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ABSTRACT

ATTACHMENT SECURITY AND PEER ACCEPTANCE AS PREDICTORS OF INTERNAL WORKING MODELS IN MIDDLE CHILDHOOD

By

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Attachment theorists emphasize the importance of children's relationships with their parents, especially mothers, in children's social development (Bowlby, 1988). Several theorists have suggested that internal working models integrate information about other significant relationships into existing models which contain information about parental relationships (Troy & Sroufe, 1987; Cohn, 1990; Rothbard & Shaver, 1994). The nature of these other social experiences gathered throughout development may be either consistent or inconsistent with the nature of the information about parental relationships already contained in the child's developing internal working model. Many researchers have referred to these "social experiences gathered throughout development" and to "model confirming and disconfirming social experiences", yet have not defined the nature of these social experiences, nor have they investigated the impact of different social experiences on the ways children think about relationships. One potential naturally occurring source of model-confirming and disconfirming social experiences involves children's relationships with peers. The focus of this research study is on the differential impact of these two types of relationships (attachment to parents and acceptance by peers) on the ways children interpret the behavior and intentions of others.

The subjects in this study were 126 male and female children, ages 9 - 11, attending the 4th and 5th grades. Children were asked to complete a series of questionnaires including peer nomination inventories, a measure of preoccupied and avoidant coping styles in their relationships with their mothers, a measure of felt security in their relationships with their mothers, and a hypothetical story measure of intent attributions.

The results indicated that children's security of attachment was the largest single predictor of hostile attributional bias in the parent and peer contexts for the entire sample. However, in post-hoc analyses, gender differences emerged in the prediction of hostile attribution bias in the peer context. It was found that boys' social preference scores significantly predicted hostile attribution bias in the peer context while the effect of attachment security was marginally significant. In contrast, it was found that attachment security was a significant predictor of hostile attribution bias for girls while the effects of social impact and physical aggression were marginally significant in the peer context. The hypothesis that model-confirming and model-disconfirming social experiences would differentially predict hostile attribution bias in the peer context was not supported. The results are discussed in terms of their contributions to attachment theory and social information-processing theory.

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INTRODUCTION

Attachment theorists have traditionally emphasized the importance of infants' and young children's relationships with their parents, especially mothers, in children's social development (Bowlby, 1988). A child's attachment to his or her parent is generally described as being secure or insecure and is said to be reflective of the child's perception of the parent as available, responsive, and capable of restoring the child's feelings of security in potentially threatening circumstances (Ainsworth & Wittig, 1969; Ainsworth, Blehar & Waters, 1978; Bowlby, 1969; Bowlby, 1988). According to Bowlby (1988), patterns of attachment remain generally stable and become unconscious properties of individual children. Over time and after repeated experiences with the caregiver, the child develops an unconscious prototype of the relationship with the parent, labeled an internal working model, which is hypothesized to influence later developmental outcomes, particularly qualities of later social relationships (Bowlby, 1988; Rothbard & Shaver, 1994; Teti & Nakagawa, 1990; Troy & Sroufe, 1987).

Attachment theorists describe internal working models as by-products of attachment related experiences that include affective, defensive, and descriptive cognitive components (Rothbard & Shaver, 1994; Bretherton, 1985; Main, Kaplan & Cassidy, 1985). Internal working models are said to function as heuristics for anticipating and interpreting the behavior and intentions of others, govern feelings toward parents and about the self, and aid in planning behavior toward parents and other significant figures (Berman & Sperling, 1994; Bowlby, 1988; Rothbard & Shaver, 1994). Furthermore, they

may influence future interactions by providing frameworks for interpersonal understanding and guidelines for responding (Miller, 1993).

Bowlby (1988) theorized that a gradual updating of working models occurs over time in response to new information. Several theorists have suggested that throughout development internal working models integrate information about other significant relationships into existing models which contain information about parental relationships (Troy & Sroufe, 1987; Cohn, 1990; Rothbard & Shaver, 1994). In this way, internal working models consolidate information about social experiences gathered throughout development (Rothbard & Shaver, 1994).

The nature of these other social experiences gathered throughout development may be either consistent or inconsistent with the nature of the information about parental relationships already contained in the child's developing internal working model. Consistencies between a child's experiences with parents and with others may confirm expectations about the world (model-confirming social experiences), which in turn may strengthen internal working models and, thus, the stability of attachment patterns across the lifespan (Jacobsen & Wille, 1986; Rothbard & Shaver, 1994). On the other hand, inconsistencies between experiences with parents and others may disconfirm a child's expectations for social relationships (model-disconfirming social experiences) and may result in changes to the internal working model (Miller, 1993).

Many researchers have referred to these "social experiences gathered throughout development" and to "model confirming and disconfirming social experiences", yet we have little valid information about the nature of these social experiences or the impact of

differential social experiences on internal working models or subsequent attachment patterns. In part, this is due to a lack of reliable and valid measures of attachment during middle childhood and adolescent developmental periods (Finnegan, Hodges & Perry, 1996). Fortunately, two such measures have recently been developed that, when used in combination, assess children's attachment relationships with their parents in middle childhood (Finnegan, Hodges & Perry, 1996; Kerns, Klepac & Cole, 1996).

In children, one potential naturally occurring source of model-confirming and disconfirming social experiences involves their relationships with peers. Model-confirming experiences would include children who are securely attached to parents and who are popular, or at least who are not experiencing peer difficulties as well as children who are insecurely attached who are either rejected or neglected by peers. Model-disconfirming experiences, then, would include children who are securely attached to their parents who are experiencing either rejecting or neglecting peer difficulties as well as by children who are insecurely attached to their parents who are popular or who are not experiencing peer problems (i.e. average children). The focus of this proposed research study will be on investigating the differential impact of these two types of relationships (variations in attachment to parents and variations in acceptance by peers), particularly in model-disconfirming circumstances, on one aspect of information hypothesized to be contained in internal working models -- the anticipation and interpretation of the behavior and intentions of others.

