

**SOCIALIZATION OF PROSOCIAL BEHAVIOR: HOW PARENTS  
ENCOURAGE THEIR CHILDREN'S HELPING**

by

**Whitney Waugh**

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This thesis was presented

by

Whitney Waugh

It was defended on

September 13, 2012

and approved by

Celia Brownell, PhD, Professor

Susan Campbell, PhD, Professor

Jana Iverson, PhD, Professor

Thesis Director: Celia Brownell, PhD, Professor

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Whitney Waugh, M.S.

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We investigated the techniques parents use to socialize prosocial behavior in young children, ages 18 and 24 months. Dyads participated in an everyday household-helping task in which parents encouraged their children to help clip cloths to a clothesline. Parental strategies for getting children to help were categorized into substantive categories (instrumental and empathic/emotional) and regulatory categories, including reinforcement. Children's compliant engagement in the task was also coded. Results indicated that parents used a variety of strategies to socialize helping. While they were equally active in encouraging helping at both ages, they used different strategies depending on children's age. At both ages parents emphasized instrumental, task-specific aspects of helping more than the emotional aspects, but used more instrumental requests and regulatory strategies with younger children. They used empathic/emotional encouragements equally often with younger and older children. They used a greater variety of techniques with younger children, particularly regulatory strategies, including gestures paired with verbalizations and attention getting strategies. Younger children were less compliantly engaged in the task than older children. When analyses were conducted controlling for compliant engagement, some results differed. Parents of older children used fewer encouragements than parents of younger children, but they used instrumental and empathic/emotional strategies equally often. Parents of younger children continued to use significantly more instrumental techniques than parents of older children, whereas parents of

older children used more empathic/emotional techniques. Parents of 24 month olds used more reinforcement than did parents of 18 month olds and no longer differed in their use of attention getting techniques. Results indicate that parents actively socialize prosocial behavior and are sensitive to age and developmental differences, changing their strategies to differentially support their older and younger children.

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## 1.0 INTRODUCTION

Prosocial behavior begins to develop between the first and second years of life, (Zahn-Waxler, Radeke-Yarrow, Wagner, & Chapman, 1992) and grows rapidly throughout childhood (Hay & Cook, 2007; Zahn-Waxler et al., 1992). Defined as “voluntary actions that are intended to help or benefit another individual or group of individuals” (Eisenberg, 1982; Staub, 1978), prosocial behavior includes helping, sharing, comforting and cooperation. The development of prosocial behavior is necessary for successful integration into society, and its emergence in infancy sets the stage for the development of social competencies later in childhood (Hastings, Utendale, & Sullivan, 2007) such as positive peer relationships (Farver & Branstetter, 1994).

To behave in a prosocial manner, infants must first develop the beginnings of representational thought, self-recognition and self-other differentiation, which begin to emerge around the second year of life (Hay & Cook, 2007; Zahn-Waxler et al., 1992) as do early forms of emotion understanding (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986; Saarni, Campos, Camras, & Witherington, 2006). Early in development prosocial behavior occurs infrequently, (Brownell, Svetlova, & Nichols, 2009; Svetlova, Nichols, & Brownell, 2010) and parents and other caregivers play an important role in socializing, encouraging and reinforcing infants’ rudimentary prosocial behaviors by supporting their children and providing them with clues to when action is warranted and what to do. Research has shown that characteristics of parenting influence the development of prosocial behavior in their offspring; however, there is little

research regarding what parents actually say and do to scaffold and encourage the very early development of prosocial behavior. This study will use laboratory procedures to observe parental techniques of eliciting and encouraging infants' helping behaviors to provide insight into the methods, tactics and skills parents employ to socialize prosocial behavior during the period when this behavior emerges. As children develop more advanced capabilities and understanding, it is likely that they require different forms of scaffolding and encouragement. Thus, differences in parents' encouragements over the second year will be examined.

## **1.1 PARENTING STYLE AND PROSOCIAL BEHAVIOR**

The majority of research on parental influences on children's prosocial behavior focuses on general parenting characteristics rather than specific socialization strategies or techniques, and is conducted with school-aged children and their parents rather than with infants and their parents. It has been shown that parenting styles have long lasting effects on prosocial development (Grusec, Goodnow, & Cohen, 2000) and specifically, that more authoritative parenting is related to more prosocial behavior (Eisenberg, Wolchik, Goldberg, & Engel, 1992; Hastings et al., 2007; Zahn-Waxler, Radeke-Yarrow, & King, 1979). Consistent with this general finding, parental responsiveness, sensitivity and warmth are generally related to higher levels of prosocial behavior (Hastings et al., 2007), while-emphasis on obedience (Sparks, Thornburg, Ispa, & Gray, 1984) and parental reports of need for control (Sparks et al., 1984) are negatively correlated with prosocial behavior. Furthermore, the development of secure attachment is associated with children's empathic responding (Kestenbaum, Farber, & Sroufe, 1989), a specific form of prosocial behavior. While these lines of research provide insight into parental characteristics

associated with children's prosocial behaviors, they fail to tell us the specific behaviors parents employ, especially with children younger than preschool age. As a result, little is known about the processes of socialization that contribute to the early development of prosociality.

To the author's knowledge, Rheingold (1982) conducted the only previous study examining specific parental socializing behaviors with their infants, which she observed during multiple everyday prosocial tasks. In addition to recording the occurrence of specific parental behaviors, she calculated the probability that the children helped after the first instance of each behavior. While the overall frequency of helping increased over the second year (18 - 30 months), the probability of the children helping was consistent across this period. Parents' directing and maintaining the children's attention on the task was associated with the highest probability of infants' helping behavior. However, Rheingold conducted few statistical tests and coded only the occurrence or non-occurrence of parental behaviors, thus limiting the ability to identify developmental or individual differences in parental socialization strategies. Furthermore, it should be noted that the parents and children in the Rheingold (1982) study were permitted to choose from five tasks; thus, it is likely that the dyads participated in those tasks that the children found most interesting or fun, which may have influenced the techniques parents used to encourage prosocial behavior. It is also possible that parents who couldn't get their children to help on one task switched tasks rather than continuing to encourage their children to help. This may have resulted in under- or overestimates of parental strategies, as well as overestimates of how likely children were to help. It should also be noted that the parents were instructed not to tell their children what to do, but to describe what they were doing, thus potentially restricting their behavior. Regardless of such limitations, this research is the first, and possibly the only, detailed analysis of parents' efforts to enlist and encourage prosocial helping

during the period when prosocial behavior is first emerging. The current study builds on Rheingold's work to provide a more focused perspective on the rates at which parents use specific strategies to encourage prosocial behavior in their children. In particular, it will provide a more detailed and differentiated account of the specific types of behavior parents use to socialize prosocial behavior and the rates at which they use them.

## **1.2 PROSOCIAL SOCIALIZATION STRATEGIES**

Previous work has shown that children's earliest helping behaviors fall into two main types based on the origins of the children's motivation to help: instrumental and empathic/emotional. It has been argued that instrumental helping appears to be primarily motivated by children's interest in the task, self-interest, or interest in the persons or objects involved in the task, and develops earlier in the second year of life, while empathic/emotional helping is primarily rooted in other-oriented concerns and develops later in the second and third years (Svetlova et al., 2010). We examined to what extent parents scaffold and encourage helping by highlighting the instrumental and empathic/emotional dimensions of potentially prosocial situations. For example, parents could emphasize the instrumental dimensions by highlighting part of the task that needs to be accomplished, perhaps asking the children to give a toy to someone. In contrast, parents could emphasize the empathic/emotional dimension by calling attention to another's need. Since more advanced emotion understanding is needed to produce empathic/emotion based helping than instrumental helping, the former occurs at lower rates in infants compared to the latter (Svetlova et al., 2010). Thus, parents may highlight these dimensions of prosocial situations at different rates depending on children's age-related behavior and understanding. By

differentiating parents' instrumental and empathic/emotional encouragement of prosocial behavior, we can begin to discover and understand the specific tools parents use to socialize very young children's prosocial responding and how parents apply them as their children develop.

Rheingold's early work (1982) provides an empirical foundation for parents' use of instrumental socialization strategies. She found that parents verbally indicated the specific means by which the children could help on approximately 40% of the tasks and that parents directly told their child what to do on 20% of the tasks. On occasion, parents encouraged their children's involvement through pretend play, possibly making the task more game-like. These strategies can be considered instrumental as they encourage children to help with the task by drawing the children's attention to the task and emphasizing specific task-oriented behavior. Although not addressed by Rheingold, parents may also highlight their own emotional need for help as a means to socialize empathic helping as this may increase the salience of the need for help and communicate the underlying emotion that should motivate helping; or they may label or encourage children's own role in providing help by emphasizing the child's prosociality. These approaches highlight the emotional or empathic motivators of helping. The current study builds on Rheingold's research by examining how parents instrumentally encourage their children to help by emphasizing the task-specific features of helping. The current study will also examine how parents emotionally encourage their children to help by highlighting the children's prosociality and the parents' own need for help.