Social-information processing theory has independently focused on the anticipation and interpretation of the behavior and intentions of others in investigations of

children's attributions of others' intentions, particularly in the peer context. However, this research has been less concerned with the developmental bases for social information processing skills in general and intent attributions in particular. Although recently researchers have begun to note potential connections between family relationships and children's social-information processing skills, potential family contributions to these skills have not been well studied in this literature (Cassidy, Scolton, Kirsh & Parke, 1996; Crick & Dodge, 1994; Quiggle, Garber, Panak & Dodge, 1992).

The proposed study attempts to integrate attachment theory and social information-processing theory, which to date have been relatively separate theoretical perspectives. This study will add to the attachment literature by beginning to explore how children's relationships with their parents combine with later peer experiences to influence children's social knowledge as contained in internal working models. The aspect of social knowledge thought to be contained in children's internal working models that will be the focus of this investigation are children's intent attributions towards both parents and peers. This study will augment the social information processing literature by beginning to explore potential developmental precursors to children's attributional tendencies. To date, the social information processing literature has all but ignored potential familial contributions to children's social information processing skills, including attributional styles. Although recently the social information processing literature has begun to mention possible developmental foundations, such as internal working models, researchers have lacked a developmental focus in their empirical work.

In the pages that follow, this literature review will discuss the relevant attachment, peer relationship, and social-information processing literature. A rationale for this study's hypotheses will be presented in conjunction with a listing of the hypotheses. The procedures for selecting and grouping subjects, data collection, and a description of the measures of the independent and dependent variables will then be discussed in the Methods section. The statistical analyses which were used to test the hypotheses will be described in the Results section. Finally, the results are discussed in terms of their impact on attachment theory and social information-processing theory in the Discussion section. The clinical implications of the findings are explored and directions for future research are suggested.

Chapter 1

LITERATURE REVIEW

Attachment Theory

The Development of Bowlby's Attachment Theory

The modern conceptualization of attachment was developed by Bowlby (1951) as a reaction to Spitz and Wolf's (1947) work regarding the effects of maternal deprivation on children raised in orphanages. Bowlby was asked by the World Health Organization to report on the mental health aspects of maternal deprivation experienced by orphaned children. His observations and completed report laid the groundwork for the theory of attachment. Over a period of several years, Bowlby refined his theory into a form that closely resembles attachment theory as it is known today (Bowlby, 1969).

Attachment theory developed out of four main theoretical traditions (psychoanalysis, ethology, control-systems theory, and cognitive theory), each of which provided an important part of Bowlby's overall conceptualization of attachment (Bowlby, 1988). Bowlby disagreed with the prevailing psychoanalytic theory of the time which hypothesized that the relationship between infant and mother developed from the mother's role in providing the infant with food. Along with his own observations, he was influenced by two important ethological reports which included Lorenz's (1935; as cited in Bowlby, 1988) work that showed a strong bond could form between a mother gosling and her ducklings in the absence of parental feeding behavior and Harlow & Zimmermann's (1959; as cited in Bowlby, 1988) report that Rhesus monkeys preferred a

soft cloth dummy "mother" to a wire mother that provided food. Thus, from ethology came the mainstay of Bowlby's theory of attachment, namely the notion that strong social bonds develop between adults and young of a species distinct from either feeding behavior or sex, in order to facilitate the development of reciprocal interaction patterns over time. The development of object relations theory allowed for the psychoanalytic emphasis on the special nature of the relationship between a caregiver and infant which is necessary for the development of attachment. Control-systems theory provided the foundation for Bowlby's conceptualization of attachment as a *behavioral system* which implies a homeostatic organization as the adaptive regulatory mechanism for maintaining the infant's close proximity to the caregiver. Finally, the concept that infants develop internal working models of their caregiver(s) was supplied by cognitive theory which then facilitated the development of Ainsworth's (1978) procedure for assessing infant attachment and for theoretical extrapolation beyond infancy.

Taken together, the existing theoretical notions described above were woven into a complex theory of the attachment process (Bowlby, 1988). The attachment process is best described as "an adaptive behavioral system with limits that concern the infant's proximity to significant others" (Bowlby, 1988). The major feature of attachment, the control system, is hypothesized to maintain homeostasis by using increasingly sophisticated methods of communication for keeping distance from and accessibility to the attachment figure within acceptable limits. In an evolutionary sense, then, attachment behaviors serve the function of bringing the infant and caregiver into some degree of proximity. Separation of the infant from the caregiver signals to the infant increased risk

of danger and activates the behavioral system which brings the infant into closer proximity to the caregiver, thereby reducing the risk of perceived danger.

As attachment behaviors are conceptualized as reducing perceived increased risk of danger, they are generally observed when stressful or threatening conditions are present. It is especially under these circumstances that the adaptive function of attachment behavior is apparent; closeness to the attachment figure reduces the threat of physical and psychological harm and increases the infant's likelihood of survival. Ainsworth expanded this notion and added the emphasis that the set goal of the attachment behavioral system was not the maintenance of proximity, per se, but the young child's feelings of security, which interact with the setting to activate or terminate attachment behavior.

Secure Base. The goal of felt security is attained by the infant's use of the caregiver as a secure base. Security and exploration needs are balanced through the attachment behavioral system which regulates the proximity of the infant to the mother until the infant is developmentally able to recognize danger signals on his/her own. Attachment behavior, then, succeeds in attaining or maintaining proximity to a caregiver who is perceived as more capable of coping with the world which results in feelings of security and a valuing of the relationship with the caregiver. Thus, the infant may wander away from the caregiver to explore the world for increasingly longer periods of time and distance, yet returns to the caregiver for reassurance of felt security, particularly when conditions signal increased risk of danger to the infant. Upon returning to the caregiver as secure base, the infant's level of felt security is restored and exploration may begin

again in the absence of a real threat. The infant's use of the caregiver as a secure base gives the infant the needed autonomy to accomplish developmental tasks within a comfortable distance from the caregiver who is in reach and able to restore feelings of security when time and/or distance away from the caregiver or perceived potential dangers exceeds the set limits of the attachment system. The phenomenon of the secure base led Ainsworth and her colleagues (Ainsworth & Wittig, 1969; Ainsworth, Blehar & Waters, 1978) to develop the Strange Situation as a means of assessing the quality of infant-caregiver attachment.

Categorization of Attachment Relationships. Categorization of infants' attachment relationships in the Strange Situation is based on observations of the infants' utilization of their mothers in stressful circumstances and on infants' use of their mothers as secure bases for exploration in non-stressful conditions. Ainsworth and her colleagues described three different attachment types: secure, resistant (anxious-ambivalent), and avoidant. Secure infants make up approximately 70% of those tested in the Strange Situation. Securely attached infants exhibit positive reunion behaviors and few proximity-avoidant, angry, or resistant behaviors when reunited with their mothers after a brief separation. Resistantly attached infants comprise approximately 10% of those tested and display both positive reunion behavior and angry and resistant behaviors when reunited with their mothers. Finally, avoidantly attached infants constitute approximately 20% of those infants tested in the Strange Situation. They tend to ignore and avoid their mothers upon reunion.

Evidence from longitudinal studies indicates that although there is some instability across time in the actual attachment behaviors observed in the Strange Situation, there is substantial stability in the tripartite classification of attachment patterns (Rosenblith, 1992). Stability estimates range from 96% between infants and their mothers over a six month period (Waters, 1978) to 81% for fathers and 73% for mothers over a period of several months (Main & Weston, 1981). Longer time periods yield similar results. For example, Grossman & Grossman (1991) reported 87% convergence between attachment categories in infancy and at six years old, although continuity in attachment categorization was stronger with mothers than fathers. When changes in attachment classification did occur, they paralleled changes in life situations. The occurrence of stressful life events and changes in family circumstances influences the stability of the caregiving environment, thus influencing stability in attachment behavior (Rothbard & Shaver, 1994).

Correlates of Infant and Toddler Attachment. Several investigations show that these attachment categories are related to infants' and toddlers' social development in meaningful ways. For example, in a compilation of findings from several studies, Rosenblith (1992) concluded that securely attached children, compared to those who are insecurely attached, were more friendly and cooperative with both peers and adults and were less afraid of strangers. Furthermore, infants' attachment to their mothers was related to conflict behavior with mothers and to infants' responsiveness to a strange adult (Main & Weston, 1981). In their study, fifty-seven percent of infants classified as insecure with their mothers exhibited conflict behavior in a play session with their

mothers compared to only 4% of securely attached infants. In the same study, infants who were securely attached to their parents demonstrated greater relatedness to an adult stranger than did insecurely attached infants, as judged by trained observers. Matas, Arend, and Sroufe (1978) reported that children rated as securely attached at 18 months were more enthusiastic, persistent and compliant, and displayed more positive and less negative affect, and were less aggressive at 24 months than were toddlers rated as insecurely attached.

In the preschool setting, toddlers rated as insecurely attached were observed to be more dependent, requested more physical contact, and received more guidance and discipline from teachers than did securely attached toddlers (Sroufe, Fox, & Pancake, 1983). Troy & Sroufe (1987) reported that in toddlerhood, avoidant attachment was associated with victimization while a secure attachment history was associated with nonvictimization. In particular, they reported that each dyad in which victimization was present was composed of a victimizer with an avoidant attachment history and a victim who was insecurely attached (either avoidant or resistant). No dyads where victimization occurred included a child with a secure attachment history. These findings were supported for girls by a later study in which young girls (4 to 5 years old) who were classified as avoidantly attached were rated as more difficult to deal with and as having more peer problems than were girls classified as securely attached (Fagot & Kavanagh, 1990).

Not only is attachment predictive of the child's behaviors; it also predicts others' perceptions of and reactions to the target child. For example, Waters, Wippman, and

Sroufe (1979) reported that securely attached preschoolers were most likely to be leaders and were sought out as interaction partners. Insecurely attached preschoolers were more likely to be rated by teachers as highly dependent, noncompliant, and socially incompetent. It is important to note that in Waters et al. (1979) sample, mothers were not present when the behavioral ratings were made. The authors concluded that because mothers were not present, internal individual factors, not maternal contingencies, were responsible for the observed behavioral differences between securely and insecurely attached children.

Internal Working Models. It appears to be the internal factors discussed above, labeled internal working models, that form the link between attachment in infancy and childhood and attachment in adolescence and adulthood (Bowlby, 1988; Rothbard & Shaver, 1994; Teti & Nakagawa, 1990). Bowlby (1988) theorizes that internal working models persist over time, are "taken for granted", and become unconscious. Over time, patterns of attachment remain generally stable and become properties of the individual children, themselves. According to Bowlby, the form of the internal working model is based on a child's real life experiences of interaction with parents. Internal working models have been described as by-products of attachment related experiences that include affective, defensive, and descriptive cognitive components (Rothbard & Shaver, 1994; Bretherton, 1985; Main, Kaplan, & Cassidy, 1985). They act as heuristics for anticipating and interpreting the behavior and intentions of others, govern feelings toward parents and about the self, and aid in planning behavior toward parents and other significant figures (Bowlby, 1988; Rothbard & Shaver, 1994; Berman & Sperling, 1994).

Thus, prototypes of relationships are developed which are hypothesized to influence later developmental outcomes, particularly qualities of social relationships (Troy & Sroufe, 1987).

Each attachment style is hypothesized to be associated with a unique combination of working models (Bartholomew, 1990). Securely attached children are likely to have formed working models of their parents as responsive and accessible and of themselves as being worthy of love. Because of the positive nature of their internal working models, they may be more likely to engage in peer interactions with a set of optimistic expectations and to anticipate positive reactions from them. Resistantly attached children are likely to have formed internal working models of their parents as inconsistently responsive and available and, therefore, may anticipate unpredictable peer interactions which they approach with anxiety, hesitancy, and impulsiveness. Finally, avoidantly attached children may have formed working models of their parents as unresponsive, rejecting, and unavailable, and may therefore anticipate rejection from peers which may increase their reliance on hostile and aggressive interactional styles (Cohn, 1990).