In addition to socializing strategies that could be considered instrumental or empathic/emotional in nature, research suggests that parents help their children regulate their own behavior appropriately and scaffold their children's attention so that the children can successfully help. Rheingold (1982) found that parents explicitly elicited their child's attention,

encouraged the child to be proximal to the task, narrated their own behavior while performing the task and clearly demonstrated what was to be done. In the current study, these regulatory strategies will also be examined, especially in relation to age since children's ability to regulate their attention and behavior undergoes significant change over the second year (Kopp, 1982)

Parents' efforts to promote children's prosocial behavior also include reinforcements. These are regulatory strategies employed after successful elicitation of prosocial behavior, and serve both to inform the child that the behavior is desired and appreciated, and to encourage the child to repeat or continue it. Eisenberg, Wolchik, Goldberg, & Engel (1992) found that parents most often responded to their toddlers' sharing behaviors with reactions intended to sustain ongoing behavior, followed by occasional positive reinforcement. Parents had very few neutral or negative reactions such as disapproval or rejection when children failed to behave prosocially. Rheingold (1982), too, found that parents spontaneously and frequently praised their children's participation during common household tasks. During home observations of daily activities, Dahl, Schuck, Hung, Hsieh, & Campos (2012) found that parents reinforced helping in 11 – 24 month old children and that parents used more reinforcements with younger children. Because it appears that parents frequently reinforce their young children's prosocial behavior, reinforcement will be examined as a regulatory strategy in the current study.

It is likely that parents use gestures as an additional regulatory strategy to support children's prosocial behavior. Gestures provide information needed to communicate intent (Wu & Coulson, 2007) and may increase the salience of the need for prosocial behavior. Research has shown that information provided by verbalizations and co-occurring gestures are integrated by the recipient (Cassell, McNeill, & McCullough, 1999; Kelly & Church, 1998; McNeill, Cassell, & McCullough, 1994) and it is easier to understand an intended message when a

verbalization is paired with a gesture as compared to speaking alone (e.g. Beattie & Shovelton, 1999, 2002; Riseborough, 1981). As a result, gestures become more important as tasks get more difficult (Riseborough, 1981). Furthermore, speech paired with gesture is a more useful teaching device than speech alone, especially when the gesture provides information in a different form than the speech (Singer & Goldin-Meadow, 2005). In the current study, gestures will be considered both when they occur alone and when they are paired with a verbalization as a means by which parents may encourage their children to help.

### **1.3 CHILD EFFECTS**

Researchers agree that socialization is a bidirectional process in which parents and children are mutually influential, even in early childhood. For example, Kochanska (1997) found that the degree to which parents and toddlers (26 to 41 months) were mutually responsive related to successful socialization of moral behavior and the internalization of maternal values and rules. Thus, when trying to understand the role parents play in socializing prosocial behavior, it is important to include characteristics of the children that could be associated with the strategies parents use. Prior research indicates that there are age differences in the nature of children's ability and motivation to help others (Svetlova et al., 2010; Warneken & Tomasello, 2007) with older children helping more often and on tasks that require more advanced social understanding than younger children. Therefore, parents may employ different tools to encourage helping in children of different ages. Children's interest and engagement are also likely to relate to the parents' behaviors as disinterested children will require additional scaffolding compared to children who are more motivated to participate. Similarly, children's compliance with parents'



requests, directives, and regulatory efforts are likely to relate to the parents' behavior; parents of children who are high on compliance will likely need to ask the children to help less frequently than parents of children who are non-compliant (Kochanska, 1993). It is also likely that children's verbal ability will relate to their understanding of parents' verbal encouragements, potentially influencing which kinds of encouragements parents use. In the current study, these child characteristics will be considered in relation to parental socialization techniques.

In sum, the goal of the current study is to identify specific socialization techniques parents use for encouraging and eliciting helping behaviors in young children who are just beginning to behave prosocially. Additionally, the study will determine whether parents use different techniques with children of different ages, and whether characteristics of the children are associated with parents' use of different techniques. In particular, the study will address whether parents of older children use more emotion-based strategies and fewer regulatory strategies; whether parents of children with more advanced verbal ability or emotion understanding, independent of age, use more emotion based strategies; and whether parents of children who are more engaged and compliant or whose parents rate them as higher on prosocial behavior outside of the laboratory use different strategies and fewer regulatory strategies.

To address these questions, 18- and 24- month old children were observed with their parents during an everyday helping task conducted in the laboratory. These ages were chosen because they bookend the emergence of prosocial behavior and the development of the understanding and skills needed to enact prosocial behaviors, thus permitting the study of socialization strategies from when infants are only beginning to exhibit prosocial responding to when prosocial responding is a more regular part of the children's repertoire (Brownell, Nichols, & Svetlova, in press).

## **2.0 METHODS**

### **2.1 PARTICIPANTS**

Forty-six typically developing 18- and 24-month-old infants and their parents were recruited from a medium-size US city. Nineteen children (10 male; 9 female) were 18-months old (within one month) and twenty-seven children (15 male; 12 female) were 24-months old (within one month). The majority of the parent participants were mothers; however, there were four fathers. Demographic data were available on varying numbers of participants depending on the measure. The participants were predominantly middle-class; out of 23 participants who reported income, 87% reported having an income above \$50,000. 71.7% of the sample were Caucasian, 2.2% African American, 4.3% other, 8.7% biracial and 13% did not report their ethnicity. Of the 24 participants who reported parental education, most had a master's degree (45.8% of the sample), while 25% had a doctoral degree, 16.7% had a bachelor's degree and 12.5% had high school or some college.

### **2.2 PROCEDURE**

Parental encouragement of children's helping behavior was assessed as part of a larger study of potential influences on early prosocial behavior. The parent-child helping task was adapted from

Rheingold's (1982) everyday-chore parent-child helping task and Warneken and Tomasello's (2006) "clothespin" helping task, both used to study helping in children of similar ages.

For this task, a box of cloths was placed at one end of the room (14.5 feet by 10 feet) and a clothesline was placed at the other end of the room. Clothespins were placed in a bucket in the middle of the room, between the cloths and the clothesline. Parents were instructed to encourage their child to help them clip the cloths on the clothesline. The clothesline was just out of the children's reach so that parents, not children, had to do the clipping. Because of the distance between the components of the task, parents needed help getting the cloths, getting the clothespins, or both.

Once the room was set up, the experimenter explained the task to the parents. To motivate helping, the experimenter stressed to the parents that they should emphasize that this was a difficult task because the cloths were all the way across the room and the clips were in a separate location. The parents were instructed to clip one or two cloths by themselves while vocalizing how difficult the task was and then try to engage the child in helping them with the task. The experimenter first demonstrated the task to the parents, saying things like "[child's name], I have such a hard job to do! I have to clip all of these cloths to this clothesline!" After the demonstration the experimenter said, "Mom, can you finish? This is such a hard job! Mom has a tough job to do!" and then left the room with the assistant experimenter. A distracter toy was left in the room from the previous play period. The parent and child were given approximately four minutes to complete the task.

## 2.3 MEASURES

### 2.3.1 Parental Behavior

The videos of the parent-child interaction were coded for the methods parents used to encourage children to help, including both verbal and nonverbal behaviors. The instrumental and empathic/emotional techniques (referred to as substantive categories) and regulatory techniques parents used to promote prosocial behaviors were counted each time parents used them. Based on a review of the video records, the instrumental and empathic/emotional categories were further broken down into two subcategories each. The instrumental subcategories were *task oriented/directive* (asks or directs the child to do something concrete related to the task itself) and *task oriented/playful* (emphasizes social aspects of the task, picks up the child, turns the task into a game). The empathic/emotional subcategories were *parental need* (emphasizes need for help) and *child prosociality* (emphasizes child's helpful participation). These four categories were mutually exclusive. (See Appendix A for full definitions and examples). Because there were no a priori hypotheses for differences among the four subcategories analyses of these measures are exploratory only.

In addition to the substantive categories, parental regulatory techniques were also coded. These included: 1) *Narratives*: describe/model the task or set up the task (e.g. It's time to hang the laundry! I am hanging up these cloths!); 2) *Reinforcements*: praise or encourage children's helping behavior. Reinforcements were coded for both spontaneous and requested helping behaviors and include both physical (hugs, high fives, smiles, etc.) and verbal (thanking, praising etc.) positive responses; 3) *Attention Getting Strategies*: attempts to draw children's attention to the parent or to the task (e.g. calling the child's name); 4) *Gestures*: hand and arm movements

(e.g., pointing; holding hand out in palm-up requesting gesture) were coded both when they occurred on their own (gestures) and when they were paired with a verbalization from the substantive categories (paired gestures). (*See Appendix A*).

Additionally, substantive and regulatory categories were summed to create a score for overall socialization attempts (excluding paired gestures as this overlapped with the substantive categories). Finally, the variety of different strategies parents used was counted. All frequencies were adjusted for the total time dyads spent on the task to yield rates per minute. Measures submitted to analysis were overall socialization; total substantive strategies and total regulatory strategies; the separate categories of instrumental and empathic /emotional strategies; the individual subcategories and the individual regulatory categories; the variety of strategies used overall; and the variety of substantive and regulatory strategies.

### **2.3.2 Child Characteristics**

Characteristics of the children were assessed using parent questionnaires or behavioral coding including: verbal ability, emotion understanding, tendency to behave in a prosocial manner at home, and compliance and engagement in the helping task.

Verbal understanding and production were measured using the MacArthur Communicative Development Inventory (CDI) (Fenson et al., 2000), a widely used, standardized checklist of the words a child can understand but cannot say (score = 1), and words a child can understand and say (score = 2). Scores ranged from 29 to 178 ( $M = 120.44$ ,  $SD = 41.97$ ).

The children's emotion understanding was measured using the Emotion Words Checklist (EWCL) (Brownell, Ramani, & Zerwas, 2006). Parents reported how often, in the last 6 months, their child has said 29 common emotion words using a four point Likert scale (0 = never used;

3 = often uses). Scores ranged from 0 to 52 ( $M = 18.16$ ;  $SD = 15.29$ ). Emotion word production was correlated with overall verbal production (CDI) ( $r = .76$ ,  $p < .001$ ; *partial r* = .59,  $p < .001$ , controlling for age).