In infancy, attachment to a parental figure is measured by observations of the infant's *behavior* in the Strange Situation. Attachment during toddlerhood and early childhood may be measured similarly, or with a newer rating technique, the Q-set; the emphasis in measuring attachment is on the infant or young child's *behavior* usually in the context of a separation or reunion from the primary caregiver. Internal working models, however, have been conceptualized as the *cognitive* representation(s) of information about the attachment relationship(s). Once communication by language

(and/or reading skills) have been reasonably well developed, it is possible to assess not only behavior, but the individual's own *perceptions* of a given attachment figure. Thus, internal working models are measured differently, through the use of self-report measures in middle childhood through adulthood which emphasize *cognitive* perceptions and expectations which are part of the internal working model. The use of self report instruments to measure internal working models is indicative of the notion that working models are representative of the attachment relationship from one individual's (i.e. the child's) perspective (Armsden & Greenberg, 1987).

Integration of Developmental Relationship Experiences into Existing Internal Working Models. Several theorists have suggested that throughout development internal working models integrate information about other significant relationships with information about parental relationships (Troy & Sroufe, 1987; Cohn, 1990; Rothbard & Shaver, 1994). Bowlby (1988) suggested that gradual updating of working models occurs over time in response to new information. Rothbard & Shaver (1994) concluded that internal working models appear to mediate the relationship between attachment history and subsequent personality development by consolidating information about social experiences gathered throughout development. To the extent that differences in attachment relationships elicit differential social responsiveness, this differential treatment may confirm expectations about social interactions, which in turn strengthens internal working models and, thus, the stability of attachment patterns across the lifespan (Jacobsen & Wille, 1986; Rothbard & Shaver, 1994). Similarly, internal working models may change through the experience of model-disconfirming social experiences.

However, many researchers have referred to these "social experiences gathered throughout development" and to "model confirming and disconfirming social experiences", yet we have little valid information about the nature of these social experiences or the impact of differential social experiences on internal working models or subsequent attachment patterns. In part, this is due to a lack of reliable and valid measures of attachment during middle childhood and adolescent developmental periods (Finnegan, Hodges & Perry, 1996). In children, one potential naturally occurring source of model-confirming and disconfirming social experiences involves their relationships with peers. Model-confirming experiences would include children who are securely attached to parents and who are popular, or at least who are not experiencing peer difficulties as well as by children who are insecurely attached who are either rejected or neglected by peers. Model-disconfirming experiences, then, would include children who are securely attached to their parents who are experiencing either rejecting or neglecting peer difficulties and as children who are insecurely attached to their parents who are popular or who are not experiencing peer problems (i.e. average children). The focus of this project will be on investigating the differential impact of these two types of relationships, particularly in model-disconfirming circumstances, on the contents and function of one aspect of internal working models, the anticipation and interpretation of the behavior and intentions toward others (i.e. attributional bias). However, attachment to parents and peer experiences are related and a bias toward model-confirming peer experiences is expected (Pettit, Dodge & Brown, 1988; Cohn, 1990; Downey, Lebolt & Rincon, 1995).

Attachment and Psychosocial Adjustment. Attachment measured both predictively in infancy or toddlerhood and concurrently in middle childhood or adolescence has been shown to be related to later psychosocial adjustment and peer relationships during middle childhood and adolescence. Attachment to parents is related to school adjustment for both children and adolescents (Cohn, 1990; Hazan & Hunt, 1997). Six year-old boys who were insecurely attached to their mothers were less well-liked by peers and teachers and were rated by teachers as less competent and as having more behavior problems than secure boys (Cohn, 1990). Hazan and Hunt (1997) longitudinally investigated the relationship between attachment and psychosocial adjustment to the transition to college (across the first year) in late adolescents. They reported that both before and after the freshman year transition to college, subjects who rated themselves as securely attached were functioning better and had adapted better to the transition to college than had insecurely attached individuals. Furthermore, immediately after leaving home securely attached subjects reported feeling worse on many psychosocial variables (loneliness, depressive symptoms, anxiety, psychosomatic symptoms) and did not report feeling better on any psychosocial variables. They (securely attached subjects) also reported the most rapid recovery after the transition to college of the three attachment-style groups. Interestingly, insecurely attached individuals reported initial improvements in functioning immediately after leaving home, experienced declines in functioning throughout the school year, and functioned more poorly on a long-term basis (across the first year of college) including proportionally more health clinic visits throughout the school year (88% of the avoidant group vs. 80%

ambivalent group vs. 46% secure group) than they had before the transition to college and compared to the secure group.

Attachment is also related to internalizing and externalizing behavioral problems in middle childhood and adolescence (Armsden & Greenberg, 1987; Cohn, 1990; Finnegan, Hodges, & Perry, 1996; Hodges & Finnegan, 1990; Kobak & Sceery, 1988). In general, insecurely attached individuals exhibit higher levels of both internalizing and externalizing behaviors than did securely attached subjects, as measured by both self- and teacher-reports. Distinctions between the two insecure groups have been reported, but with less consistency than the insecure-secure comparisons. In general, however, resistant attachment styles have been associated with increased internalizing problems, most notably anxiety and depression, compared to both securely and avoidantly attached individuals (Hazan & Hunt, 1997; Kobak & Sceery, 1988). Avoidant attachment has been associated with increased externalizing difficulties (Finnegan, Hodges, & Perry, 1996; Kobak & Sceery, 1988), decreased internalizing problems (Finnegan, Hodges, & Perry, 1996), and overt hostility (Hazan & Hunt, 1997) compared with securely and avoidantly attached children.

Finally, attachment to parents and to peers is related to overall perceptions of life satisfaction in adolescence (Armsden & Greenberg, 1987; Hazan & Hunt, 1997; Osbourne, Cooper, & Shaver, 1993). Armsden & Greenberg (1987) reported that adolescents who were securely attached to their parents had higher self-esteem and reported greater satisfaction with themselves than did insecurely attached subjects. Those who were securely attached to their peers also reported higher self-esteem and greater

overall life satisfaction than did those who were insecurely attached to peers. Two later studies also found that securely attached individuals reported greater life satisfaction (Hazan & Hunt, 1997; Osbourne, Cooper, & Shaver, 1993).

Some researchers have hypothesized that differences in social support may mediate the relationship between attachment style and psychosocial adjustment (Armsden & Greenberg, 1987; Osbourne, Cooper, & Shaver, 1993). This hypothesis has received some initial support. Armsden & Greenberg (1988) reported that securely attached subjects were more likely to seek social support and they desired significantly more sharing of important concerns with others than did insecurely attached subjects. Social network deficiencies and decreased likelihood to have a romantic partner were reported as correlates of the insecurely attached group in another study (Osbourne, Cooper, & Shaver, 1993). This study examined the social support mediation hypothesis and found evidence that secure-insecure differences in psychosocial adjustment were in part accounted for by differences in social support. There was also preliminary evidence that network deficiencies were more strongly linked to maladjustment among ambivalently attached adolescents compared to avoidantly attached adolescents.

Attachment and Peer Relationships. As early social and emotional experiences occur within the family context, it is understandable that the quality of the parent-child relationship would serve as guides or templates for children's peer relationship development (Burks & Parke, 1996; Cohn, 1990). In fact, one study reported 72% agreement between categorical assignment to secure and insecure attachment groups on parent and peer attachment measures (Armsden & Greenberg, 1987). The literature

regarding the relationship between parental attachment and subsequent peer relationships indicates that attachment influences children's cognitive perceptions of peer relationships as worthwhile (Cohn, 1990), children's social competence and social status (Cohn, 1990; Fagot & Kavanagh, 1990; Kobak & Sceery, 1988; Sroufe, Fox, & Pancake, 1983), and children's social problem-solving styles (Burks & Parke, 1996; Parke & Waters, 1989; Petit, Dodge, & Brown, 1988; Weiss, Dodge, Bates, & Petit, 1992).

There have been few studies about the relationship between attachment and children's perceptions of relationships as inherently pleasing. Cohn (1990) appears to be the first to attempt to address this interesting issue. Cohn reported that insecurely attached boys assigned lower liking ratings to classmates and desired less contact with classmates that did securely attached boys. This finding is consistent with the literature on attachment and social support in adolescence discussed earlier which indicated that securely attached individuals were more likely to seek out social support and desired significantly more sharing of serious concerns with others than did insecurely attached adolescents (Armsden & Greenberg, 1987; Kobak & Sceery, 1988; Osbourne, Cooper, & Shaver, 1993).

There is much more overwhelming evidence regarding the influence of attachment to parents on children's social status and social competence. There is ample support for the notion that attachment to parents is moderately predictive of children's experience of peer rejection and victimization (Petit, Dodge & Brown, 1988). In general, secure attachment to parents is associated with peer popularity and non-victimization (Sroufe, Fox, & Pancake, 1983; Troy & Sroufe, 1987) while insecure attachment to

parents is consistently associated with peer rejection and victimization (Cohn, 1990; Finnegan, Hodges, & Perry, 1996; Sroufe, Fox, & Pancake, 1983). One study reported that 67% of rejected boys were insecurely attached compared to only 28% of boys in a non-rejected group (Cohn, 1990). The emergent pattern of insecure attachment and peer rejection and/or victimization is dramatically illustrated when children's relationships are viewed dyadically (Sroufe, Fox, & Pancake, 1983). In their study regarding play dyads with non-familiar peers, no dyads with at least one securely attached child had victimization occur while 83.4% of play pairs consisting of two insecurely attached children evidenced victimization. Furthermore, one hundred percent of play pairings which included at least one child with avoidant attachment and a second child with either avoidant or ambivalent attachment exhibited victimization, while no remaining pairs (including two ambivalently attached or at least one securely attached child) experienced victimization, indicating a strong relationship between avoidant attachment and victimization.

Examinations of relationships between attachment and children's social competence provides some insight into the established moderate relationship between attachment and social status. In general, securely attached children are rated as more socially competent than insecurely attached children (Cohn, 1990; Kobak & Sceery, 1988; Sroufe, Fox, & Pancake, 1983). Fagot & Kavanagh (1990) reported that girls classified as avoidantly attached were more difficult to deal with and had more difficulty with peers based on teacher reports and in-class observations. Insecure attachment is also related to increased dependency on teachers, seeking more physical contact with them,

and receiving significantly more guidance and discipline from them compared with securely attached children (Sroufe, Fox, & Pancake, 1983). It is important to note that in this study, although all children sought teacher attention, the insecurely attached children did so in significantly more negative and less effective ways and sought more help in self and social management than did securely attached children. Insecure attachment is also associated with a hovering peer group entry style (Finnegan, Hodges, & Perry, 1996). Dyadically, mother-child attachment was related to play behavior of best friend pairs during free play (Parke & Waters, 1989). In this observational study, best friend dyads consisting of two securely attached children evidenced more harmonious and responsive play and fewer controlling behaviors than did dyads including at least one insecurely attached child. The authors concluded that stylistic aspects of social competence, rather than content of peer play as had been previously suggested, may be most closely related to attachment.

One hypothesized link between attachment to parents and social competence with peers is children's social problem-solving style (Burks & Parke, 1996; Parke & Waters, 1989; Petit, Dodge, & Brown, 1988; Weiss, Dodge, Bates, & Petit, 1992). Attachment to parents was related to both the overall number of solutions and the number of prosocial solutions generated to hypothetical problems situations (Petit, Dodge, & Brown, 1988). As would be expected, securely attached children generated a significantly greater number, and also more prosocial solutions to the hypothetical situations. In best friend play dyads, secure-secure dyads did not experience less conflict that secure-insecure dyads, but resolved their conflicts using more prosocial and effective conflict resolution

strategies, such as negotiation (Parke & Waters, 1989). Secure-insecure best friend dyads used more direct and less effective strategies, such as grabbing toys from one another. Insecure-insecure dyads were not studied.