Children's tendency to behave in a prosocial manner outside of the laboratory was measured using the Early Social Behavior Questionnaire (ESB), a five-question parental report measure excerpted from Goodman's Strengths and Difficulties Questionnaire (1997). It rates how characteristic certain prosocial behaviors are of the child (e.g. shares readily; helpful if someone is upset or hurt) using a three point Likert scale (0 = not true; 2 = certainly true). The Strengths and Difficulties Questionnaire is one of the most widely used instruments in child mental health research (Vostanis, 2006) and has proven to be both reliable and valid (Goodman, 2001; Vostanis, 2006). Furthermore, it has previously been used to study prosocial behavior in toddlers (Ensor & Hughes, 2005). Individual average scores ranged from .2 to 2 ( $M = 1.16$ ;  $SD = .36$ ).

Children's engagement in the helping task was rated on a five point Likert scale (1 = not engaged at all to 5 = high engagement) (See Appendix A for descriptions). Non-engagement was rated when children refused to look at the task or participate in the task, attempted to leave the room on multiple occasions, ignored the mother or only played with the distracter toy. A rating of high engagement was given to children who displayed spontaneous attention to and engagement in the task throughout the entire session. Scores ranged from 1-5 ( $M = 3.40$ ;  $SD = 1.51$ ).

Children's compliance with their parents' commands was rated from video records on a five point Likert scale (1 = not at all characteristic to 5 = highly characteristic) (See Appendix A for descriptions). All parents made requests of their children. A rating of not at all characteristic

was given to children who never or almost never complied. A rating of highly characteristic was given to children who complied with nearly every parental request and did so willingly and promptly. Scores ranged from 1-5 ( $M = 3.13$ ;  $SD = 1.60$ ). Compliance and engagement scores were highly correlated ( $r = .95$ ). Therefore, the scores were averaged to create a composite score of compliant engagement for use in analyses.

## **2.4 RELIABILITY**

The author and undergraduate research assistants coded the videos and establish reliability on 20% of the videos prior to coding independently. Kappa of .83 was established for the substantive categories and kappa of .70 was established for the regulatory categories. The interclass correlation was 92.20% for compliance and 96.40% for engagement. Disagreements were resolved through consensus.

### **3.0 RESULTS**

Preliminary analyses showed that household income was significantly correlated with emotion understanding and parents use of task oriented/directives, and marginally correlated with parents use of paired gestures, verbal ability and prosocial behavior outside of the laboratory (Table 1). Parents' education was significantly correlated with the variety of regulatory categories parents used and marginally correlated with the overall variety of categories parents used. However, because these correlations were few and unsystematic, income and education were not controlled in subsequent analyses.



**Table 1: Correlations Between Demographic Variables and Measures of Parental Socialization and Child Characteristics**

	<b>Household Income</b>	<b>Parents Highest Education</b>
<b>Overall Socialization</b>	-0.18	-0.16
<b>Substantive Strategies</b>		
<b>Total Substantive</b>	-0.22	-0.23
<b>Instrumental</b>	-0.32	-0.17
<b>Empathic/Emotional</b>	.11	-0.12
<b>Task Oriented/Directive</b>	<b>-.48*</b>	-0.15
<b>Task Oriented/Playful</b>	.29	-0.08
<b>Parental Need</b>	.10	-0.09
<b>Child Prosociality</b>	.05	-0.07
<b>Regulatory Strategies</b>		
<b>Total Regulatory</b>	-0.31	-0.22
<b>Narration</b>	.02	.08
<b>Reinforcement</b>	.09	.11
<b>Attention Getting</b>	-0.22	-0.17
<b>Gestures</b>	-0.10	-0.19
<b>Paired Gestures</b>	<b>-.38<sup>+</sup></b>	-0.29
<b>Variety of Categories Used</b>		
<b>All Categories</b>	-0.11	<b>-.40<sup>+</sup></b>
<b>Substantive Categories</b>	.27	.01
<b>Regulatory Categories</b>	-0.30	<b>-.49*</b>
<b>Child Characteristics</b>		
<b>Verbal Ability</b>	<b>.40<sup>+</sup></b>	.06
<b>Emotion Understanding</b>	<b>.51*</b>	.13
<b>Prosocial Behavior Outside the Laboratory</b>	<b>.36<sup>+</sup></b>	.20
<b>Compliant Engagement</b>	.20	.02

\* Significant at  $p = 0.05$ ; <sup>+</sup> Marginally Significant  $p = .054-.096$

Preliminary analyses using one-way ANOVAs or MANOVAs were conducted to test for gender differences in parent socialization measures and child characteristics (Table 2). Gender differences were found for overall socialization; substantive strategies (instrumental and empathic); regulatory strategies (narrate; reinforcing; attention-getting; paired gestures; gestures); task oriented/directives; attention getting and paired gestures. In all cases, parents more frequently encouraged their boys' helping than they did their girls' helping. Significant effects were also found for the total variety of different tactics used, and for the variety of different regulatory strategies in particular, again at a greater rate for boys. Finally, significant effects were found for children's compliant engagement and emotion understanding; girls scored higher in both. Gender will therefore be included in analyses using these measures.

**Table 2: Gender Differences in Parental Socialization Techniques and Child Characteristics**

	<b>Mean (SD)</b>		<b>F</b>	<b>P</b>
	<b>Male</b>	<b>Female</b>		
<b>Overall Socialization</b>	8.95 (2.24)	7.65 (1.97)	4.28	<b>.04</b>
<b>Substantive Strategies</b>				
<b>Total Substantive</b>	7.48 (1.82)	6.12 (2.17)	5.29	<b>.03</b>
<b>Instrumental</b>	4.57 (1.79)	3.69 (1.96)	2.55	.12
<b>Empathic/Emotional</b>	2.90 (1.59)	2.43 (1.38)	1.13	.29
<b>Task Oriented/Directive</b>	3.95 (1.73)	3.08 (1.55)	3.14	<b>.08</b>
<b>Task Oriented/Playful</b>	.63 (.70)	.61 (.84)	.006	.94
<b>Parental Need</b>	1.87 (1.27)	1.62 (1.16)	.49	.49
<b>Child Prosociality</b>	1.03 (.86)	.81 (.71)	.86	.36
<b>Regulatory Strategies</b>				
<b>Total Regulatory</b>	7.02 (2.91)	5.53 (2.26)	3.62	<b>.06</b>
<b>Narration</b>	1.09 (.80)	.91 (.73)	.62	.44
<b>Reinforcement</b>	1.56 (1.22)	1.88 (1.24)	.78	.38
<b>Attention Getting</b>	.52 (.73)	.15 (.31)	4.67	<b>.04</b>
<b>Gestures Alone</b>	.10 (.22)	.13 (.30)	.10	.76
<b>Paired Gestures</b>	3.75 (2.12)	2.47 (2.00)	4.35	<b>.04</b>
<b>Variety of Categories Used</b>				
<b>All Categories</b>	6.92 (.86)	6.14 (1.24)	6.27	<b>.02</b>
<b>Substantive Categories</b>	3.40 (.58)	3.14 (.73)	1.79	.19
<b>Regulatory Categories</b>	3.52 (.77)	3.00 (.77)	5.18	<b>.03</b>
<b>Child Characteristics</b>				
<b>Verbal Ability</b>	113.14 (36.62)	128.94 (47.09)	1.39	.25
<b>Emotion Understanding</b>	13.50 (10.51)	23.33 (18.20)	4.27	<b>.046</b>
<b>Prosocial Behavior Outside the Laboratory</b>	1.14 (.31)	1.18 (.43)	.13	.73
<b>Compliant Engagement</b>	2.84 (1.54)	3.76 (1.38)	4.49	<b>.04</b>

Five sets of analyses were conducted. The first examined how many parents used the various socialization techniques. The second examined how often parents used each socialization technique (rate per minute). The third examined how many different techniques parents used. These were conducted both across ages and as a function of age. The fourth set of analyses examined the effects of child characteristics on parents' use of socialization techniques for both rate and the number of different techniques. Finally, because children's compliant engagement was found to relate to parents' behavior, analyses on parents' behavior were conducted again, this time controlling for children's compliant engagement.

### **3.1 WHAT DID PARENTS DO: OVERALL CATEGORY USE**

Analyses were conducted to determine which strategies parents used and how frequently they used each one relative to the other categories of socialization techniques. Of the individual subcategories 97.8% of parents used task oriented/directives, 93.5% used child prosociality techniques, 82.6% used parental need techniques and 54.3% used task oriented/playful techniques (Figure 1). McNemar Tests confirmed that the fewest parents used task oriented/playful techniques ( $p = .02$  to  $p < .001$ ); more parents used task oriented/directive techniques than parental need techniques ( $p = .04$ ). Broken down by age group, the results were generally similar for 24 month olds, except that parental need techniques (88.9%) were used by the same number of parents as task oriented/directive techniques (96.3%). For parents of 18 month olds the results differed as follows: task oriented/playful techniques (52.6%) and parental need techniques (73.7%) were used by the same number of parents; there was only a marginal

difference between the number of parents who used parental need techniques (73.7%) and task oriented/directive techniques (100%;  $p = .06$ ) and child prosociality (100%;  $p = .06$ ).

All parents used regulatory strategies. Of the individual regulatory strategies, 93.5% of parents used paired gestures, 91.3% used reinforcements, 80.4% used narratives, 41.3% used attention-getting strategies and 21.7% used gestures alone (Figure 2). McNemar Tests showed that significantly ( $p = .02$  to  $p < .001$ ) more parents used paired gestures, reinforcements and narratives than used attention-getting strategies or gestures alone; parents used more attention getting strategies than gestures alone ( $p = .05$ ). Broken down by age, the number of parents who used attention-getting strategies (18 months = 57.9%; 24 months = 29.6%) did not differ from the number who used gestures alone (18 months = 36.8%; 24 months = 11.1%) for either 18 or 24 month olds. Otherwise, results for the 24 month old mirrored the entire sample. In addition, the same number of parents of 18 month olds used attention-getting strategies (57.9%) as narrations (84.2%) and reinforcements (84.2%).