Finally, there is some evidence to suggest that attachment-related functions are transferred from parents to peers during middle childhood to late adolescence (Hazan & Zeifman, 1994). Hazan & Zeifman identified four components of attachment relationships which included proximity seeking, safe haven, separation protest, and secure base phenomena. They found that attachment functions transfer from parents to peers, component by component, in the order listed above. They reported that all children were peer-oriented for proximity seeking behavior. A shift from parents to peers occurred beginning at age 8 and completed at age 14 in preferring peers as safe-havens, which they defined as comfort and reassurance seeking. Parents continued to be preferred as secure bases and targets of separation protests until serious romantic relationships were developed in late adolescence.

Attachment and Aggressiveness and Withdrawal. Another factor influencing the relationship between attachment to parents and social status is the relationship between attachment and aggression and attachment and social withdrawal. Consistent findings indicate that insecurely attached children tend to be more aggressive or more anxious and withdrawn than securely attached children (Cohn, 1990; Finnegan, Hodges, & Perry, 1996; Lyons-Ruth, 1996; Lyons-Ruth, Alpern, & Repacholi, 1993). Although these results may seem contradictory, the picture becomes clearer when insecure attachment is divided into its three general categories (avoidant, ambivalent, and disorganized). In

general, avoidant attachment to parents is consistently positively associated with increased externalizing problems (Hodges & Finnegan, 1995) and with aggressiveness, dishonesty, disruption, and immaturity and negatively associated with internalizing problems (Finnegan, Hodges, & Perry, 1996). Ambivalent attachment to parents is generally associated with the absence of aggression (Hodges & Finnegan, 1995) and with increased anxiety and withdrawal (Hazan & Hunt, 1997). This finding is not always the case as one study reported that ambivalently attached boys were perceived as markedly more aggressive than secure boys while avoidantly attached boys were only marginally significantly more aggressive than securely attached boys (Cohn, 1990). Nonetheless, the prevailing notion in the bulk of the literature is that avoidant attachment is associated with aggression while ambivalent attachment is associated with anxiety and withdrawal.

There is new interest in the third insecure attachment category, disorganized attachment. This fairly new attachment category was created based on researchers' observations that some children did not clearly fit into avoidant or ambivalent attachment categories, yet seemed to begin to evidence avoidant or ambivalent attachment behaviors which were halted mid-stream (Bowlby, 1988). Thus far, the two studies that examined the relationship between disorganized attachment to parents and aggression or withdrawal have been promising. The first study in the series reported that disorganized infant attachment was the strongest single predictor of hostile behavior towards peers (Lyons-Ruth, Alpern, & Repacholi, 1993). In this study, 71% of preschoolers rated as hostile were classified as having a disorganized attachment toward parents. Furthermore, hostile preschoolers were six times more likely to be classified as disorganized than as securely

attached. This study received later support in a sample of school-aged children (Lyons-Ruth, 1996). The robust results of these two studies may provide clues to the somewhat inconsistent results found regarding avoidantly and ambivalently attached children, although more studies than not result in similar conclusions that avoidantly attached children display more hostile and aggressive behaviors than do securely attached or preoccupied children.

Although attachment to parents and peer experiences are significantly related, the relationship is by no means a perfect association. Subsequent peer experiences may tend to be similar to children's experiences with their parents; however, the possibility exists that they may also be very different from experiences with parents. It is with these continuities and discontinuities in mind that I now turn to a discussion of children's peer experiences. The majority of literature in this area conceptualizes peer experiences in categorical terms of children's acceptance or non-acceptance by peers, termed social status. Examining children's social status in comparison to children's attachment to their parents will provide information regarding potential sources of model-confirming and model-disconfirming social experiences which are likely to influence the development of internal working models.

Peer Relationships

Definitions of Social Status Groups. When discussing children's social status (acceptance or non-acceptance by peers) a distinction must first be made between a child's level of acceptance in the peer group ("Is the child liked"?) and the child's behavior which may be related to his/her acceptance by the group ("What is the child

like"?; Parker & Asher, 1987). In the context of defining social status groups, the focus is on whether or not the child is liked by peers rather than on child behavior characteristics related to placement in social status categories.

Determining the level of a child's peer acceptance depends on the use of acceptance-related and/or rejection-related peer ratings or nominations. In general, examining both acceptance-related and rejection-related peer perceptions is preferable to acceptance-related perceptions alone as the combination is more descriptive and allows for finer distinctions between social status groups to be made (Coie, Dodge & Coppotelli, 1982; Asher & Dodge, 1986; French, Waas & Tarver-Behring, 1986).

In defining social status groups, two dimensions of a child's effect on the peer group are important to consider: social preference and social impact (Coie, Dodge, & Coppotelli, 1982). Social preference is defined as how much a child is generally liked or preferred as a play partner by the peer group. It is measured as the child's level of acceptance (liking) minus the child's level of non-acceptance (disliking). It is positively predicted by positive constructs including being supportive of peers and being physically attractive and negatively predicted by peers' perceptions of a child as disruptive, unattractive, and, for eighth graders only, by not fitting in with peers. Coie & Dodge (1983) reported that social preference remained stable across a 5-year period.

Social impact is the level of the child's influence on the peer group, either positive or negative (Coie, Dodge & Coppotelli, 1982). That is, social impact represents the extent to which the child is "visible" to the peer group in terms of his or her positive or negative effect on peers. It is measured by summing the child's liking (acceptance) and

disliking (non-acceptance) scores. In contrast to social preference, social impact is positively predicted by peers' perceptions of both positive and negative indicators including being supportive of peers and being a leader, disrupting the group, starting fights, getting into trouble with the teacher, and, for eighth graders only, being picked on by peers. Coie & Dodge (1983) reported that social impact was somewhat less stable than social preference; social impact remained stable across time periods of three years or less.

When social preference and social impact are considered together, five social status groups emerge labeled popular, rejected, controversial, average, and neglected (Coie, Dodge, & Coppotelli, 1982). Children in the popular social status group have high social preference scores and average social impact scores. That is, popular children are well-liked by peers, tend to be named as preferred play partners, and have a moderate impact on their social group (due to high liking ratings added to low disliking ratings). At the opposite end, rejected children have low social preference scores and average social impact scores. Children in the rejected group tend to be actively disliked by peers, rejected as play partners, and have an average social impact on other children (due to low liking ratings added to high disliking ratings). Children in the controversial group appear to combine aspects of both popular and rejected children, although they clearly do not belong to either group. Controversial children have high social impact scores (many liking and disliking nominations) and average social preference scores (Coie, Dodge & Coppotelli, 1982) as they tend to receive mixed evaluations from classmates (Coie & Dodge, 1988). Thus, controversial children are at the same time liked and disliked by

classmates and have a substantial influence on peer group interactions (due to the effects of both positive and negative interactional influences). Children in the average group are aptly labeled. Average children have intermediate social preference scores and intermediate social impact scores. Although they receive average ratings and some nominations from peers, they are not actively liked nor are they actively disliked and they tend to have an average level of social impact on peers. Finally, children in the neglected social status group have intermediate social preference scores and low social impact scores. Neglected children, as with average children, are not actively liked or disliked by peers. In contrast to average children, neglected children tend to be less "visible" to the peer group and have little influence on other children (few liking and few disliking ratings).

Coie & Dodge (1983) conducted a five-year longitudinal study of the stability of social status categories. Overall, they concluded that although variability existed, social status in year five was significantly positively related to social status in year one. The rejected subgroup was the most stable; 45% of children classified as rejected in year one were so classified in year five. The neglected subgroup was the least stable with only 25% of children being classified as neglected after a one year period.

Coie & Dodge (1983) also reported the patterns in direction of status changes for each of the social status categories. Children who were popular in year 1 were most likely to either remain popular or change to average status in year 5. Popular children in year 1 were less likely than chance to become rejected in year 5 (only 5% did so). Rejected children tended to shift their social status in one of three ways over the five year

period: 30% remained rejected, 30% became neglected, and 36% became average. Given this data, it appears that majority (30% + 30% = 60%) of rejected children continued to experience some type of peer difficulty over a five year period. Children who were rejected in year 1 were less likely than chance to be popular in year 5 (3%). Of the children who were neglected in year 1, 24% remained neglected five years later, 45% became average, and 24% became popular. Children in the controversial status group at year 1 were most likely to become either popular or rejected in year 5. Finally, average children at year 1 were most likely to remain average or to become popular five years later.

Behavioral Profiles of Social Status Groups. The weight of the literature suggests that distinctive patterns of behavior exist for each of the status groups and that these patterns are consistent over several age groups (Coie, Dodge & Coppotelli, 1982; Coie & Dodge, 1983; Coie & Dodge, 1988; Dodge, 1983; French, 1988; French & Waas, 1985). These behavioral patterns are concurrently related to children's social status and are predictive of children's social status one and five years later, particularly for aggressive behaviors (Coie & Dodge, 1983). To date, it appears that there are no long-term longitudinal studies which have examined how the stability of children's social status is related to or predictive of subsequent behavioral characteristics. In general, as would be expected, popular children tend to be more prosocial than children in the other social status groups as rated by peers and are rated by teachers as the most prosocial group (Coie, Dodge & Coppotelli, 1982; Coie & Dodge, 1988; Cantrell & Prinz, 1985). Compared to other groups they are viewed as cooperative and as leaders (Coie, Dodge &

Coppotelli, 1982), are described by peers as nice and liked by everyone (Cantrell & Prinz, 1985), have a greater likelihood of having friends and best friends, and have the highest number of friendships (Parker & Asher, 1993).

Children in the rejected social status group are the most well-studied because of concern about their "at risk" status (Parker & Asher, 1987). Children in this group appear to be the least well-adjusted compared to the other social status groups and tend to display many different problem behaviors at home and in school (French & Waas, 1985; Vosk, Forehand, Parker & Rickard, 1982). French & Waas (1985) reported that on the Child Behavior Checklist (CBCL), rejected children on average scored greater than the 90th percentile (the clinical range) on three subscales including Social Withdrawal, Hyperactivity, and Delinquency. As a group, their average scores on the other clinical subscales ranged from the 78th to the 88th percentiles, in the borderline clinical range. Compared to children in the other social status groups, rejected children had the highest number of total behavior problems, were the most aggressive, and the most hostily isolative. According to peers and teachers, rejected children are viewed as significantly more aggressive, disruptive, bossy, immature, and restless than other social status groups except for the controversial children, significantly less prosocial than other groups except for neglected children, and are rated by teachers as having greater academic difficulties and more isolative behavior than other groups (Coie & Dodge, 1988; Cantrell & Prinz, 1985; Dodge, Coie & Brakke, 1982; Dodge, 1983). They are less likely to report having friends and best friends, they have the fewest number of friends, report less validation and caring within their friendships, have more difficulty resolving conflicts with friends, and

report more conflict and betrayal in friendships than do well-accepted children (Parker & Asher, 1993).

The increased aggressiveness of children in the rejected social status group relative to the other groups has also recently been supported for girls (Crick & Grotpeter, 1995). Crick & Grotpeter theorized that the type of aggression displayed is consistent with a person's (in this context, a child's) salient goals. A consistent finding in the literature is that boys are more overtly physically and verbally aggressive than girls. Crick & Grotpeter theorize that this finding is consistent with salient goals for boys which tend to include physical dominance and instrumentality and suggests that forms of aggression relevant to girls have not been accurately conceptualized and assessed. In contrast, salient goals for girls include the development of close, intimate relationships. Therefore, these researchers theorized that girls' aggressive behavior would be directed toward these relational issues (i.e. relational aggression) including excluding peers from groups, withdrawing friendship in order to hurt or control others, and spreading rumors, with the overarching goal of damaging peer relationships. The authors found that the concept of relational aggression was relatively distinct from overt aggression and was related in the theorized ways to gender (significantly more girls than boys were classified as being relationally aggressive). Furthermore, they found that rejected and controversial status girls exhibited the highest levels of relational aggression, similar to the pattern French & Waas (1985) and Coie & Dodge (1988) have reported for verbal and physical aggression in rejected boys. This study highlights the importance of considering relational aggression when assessing children's, particularly girls', peer relationships.