Results indicate that parents used a wide variety of socialization techniques to encourage their children to participate in prosocial behavior. While most parents used all of the substantive categories there was more diversity in the number of parents who used the individual regulatory categories.

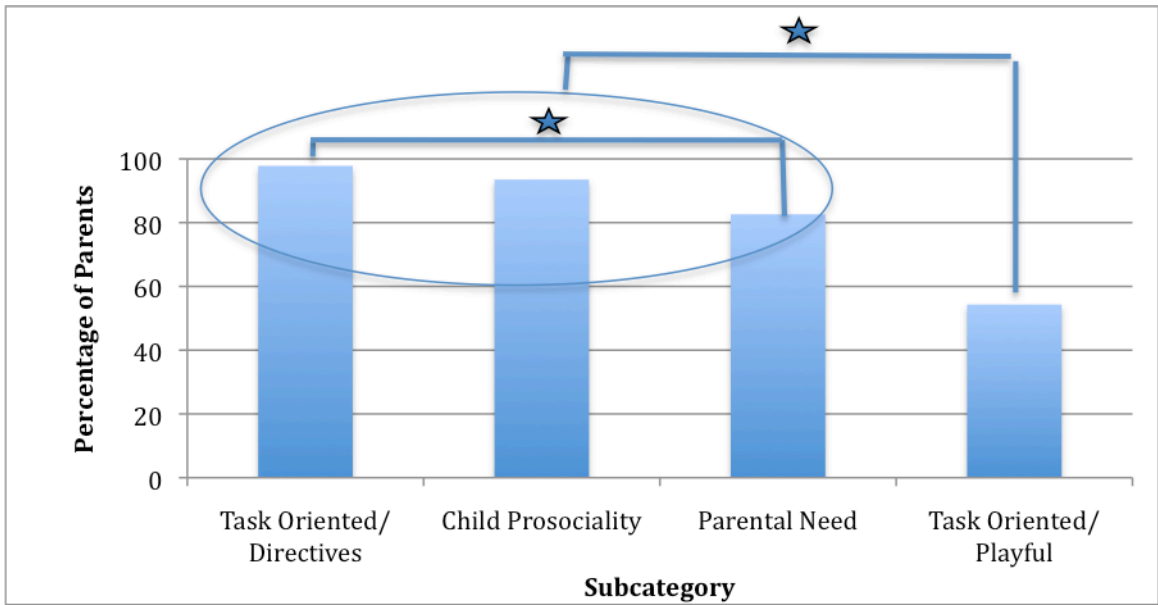


Figure 1: Percentage of Parents Who Used Each Subcategory

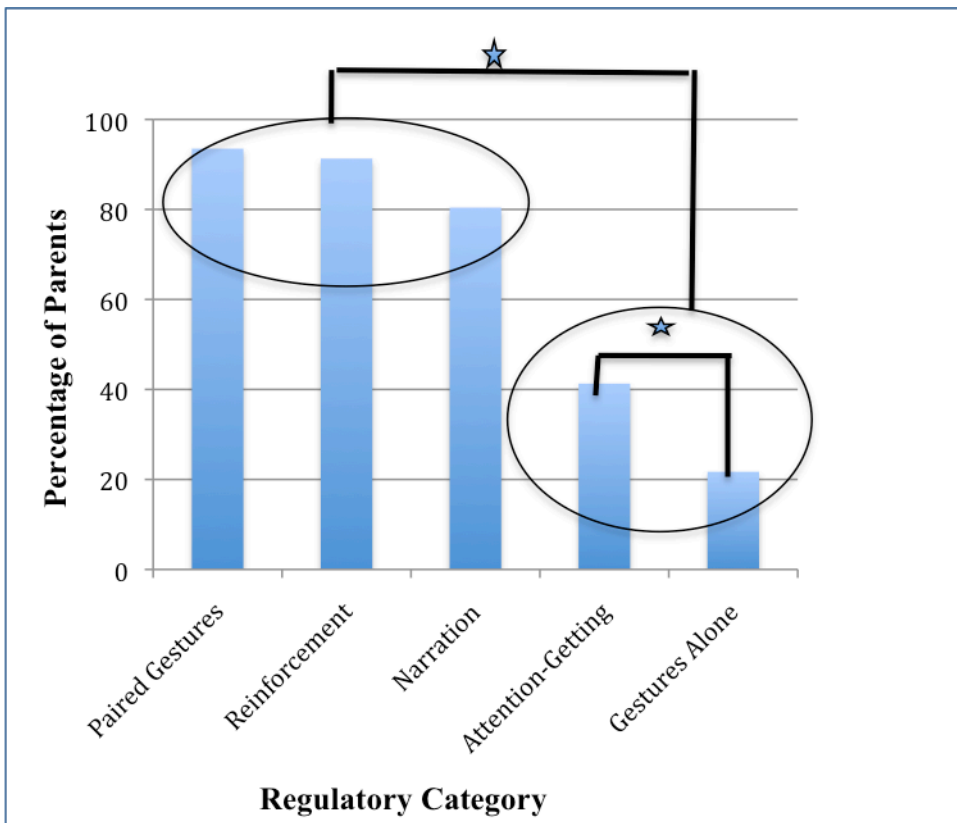


Figure 2: Percentage of Parents Who Use Each Regulatory Category

### **3.2 HOW MUCH DID PARENTS DO: RATES AS A FUNCTION OF AGE**

To evaluate age related differences in rates of parental socialization techniques, one-way ANOVAs, MANOVAs or repeated measures ANOVAS were conducted. Unless otherwise specified, age and gender were used as the between subject factors and the specified socialization techniques were used as within subject factors in repeated measures ANOVAs, or as the dependent measures in MANOVAs. There were no significant age differences in overall socialization of helping (see Table 3), however rates differed for the particular strategies.

**Table 3: Age Differences in Parental Socialization Techniques With and Without Controlling For Compliant Engagement**

	Mean (SD)		F	P	Compliant Engagement Controlled	
	18 Months	24 Months			F	P
<b>Overall Socialization</b>	8.68 (2.27)	8.14 (2.16)	.84	.36	3.20	<b>.08</b>
<b>Substantive Strategies Rate</b>						
<b>Total Substantive</b>	7.13 (1.95)	6.66 (2.19)	.56	.46	.31	.58
<b>Instrumental</b>	4.81 (1.61)	3.72 (1.99)	3.95	<b>.05</b>	4.86	<b>.03</b>
<b>Empathic/Emotional</b>	2.32 (1.52)	2.95 (1.46)	1.98	.17	3.98	<b>.05</b>
<b>Task Oriented/Directive</b>	4.25 (1.52)	3.06 (1.65)	6.08	<b>.02</b>	6.87	<b>.01</b>
<b>Task Oriented/Playful</b>	.57 (.71)	.65 (.81)	1.34	.71	.03	.86
<b>Parental Need</b>	1.54 (1.38)	1.91 (1.08)	1.03	.32	1.11	.30
<b>Child Prosociality</b>	.78 (.47)	1.04 (.95)	1.18	.28	4.79	<b>.03</b>
<b>Regulatory Strategies Rate</b>						
<b>Total Regulatory</b>	7.62 (2.85)	5.44 (2.24)	9.17	<b>.004</b>	20.74	<b>&gt;.001</b>
<b>Narration</b>	.94 (.76)	1.06 (.78)	.26	.61	.23	.63
<b>Reinforcement</b>	1.59 (1.34)	1.78 (1.16)	.24	.63	4.67	<b>.04</b>
<b>Attention Getting</b>	.59 (.82)	.35 (.60)	6.37	<b>.02</b>	2.14	.15
<b>Gestures Alone</b>	.16 (.24)	.09 (.26)	.61	.44	.37	.55
<b>Paired Gestures</b>	4.34 (1.86)	2.34 (1.96)	13.85	<b>.001</b>	17.14	<b>&gt;.001</b>
<b>Variety of Categories Used</b>						
<b>All Categories</b>	6.89 (.88)	6.33 (1.21)	3.70	<b>.06</b>	3.01	<b>.09</b>
<b>Substantive Categories</b>	3.26 (.56)	3.30 (.72)	.03	.87	.01	.92
<b>Regulatory Categories</b>	3.63 (.76)	3.04 (.76)	7.60	<b>.009</b>	5.33	<b>.03</b>



### 3.2.1 Substantive categories.

The use of instrumental techniques was marginally negatively correlated with the use of empathic/emotional techniques ( $r = -.27, p = .07$ ). However, when age was controlled, they were no longer related (*partial*  $r = -.22, p = .14$ ).

A repeated measures ANOVA was conducted to determine age differences in parental use of substantive strategies (instrumental and empathic/emotional). There were no significant age differences in the overall use of the substantive strategies (Table 3). However, there was a significant main effect for strategy type  $F(1, 44) = 17.44, p > .001$ , which was qualified by a significant interaction between age and strategy type  $F(1, 44) = 4.45, p = .03$  (Figure 3). Across age, parents used instrumental requests ( $M = 4.17, SD = 1.90$ ) significantly more often than they did empathic/emotional requests ( $M = 2.69, SD = 1.50$ ). This effect was carried by parents of 18 month olds who used significantly more instrumental requests than empathic/emotional requests  $F(1, 18) = 19.77, p > .001$ , whereas parents of 24 month olds used them at the same rate (Table 3 for means). Contrary to hypotheses, there was no significant difference in parents' use of empathic/emotional techniques as a function of age.

To further explore parents' differential use of the substantive strategies, a repeated measures ANOVA was conducted with age as the between subjects factor and the subcategory type as the within subjects factor (task oriented/directive; task oriented/playful; parental need; child prosociality). There was a main effect of strategy type  $F(3, 132) = 60.63, p < .001$  and significant strategy by age interaction  $F(3, 132) = 4.16, p = .007$  (Figure 4). Pairwise comparisons following up the effect for strategy type showed that parents used task oriented/directive techniques ( $M = 3.55, SD = 1.69$ ) more often than the other three subcategories (mean difference from 1.93 to 3.05, all  $p < .001$ ). Parental need ( $M = 1.76, SD = 1.21$ ), was used

more often than child prosociality ( $M = .93$ ,  $SD = .79$ ) and task oriented/playful techniques ( $M = .62$ ,  $SD = .76$ ; mean difference = .24, all  $p < .001$ ) which did not differ from each other.

To follow up the strategy by age interaction, a MANOVA with age as the factor was conducted on the four subcategories of instrumental and empathic/emotional strategies. Parents of 18 month olds used task oriented/directive requests more often than did parents of 24 month olds (Table 3; Figure 4). There were no age differences in parents' use of task oriented/playful, parental need, or child prosociality techniques.

In sum, results indicate that there were no significant age differences in the overall use of substantive strategies, but that parents used instrumental strategies significantly more often than they did empathic/emotional strategies with 18 month olds. Contrary to hypotheses, there was no significant difference in parents' use of empathic/emotional techniques as a function of age. Finally, among the individual subcategories, parents used task oriented/directive techniques more frequently than any other subcategory and parents of 18 month olds used this technique more often than parents of 24 month olds.

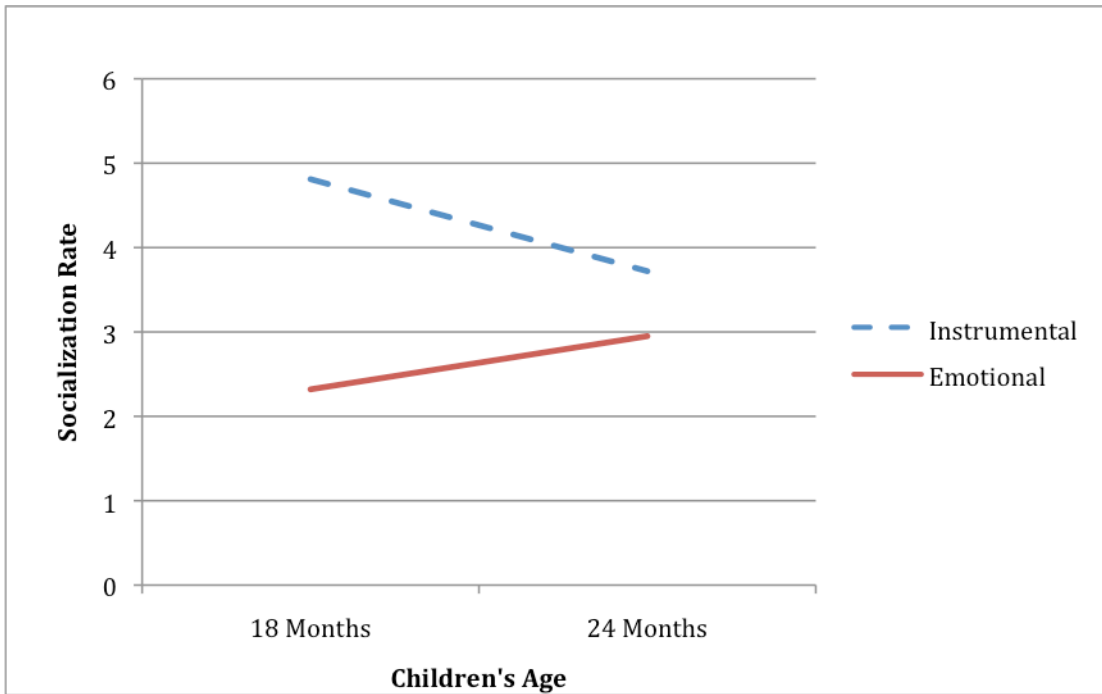


Figure 3: Age Differences in the Rate of Socialization of the Substantive Categories

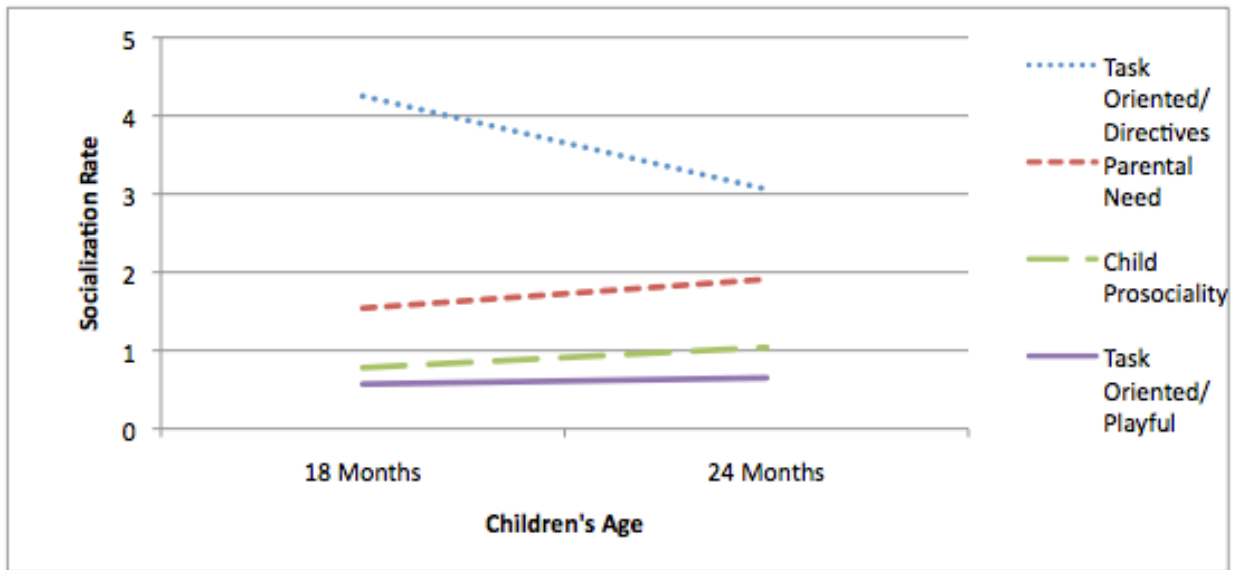
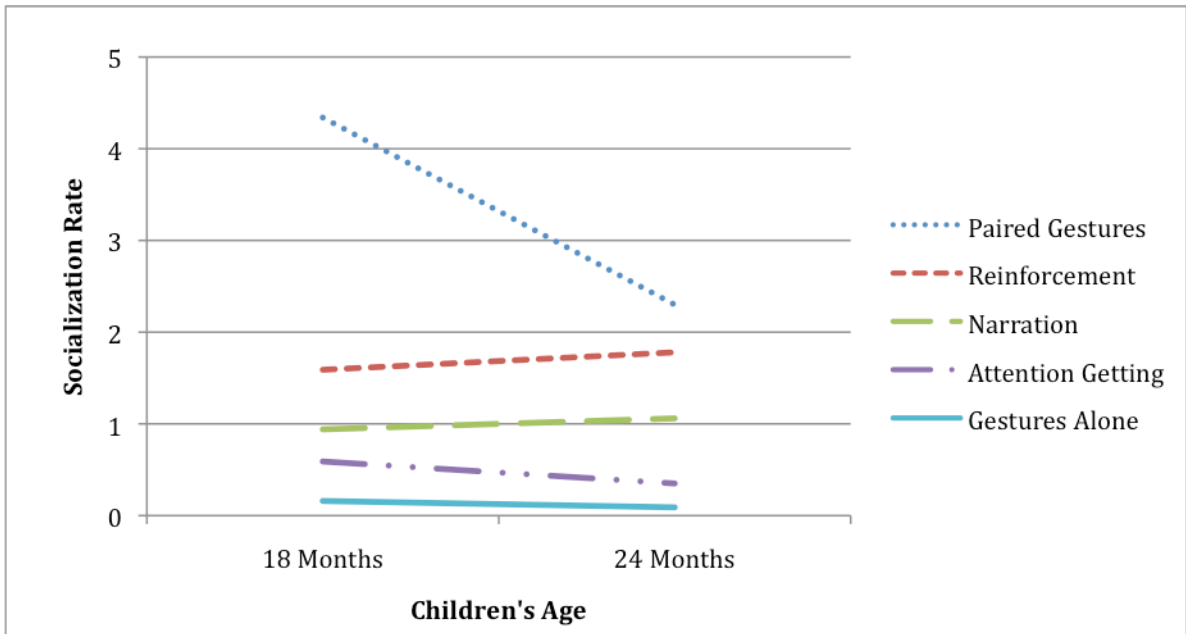


Figure 4: Age Differences in the Rate of Socialization of the Subcategories

### 3.2.2 Regulatory strategies

In parallel with the analyses conducted in the previous section to determine age differences in the use of individual substantive strategies, analyses were conducted to determine age differences in the use of regulatory strategies (narration, reinforcements, attention getting, gestures alone and paired gestures). There was a main effect of age  $F(1, 42) = 9.17, p = .004$  and a main effect of strategy type  $F(4, 168) = 60.71, p > .001$ . These were qualified by a significant interaction between age and regulatory strategy type  $F(4, 168) = 8.14, p > .001$  (Figure 5). Parents of 18-month olds used all regulatory strategies more often than parents of 24 month olds (Table 3). Pairwise comparisons showed that parents used the regulatory categories at significantly different rates ( $p$ 's  $\geq .012$ ), in the order from most used to least used: paired gestures, reinforcements, narrations, attention getting, gestures alone. To follow up the significant strategy by age interaction a MANOVA with age and gender as the factors was conducted on the individual regulatory strategies (narration, reinforcement, attention getting, gestures alone and paired gestures). Parents of 18 month olds used attention-getting techniques and paired gestures more often than parents of 24 month olds (Table 3). There were no age differences in parents' use of the other regulatory techniques.



**Figure 5: Age Differences in the Rate of Socialization of the Regulatory Categories**

### 3.3 VARIETY OF CATEGORIES USED

To determine age differences in the variety of categories parents used with their children, an ANCOVA was conducted on the number of different categories parents used (across all substantive and all regulatory) as a function of age and gender. Parents of 18 month olds used marginally more strategy types than did parents of 24 month olds (Table 3). The age by gender interaction was not significant. To determine if parents differed in the variety of substantive or regulatory strategies more specifically, separate ANCOVAs were conducted for the number of different substantive strategies and the number of different regulatory strategies as a function of age for the substantive strategies and as a function of age and gender for the regulatory strategies. For the variety of substantive strategies parents used there were no significant age differences. There was a significant age difference in the variety of regulatory categories

(narratives, reinforcements, attention getting, gestures alone and paired gestures) used, with parents of 18 month olds using significantly more categories than parents of 24 month olds (Table 3).

In sum, parents used regulatory strategies more often with younger children. There were also age differences in parents' use of the individual regulatory categories; parents of 18 month olds used attention-getting techniques and paired gestures more often than parents of 24 month olds. With respect to variety of strategies used, parents of 18 month olds used marginally more strategy types than did parents of 24 month olds, with parents of 18 month olds using a greater variety of regulatory categories than parents of 24 month olds.

### **3.4 CHILD CHARACTERISTICS**

#### **3.4.1 Verbal ability**

There were significant age, but not gender differences in children's verbal ability (Table 2 & 4). To ensure that parents' behavior was not influenced by children's verbal ability above and beyond children's age-related language and social skills, children's CDI scores were correlated with the rates of parental techniques, controlling for age. There were no significant associations between the child's verbal ability and rates of any of the parental encouragement techniques; however, verbal ability was marginally correlated with the number of regulatory categories parents used (Table 5).

**Table 4: Age Differences in Child Characteristics**

	Mean (SD)		<b>F</b>	<b>P</b>
	<b>18</b>	<b>24</b>		
<b>Verbal Ability</b>	74.33 (27.70)	140.93 (28.86)	45.30	<b>&gt;.001</b>
<b>Emotion Understanding</b>	4.09 (4.64)	23.89 (14.37)	30.79	<b>&gt;.001</b>
<b>Prosocial Behavior Outside the Laboratory</b>	.92 (.34)	1.27 (.32)	9.55	<b>.004</b>
<b>Compliant Engagement</b>	2.55 (1.51)	3.76 (1.35)	8.91	<b>.005</b>

**Table 5: Correlations Between Child Characteristics and Parental Socialization Strategies**

	<b>Verbal Ability</b>	<b>Emotion Word Understanding</b>	<b>Child Prosocial Tendency</b>	<b>Compliant Engagement</b>
<b>Overall Socialization Rate</b>	-0.04 (.82)	-.11 (.52)	-.16 (.34)	<b>.33 (.03)</b>
<b>Substantive Strategies</b>				
<b>Total Substantive</b>	-.09 (.59)	-.12 (.50)	-.13 (.44)	.07 (.64)
<b>Instrumental</b>	-.12 (.47)	-.11 (.52)	-.06 (.71)	<b>.26 (.09)</b>
<b>Empathic/Emotional</b>	.04 (.83)	-.007 (.97)	-.1 (.56)	-.21 (.16)
<b>Task Oriented/ Directive</b>	-.17 (.30)	-.08 (.66)	-.05 (.75)	<b>.26 (.09)</b>
<b>Task Oriented/ Playful</b>	.07 (.68)	-.12 (.49)	-.04 (.79)	.07 (.65)
<b>Parental Need</b>	.10 (.55)	.10 (.60)	-.10 (.56)	-.02 (.92)
<b>Child Prosociality</b>	-.07 (.66)	-.13 (.45)	-.03 (.85)	<b>-.38 (.01)</b>
<b>Regulatory Strategies</b>				
<b>Total Regulatory</b>	-.09 (.60)	-.11 (.53)	-.01 (.94)	<b>.48 (.001)</b>
<b>Narration</b>	.13 (.44)	.02 (.93)	-.12 (.46)	-.02 (.92)
<b>Reinforcement</b>	.03 (.85)	-.11 (.52)	-.10 (.55)	<b>.73 (&gt;.001)</b>
<b>Attention Getting</b>	-.23 (.16)	.14 (.43)	.01 (.93)	<b>-.34 (.03)</b>
<b>Gestures</b>	.18 (.28)	.12 (.49)	.18 (.27)	-.05 (.74)
<b>Paired Gestures</b>	-.16 (.35)	-.11 (.53)	.07 (.67)	.25 (.10)
<b>Variety of Categories Used</b>				
<b>All Categories</b>	.15 (.36)	<b>.28 (.09)</b>	.01 (.93)	.007 (.96)
<b>Substantive Categories</b>	-.08 (.65)	.08 (.64)	-.09 (.59)	.09 (.56)
<b>Regulatory Categories</b>	<b>.28 (.09)</b>	<b>.32 (.05)</b>	.10 (.56)	-.07 (.64)

P values are in parentheses.

Correlations are partial correlations with age and/or gender controlled.



### **3.4.2 Emotion Understanding**

There were significant age and gender differences in children's emotion understanding (Tables 2 & 4). It was expected that parents of children with more advanced emotion understanding, regardless of the child's age, would use more advanced tools to encourage their children's helping behavior and thus employ more empathic/emotion based encouragements. Partial correlations controlling age and gender showed no significant associations between the child's emotion understanding and rates of any of the parental encouragement techniques, contrary to expectations. Emotion understanding was marginally positively correlated with the total variety of categories parents used and significantly correlated with the variety of regulatory categories in particular (Table 5).

### **3.4.3 Prosocial behavior outside the lab**

There were significant age, but not gender differences in children's prosocial tendencies outside the laboratory as reported by parents (Table 2 & 4). It was expected that parents of children who were more prosocial outside of the laboratory would need to use fewer encouragements in the laboratory, fewer different categories, and different rates of reinforcements compared to less prosocial children. Partial correlations, controlling for age, showed no significant associations between parental report of the child's prosocial tendency at home and measures of parental encouragement in the lab, contrary to what was expected (Table 5).

### 3.4.4 Compliant Engagement

A two-way ANOVA with age and gender as factors, showed that, as expected, older children were significantly more compliantly engaged than younger children  $F(1, 42) = 8.91, p = .005$  (Table 4). There was no age by gender interaction. It was expected that parents of children who were less compliantly engaged in the task would use more or different techniques than parents of children who were more compliantly engaged. To test this, a series of partial correlations, controlling for age and gender, were conducted to examine relations between children's compliant engagement and the measures of parental socialization. Children's compliant engagement was significantly positively associated with parents' overall socialization, regulatory techniques, and reinforcements; it was marginally associated with instrumental techniques and task oriented/directive requests (Table 5). Compliant engagement was significantly negatively associated with child prosociality and attention getting strategies (Table 5). In other words, parents of children who were more compliant and engaged were working harder to keep their children participating by directing them about what to do to help and praising these children's participation, whereas parents who had children who were less engaged in the helping task and complied less were working harder to get their children to attend to the task and appealing more often to their child's role as a helper.

### **3.5 DIFFERENCES IN PARENS' CATEGORY USE CONTROLLING FOR COMPIANT ENGAGEMENT**

Because of the significant age and gender differences in compliant engagement, and the several significant associations between compliant engagement and parents' strategy use, analyses were rerun controlling for compliant engagement to examine age-related differences in parents' socialization of helping behavior, above and beyond the effects of children's compliance and engagement in the task.

#### **3.5.1 Age differences in Overall Category Use Controlling for Compliant Engagement.**

When compliant engagement was controlled in the ANCOVA to examine age differences in the overall socialization of helping there was now a marginal main effect of age  $F(1, 41) = 3.20, p = .08$  such that parents of older children used fewer encouragements than parents of younger children. Previously there were no significant age differences in overall socialization (Table 3).

#### **3.5.2 Substantive Categories**

When compliant engagement was controlled in the repeated measures ANOVA to determine age differences in parental use of the substantive strategies, there was no longer a significant main effect of strategy type  $F(1, 43) = .05, p = .83$  (previously significant); however, age and strategy again interacted,  $F(1, 43) = 7.40, p = .009$ . Parents of 24 month olds used significantly more empathic/ emotional techniques than parents of 18 month olds (Previously not significant) (Table 3).

When compliant engagement was controlled in the repeated measures ANOVA with age as the between subjects factor and the subcategory type as the within subjects factor (task oriented/directive; task oriented/playful; parental need; child prosociality), the majority of the results remained consistent. There continued to be a main effect of strategy type  $F(3, 129) = 6.51, p > .001$  and a significant strategy by age interaction  $F(3, 129) = 5.27, p = .002$ . Parents of 18 month olds continued to use task oriented/directive requests more often than parents of 24 month olds (Table 3). However, there was an additional significant age difference, with parents of older children using child prosociality more often than parents of younger children (Table 3).

### **3.5.3 Regulatory strategies**

When compliant engagement was controlled in the ANOVA to determine age differences in the total use of regulatory categories, the results remained consistent with the results from the previous uncontrolled analysis. There continued to be main effects of regulatory strategy  $F(4, 164) = 6.38, p > .001$  and age  $F(1, 41) = 20.74, p > .001$ , and a significant interaction between age and regulatory strategy type  $F(4, 164) = 10.05, p > .001$ . Parents of 24 month olds used more reinforcement than did parents of 18 months olds (previously not significant) (Table 3). However, parents no longer differed in their use of attention-getting techniques (previously significant). All other results remained consistent.

### **3.6 VARIETY OF CATEGORIES USED CONTROLLING FOR COMPLIANT ENGAGEMENT**

When compliant engagement was controlled in the ANCOVAS to determine age differences in the number of categories used, the results remained consistent; parents of 18 month olds use marginally more strategy types and significantly more types of regulatory strategies than parents of 24 month olds, and there were no age differences in the variety of substantive categories used (Table 3).

## 4.0 DISCUSSION

Development of prosocial behavior is fundamental to becoming a successful and integrated member of society (Hastings et al., 2007). Research on parental encouragement of prosocial behavior has focused on older children and the little research on younger age groups is descriptive or focuses on general parenting characteristics, failing to indicate how parents socialize these behaviors. The aim of the current study was to extend previous research and focus on how parents socialize prosocial behavior at a time when children first develop the capacity to enact these behaviors.

We asked parents to get their 18- and 24-month-olds to help hang laundry on a clothesline with clothespins. We differentiated instrumental techniques such as directing or commanding the child; empathic/emotional techniques that emphasized the parent's needs or the children's ability to help; and regulatory techniques that focused the children's attention on the task and reinforced their efforts. We found that parents actively encourage their toddlers' helping using a variety of techniques, replicating the foundational work by Rheingold (1982). Overall, parents encouraged their children with more instrumental than empathic/emotional techniques, but when children's compliance and engagement in the helping task were taken into account, parents used these approaches equally often. However, parents were generally more active in socializing their 18-month-olds than their 24-month-olds. They emphasized instrumental techniques with younger children and empathic/emotional techniques with older

children. Parents most frequently used directives and commands and did so more with younger children. With the younger age group parents also used a wider variety of regulatory strategies and used them more often. Parents reinforced their older children more. Overall, parents worked to scaffold their children's helping behavior in a way that complemented and supplemented their children's developmental capabilities.

#### **4.1 AGE DIFFERENCES IN SOCIALIZATION STRATEGIES**

Parents encouraged their toddlers to help by directing their task-related behavior, i.e., instrumental strategies, and by emphasizing the need for help, i.e., empathic/emotional strategies. They also helped children focus on and understand the task by calling their attention to and describing what had to be done, supporting their verbalizations with explicit gestures, and reinforcing the children's efforts. As expected, parents used these strategies differently with 18-month-old children than with 24-month-olds.

##### **4.1.1 Instrumental and Empathic Strategies**

Although parents who used instrumental strategies tended to be less likely to use empathic/emotional strategies their use was unrelated once age was controlled. Older children were more interested and engaged in the task of helping the parent, and more likely to comply with parents' suggestions and requests; thus, how often parents used specific approaches was partly a function of these age-related differences. Once differences in compliance and engagement were controlled, however, a number of age differences were still evident in how

parents attempted to socialize children's helping. Specifically, they not only generated a greater number of attempts to get younger children to help, but they also engaged in more different types of approaches. As predicted, parents used developmentally easier instrumental requests more with younger children, who need more support to enable and encourage task understanding and participation in comparison to older children. In contrast, they utilized emotional requests more with older children, recognizing these children's more advanced social understanding. Thus, the frequency with which parents use instrumental and empathic/emotional techniques changes in tandem with their children's age and development.

These results complement the work of both Rheingold (1982) and Svetlova et al. (2010). Rheingold (1982) studied only parents' instrumental requests. She found that the frequency of children's helping increased over the second year and that parents used a number of behaviors to encourage helping including indicating the specific means by which the children could help and telling them explicitly what to do. Here we additionally found that parents change how they socialize helping over the second year. Svetlova and colleagues (2010) studied instrumental and emotional helping in 18 and 30 month old children, finding not only that older children were more likely to help, but also that empathic helping in particular increased with age. This corresponds to the results of the current study, that over the second year parents increase the frequency of prosocial encouragements emphasizing the emotional need for help and the child's own prosociality as a helper.

When the specific subcategories of encouragements were considered, it became apparent that parents used directives the most frequently when socializing their children. They did so particularly often with younger children. These specific, concrete, task related commands or request and can be considered the easiest and most direct means of communicating a need for



help. They are straightforward and do not require the child to understand others' emotion communications or others' expectations for prosocial behavior. With older children parents used more emotion related and child prosociality techniques than with younger children. As children age parents expect them to understand the more abstract nature of helpfulness and they increasingly encourage their children to be a helper rather than specifically telling them what to do. In the process, they contribute to their children's autonomy as a helper.

#### **4.1.2 Regulatory Strategies**

As expected, parents were doing more to regulate the younger children's behavior, even after considering differences in children's compliant engagement. As older children are more capable helpers (Svetlova et al., 2010) and have more advanced executive function with improved ability to maintain attention, inhibit responses and understand what is needed from them (Grusec & Redler, 1980), parents need to regulate these children's behavior and scaffold their attention less frequently relative to the younger children. Parents most frequently regulated their children's behavior by pairing gestures with a verbalization, a reflection of the benefit, for both ages, of providing information in multiple forms to aid in understanding, as supported by previous research (Beattie & Shovelton, 1999, 2002; Riseborough, 1981; Singer & Goldin-Meadow, 2005). Parents of young children paired gestures with a verbalization and used attention-getting strategies more often than parents of 24 month olds, recognizing that their younger children benefited from the additional emphasis these strategies place on the task as both draw the children's focus to the task. However, when children's compliant engagement was controlled, there was no longer an age difference in parents' use of attention getting strategies. It seems

evident, then, that parents were using attention-getting strategies more often with the younger children as a means to encourage their participation in the helping endeavor.

Reinforcements were the second most frequently used regulatory strategy and parents used them equally across age. These results replicate other research which indicates that parents use reinforcements to encourage their children's prosocial behavior (Eisenberg et al., 1992; Dahl et al., 2012) and counter arguments by Warneken and Tomasello (2009) that young children are not provided opportunities to learn prosocial responses from reinforcement during parent-child interaction. Anecdotally, from the videos of the parent-child interactions it appeared that parents used reinforcements to praise completed helping, to encourage their children to continue to help and to spur on helping. For example, multiple parents praised their children for walking toward the clips after being told to get a clip, thereby praising their children prior to completion of the helping behavior. These parents were using reinforcements as a tool to encourage prosocial behavior and to support progressive steps on the way to helping. Such encouragements are a form of scaffolding, and would be expected to contribute to the development of children's autonomous helping. Future research should consider in greater detail how reinforcement may be used to scaffold and support prosocial responding.

#### **4.1.3 Variety of Techniques Used**

Parents of 18 month olds used a greater variety of regulatory strategies than did parents of older children, perhaps compensating for younger children's poorer understanding and ability to regulate their attention and behavior, attempting more different ways to get them to focus on and complete the task. These differences were not a result of lower compliant engagement in the younger age group, as the results remained consistent after controlling compliant engagement.

However, parents did not differ in the variety of instrumental and empathic/emotional subcategories used (task oriented/directive, task oriented/playful, parental need, and child prosociality). At both ages, most parents used most of these substantive strategies at least once. Thus, parents used the same variety of techniques to express their need for help, but used a greater variety of techniques to regulate their younger children's behavior.

## **4.2 CHILD CHARACTERISTICS**

How parents socialized their young children's prosocial helping was related to children's compliance with parents' requests and engagement in the helping task, but not to children's verbal ability, emotion understanding, or prosocial behavior outside of the lab. However, the relationship between compliant engagement and socialization of prosocial helping was in a different direction from what was predicted. It was expected that parents of children who were less compliantly engaged in the task would do more to socialize their children than parents of children who were more compliantly engaged in the task. Instead, a positive relationship was found; children who were more compliantly engaged in the task had parents who socialized and regulated their children's behavior more frequently, tending to use more concrete task-related strategies and reinforcing them more often. This positive relationship may be a reflection of more effective scaffolding by parents, or perhaps of having more opportunities to encourage helping in children who were more participatory, or even of a higher frequency of helping in the more compliantly engaged children, all questions for future research. As expected, parents of compliant and engaged children less frequently needed to get their children's attention. They

also tended to emphasize the value of the children's participation in helping, perhaps trying to reframe the tasks by encouraging the children's contributions.

Although it is difficult to explain the null effects, it is possible that children's verbal ability and emotion understanding did not relate to aspects of parental socialization because parents made their socialization techniques linguistically simple and emotionally transparent. The measure of children's prosocial behavior outside of the lab may have lacked the specificity necessary to relate to this particular helping task as the questionnaire inquires about multiple forms of prosocial behavior and at a more general level. Further, without evidence for the generality of these socialization techniques inferences about how they relate to children's behavior in the real world will remain limited.

### **4.3 FUTURE DIRECTIONS**

While the current research has begun to describe the age related differences in how parents socialize prosocial behavior in their young children, several limitations should be noted and more work is needed. The experimenter initiated task directions could be considered a limitation. The experimenter modeled the task as difficult to accomplish, which may have increased the frequency at which parents highlighted their own need. Conducting the current study with minimal directions would create a more naturalistic environment and perhaps a more realistic account of socialization.

A second limitation is the homogeneity and relatively high levels of education and income of the sample. The majority of the sample was white and had a family income over \$50,000. Parents of these advantages have more access to parenting resources and more time to

spend with their children. These factors may have influenced the frequency and types of socialization strategies the parents in our sample used and limit the generalizability of the results. Future research should sample a more diverse population in order to provide a more nuanced description of the socialization strategies parents use.

The current study illustrates what parents are doing to socialize prosocial behavior, but it does not tell us which techniques are most effective and if the effectiveness of these techniques changes with age and other child characteristics. Thus, while the current work takes a first step toward understanding what parents do to socialize helping, sequential analyses could address parent-child contingency and the immediate efficacy of the specific techniques parents use to encourage their children's prosociality; longitudinal research is needed to examine long-term effectiveness of parental socialization strategies. It should also be recognized, however, that even if what parents do in a given situation is not effective in that particular moment it may be influential over the long run, across many such socialization contexts and teachable moments.

Thus, the fact that the current study examined only children's helping and did so using only one everyday helping task could be considered another limitation. Other prosocial contexts and other forms of prosocial behavior would not only provide a broader picture of how prosociality is socialized, but would also show whether some aspects may be influenced by different forms of socialization. Thus, future studies should include additional helping tasks and different types of prosocial behavior such as comforting and sharing. Furthermore, sampling a wider age range would enable a more detailed illustration of the developmentally relevant changes in parents' socialization behaviors.

In conclusion, the results from the current study indicate that parents engage in a variety of behaviors to socialize and scaffold prosocial behavior in their young children and do so

differently in accordance with children's age and development. While the current results do not speak to the claim that "socialization works in concert with [a] predisposition" toward prosocial behaviors (Warneken & Tomasello, 2006, 2009), they do provide evidence that parents work to promote prosocial behavior in their children. The current research joins a growing body of evidence in a variety of domains supporting age related differences in parental scaffolding of young children's developing behaviors, including coordinated attention (Bakeman & Adamson, 1984); language and communication (Chapman, 1981; Mandle, Barton, & Tomasello, 1992); and social play (Rome-Flanders, Cronk, & Gourde, 1995). Even if such attempts are not effective in the immediate situation, they may be in the long run, by communicating to children the need for and desirability of prosocial behavior and helping them understand when to help and how to do so.

## **APPENDIX A**

### **CODING MANUEL**

#### **A.1 DURATION OF THE INTERACTION**

Measured from the time the experimenters exit the room (shut the door) to the time the experimenters reenter the room (open the door), measured in seconds.

#### **A.2 PARENTAL ENCOURAGEMENTS OF PROSOCIAL BEHAVIORS: SUBSTANTIVE STRATEGIES**

Each instance of parents' task-related encouragement language and behavior \* can be categorized into one of two higher order substantive categories. Each of these is comprised of two lower-level subcategories. These 4 subcategories represent distinct ways that parents try to get their children to help. Decisions about which subcategory best fits the parent's behavior should be made on both what the parent says and how it is said i.e. attend to tone of voice, body language, and/or accompanying gestures that make it clear what message the parent is conveying. The behaviors in each category will be counted.

### **A.2.1 Instrumental Encouragements**

The parent directs or commands the child to do something or get something specific; direct or indirect requests or commands; directive gestures (pointing, reaching for).

1) *Task oriented/directive encouragement techniques*-The parent requests prosocial behaviors by emphasizing specific, concrete, task related behaviors or by physically indicating the desire for an object (e.g. Get the cloth or Go get me another [object's name]!).

2) *Task oriented/playful encouragement techniques*-The parent emphasizes the social aspects of completing the task, togetherness, turns the task into a game and/or emphasizes how fun it can be (e.g. Let's do this together! Or Picking the child up.).

### **A.2.2 Empathic/ Emotional Encouragements**

The parent emphasizes the more abstract needs of the parent for help, or the child's actual or potential role as a helper, rather than the specific behaviors that need to be completed.

1) *Parental need emphasis encouragement techniques* -The parent emphasizes his/her emotional or physical need for help (e.g. This is so hard! Or I have so much to do!).

2) *Child prosociality encouragement techniques* -The parent emphasizes the value of the child's participation in the helping behavior and communicates child's role as helper (e.g. You're such a great helper!).



*Note:* The parent's posture, gestures, intonation and delivery must be taken into account when choosing a category.

### **A.3 REGULATORY STRATEGIES**

Each instance in which parents help their children regulate their own behavior appropriately, scaffold their children's attention so that the children can successfully aid the parent, inform the child that their behavior is desired and appreciated, and encourage the child to repeat or continue a behavior will be categorized into one of five regulatory categories. Each instance of the behavior is counted.

#### **A.3.1 Narration**

Verbalizations that support and encourage the child to help but do not fit into the other categories. This includes parental comments that set up the task, e.g., "Okay, it's time to hang the laundry. First we have to get a cloth."

#### **A.3.2 Reinforcement**

Physical and verbal reinforcements. This includes behaviors such as hugs, high fives, smiles, thanking, and praising that follow any task-related behavior.

### **A.3.3 Attention Getting**

Verbalizations that direct the child's attention toward the task or toward the parent.

### **A.3.4 Gestures alone**

Gestures that indicate to the child what they should be doing to help or participate (e.g., point, "come here" gesture)

### **A.3.5 Paired Gestures**

Gestures that occur with a verbalization in the instrumental or empathic/emotional categories and that serve to convey additional or new information (e.g., point, "give me" gesture)

\*An instance of behavior or language is defined as an uninterrupted stream of language and/or behavior without a pause of more than 1 second.

## **A.4 CHILD CHARACTERISTICS**

For each parent-child dyad child compliance and child engagement throughout the parent-child interaction were coded. This was done using the following Likert Scales:

#### **A.4.1 Child Engagement: (NICHD-Early-Child-Care-Research-Network, 1999)**

Ratings on this scale are based on both quality and quantity of the child's engagement:

1 = Disengaged

This rating should be given to children who display no engagement with the parent throughout the entire session. This rating can be used for children who refuse to look at the task or the parent, refuse to participate in the task, attempt to leave the room on multiple occasions, ignore the parent or play with the distracter toy. Children given this rating seem clearly disconnected and disengaged from what the parent is doing or wants them to do. They actively reject or ignore the parent's efforts to get them engaged.

2 = Low engagement

This rating should be given to children who display little interest in the parent or the task and infrequent or weak engagement, with little engagement overall throughout the entire session. This rating can be used for children who occasionally watch their parent perform the task, but do not participate themselves. These children play with the distracter toys, but occasionally stop their playing to watch their parent work. They are somewhat responsive to the parent, but not in a sustained way. Brief periods of engagement may occur. They mostly appear self-occupied – typically their play and activity excludes the parent although active rejection may also sometimes be present.

3 = Interest in the parent's activity

This rating should be given to children who show more sustained interest in the task, but do not participate fully. These children may try out the task a few times, but are occasionally drawn away by the distracter toy. These children may stand by and watch for most of the task.

#### 4 = Engaged

This rating should be given to children who are more engaged with the parent than not when the parent initiates activity or tries to get them engaged. The child responds to the parent but the intensity and/or frequency of the child's behavior is less than a 5. This rating should be given to children who help or try to help when the parent models or encourages helping. These children rarely spontaneously help or try to help, but they are very interested and do follow directions. They watch their parent engage in the task and participate when asked.

#### 5 = High engagement

This rating should be given to children who are very engaged with the parent and the parent's work and this is sustained throughout the session. The child has a high frequency of positive responses to the parent's initiations and encouragements. Their attention to the parent and the task is sustained throughout the session, they do not leave the task, become distracted, or play on their own. They may spontaneously begin to get clips and cloths, prior to their parent asking for help, imitating the parent's behavior or anticipating the parent's requests. They are eager to play with the parent (if they don't understand that this is helping) and may give the parent clips or cloths, even if at the wrong time, or they may try actively to help the parent and throw themselves into the job.

#### A.4.2 Compliance

This scale indexes the frequency, intensity, and willingness of children's compliance with the parent -- how easy or difficult it is to get the child to cooperate with the parent's directions, requests, or demands.

Parent MUST make requests, give instructions, or direct child to be able to code compliance

1 = Not at all characteristic

- Child is mainly non-compliant even when the parent is firm or insistent, and even after multiple attempts to get the child to come over, pick something up, get something, or hand something to the parent
- Generally does not understand or does not want to comply
- Child may ignore prompts because he/she is more interested in playing
- The child does virtually nothing that is asked of him/her
- Almost never complies

2 = Minimally characteristic

- Child complies very little, only occasionally (10% - 25%)
- Requires continuous prompting to help
- Response time is usually very delayed

3 = Sometimes characteristic

- Child is moderately compliant, complies some of the time (30% - 50%)
- Or may comply quickly once or twice, but offsets this with intense episodes of non-compliance or overall weak compliance
- Needs direction & requires multiple prompts to help
- Mixes playing, which is predominant, with helping even when it is clear that s/he understands the task

4 = Moderately characteristic

- Child is compliant much of the time, but not throughout the whole session (60% - 75%)
- May require initial directive prompting or explicit demonstrations, but child eventually gets it and then does as parent asks
- Complies more often than not with parent's requests

5 = Very characteristic

- Child complies nearly all of the time and does so willingly and immediately (80% - 100%)
- Listens and pays attention to the parent, tries to get it right
- Any noncompliance is weak and short lived, based on not understanding the task rather than willing non-compliance
- Requires little to no prompting, especially after the task is understood

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