French (1988) has challenged the prevailing notion that the majority of rejected boys are aggressive. Using cluster analysis, he identified two clusters of rejected boys which he described as aggressive and non-aggressive subtypes. One cluster, the aggressive subtype of rejected boys, shares the behavioral profile discussed above for children in the rejected social status group. They tend to be perceived as having more overall behavior problems, more aggressive and solitary, exhibit higher rates of negative behaviors and lower rates of positive behaviors, and have less self control than do children in the other social status groups. The second cluster, labeled the non-aggressive subtype, experienced peer rejection, but were not significantly more aggressive than peers in the other social status groups. Similar to the aggressive subtype of rejected boys, the non-aggressive subtype received low teacher ratings of positive behavior and were withdrawn and involved more often in solitary activity. In contrast to the aggressive subtype, however, they did not exhibit significant behavioral problems or aggression. On the basis of this data, French (1988) concluded that only approximately fifty percent of rejected boys exhibited multiple behavior problems and an aggressive behavior profile. This challenge has received additional support from a recent study by Parkhurst & Asher (1992) who also identified aggressive and non-aggressive subtypes of rejected children.

Parkhurst & Asher (1992) also provided initial support for the existence of a submissive subtype of socially rejected children. Three subtypes of socially rejected children were identified in this study: one subtype characterized by the "usual" aggressive behaviors, a second subtype characterized by submissive behavior, and a third type which included children who did not fit into the aggressive or submissive subtypes. Both the

rejected-aggressive children and the submissive-rejected children were perceived by their peers as less cooperative and trustworthy and less able to handle teasing. However, in contrast to their rejected-aggressive peers, submissive-rejected children did not exhibit high levels of aggressive or disruptive behavior and were not judged to be less kind by their peers. Furthermore, compared to rejected-aggressive and average status peers, only the rejected-submissive subtype reported feeling lonely and concerned about the possibility of being humiliated or rejected by peers during after lunch times and between classes. This classification system is further supported by a cluster analysis which revealed internalizing and externalizing subtypes of rejected children similar to the submissive and aggressive subtypes proposed by Parkhurst & Asher (1992) (Pope, Silva & Reda, 1991).

As previously stated, children in the controversial social status group tend to possess combined features of the popular and rejected groups and this combination is carried through into their characteristic behavior profile. Similar to popular children, they are identified as group leaders, described as cooperative, funny, and good at sports, and fall between popular and average children on measures of prosocial behavior (Coie, Dodge & Coppotelli, 1982; Coie & Dodge, 1983; Coie & Dodge, 1988). However, they have also been described as similar to rejected children in that they are seen as disruptive, aggressive, prone to anger, active, and are frequently off-task in the classroom (Coie, Dodge & Coppotelli, 1982; Coie & Dodge, 1988; Dodge, 1983). Controversial children are also the only group to score below the mean on shyness, leading researchers to

conclude that they are "visible, active, and assertive" children (Coie, Dodge & Coppotelli, 1982).

Children in the neglected group have been described as the "polar opposites" of children in the controversial group with the exception of similar levels of cooperative behavior (Coie, Dodge & Coppotelli, 1982) and are sometimes difficult to distinguish from the average group except that they receive fewer peer nominations for being helpful and nice (although they are not perceived as lacking these attributes; Cantrell & Prinz, 1985). They are often perceived as shy (Coie & Dodge, 1983), are less likely to clown around and get others to laugh (Cantrell & Prinz, 1985), and engage in more task-appropriate solitary activity than children in the other social status groups (Coie & Dodge, 1988; Dodge, Coie & Brakke, 1982). They are perceived as avoidant of aggression and seem to be generally peaceable, reserved, and less likely to offend peers than other children (Coie & Dodge, 1988; Dodge, 1983). Because they are less interactive with peers overall (including both prosocial and aggressive behavior), they have been described as a "low visibility group" (Coie, Dodge & Coppotelli, 1982; Coie & Dodge, 1988). There is some evidence that neglected children do not start out being less interactive, but become so over time as they experience social rebuffs from peers (Asher, 1983; Dodge, 1983).

Social Status Implications for Psychosocial Adjustment. In a review of the literature, Parker & Asher (1987) concluded that children with poor peer adjustment were at risk for later psychosocial difficulties. Specifically, Parker & Asher reported three general conclusions from their review. First, they concluded that, retrospectively,

between 28 and 70 percent of adults with psychological disorders have histories of poor peer relationships. Second, prospectively, they concluded that two variables, low peer acceptance and aggressiveness, were more consistent predictors of later negative outcomes than were shyness or withdrawal. Finally, on closer examination of the predictive pattern for low acceptance and aggressiveness, they reported that low peer acceptance appeared to be a better predictor than aggression for dropping out of school before high school graduation while aggressive behavior appeared to be a better predictor than low peer acceptance for criminal behavior.

Parker & Asher's (1987) conclusions suggest that children who are both rejected and aggressive may be at the greatest risk for later maladjustment. Although few studies have empirically studied this possibility, one study, in particular, lends support to the at-risk status of rejected-aggressive children (Bierman, n.d.). Bierman followed four subtypes of children (aggressive and rejected, rejected but not aggressive, aggressive but not rejected, and neither rejected or aggressive) over a two year period and assessed their adjustment difficulties. She reported that "rejected-aggressive boys fared the worst". They were comparable to the aggressive not rejected group in levels of physical aggression and prosocial behavior, but in contrast boys who were both rejected and aggressive exhibited addtional conduct problems including being argumentative, disruptive, and inattentive. Furthermore, Bierman concluded that rejected boys who were not aggressive appeared to be at low risk for the development of additional conduct problems, although they remained at moderate risk for continued peer rejection over the

two year period. Boys who were both rejected and aggressive were at "considerable risk for continuing social adjustment difficulties".

Not only do rejected children, particularly rejected-aggressive children, appear to be at risk for conduct problems (Bierman, n.d.) and dropping out of school (Parker & Asher, 1987), they also appear to hold inaccurate views of themselves (Asarnow & Callan, 1985; Patterson, Kupersmidt & Griesler, 1990). Asarnow & Callan (1985) reported that although rejected children experienced the highest degree of peer problems compared to the other social status groups, they endorsed equal numbers of positive statements about themselves as did children from the other social status groups. The authors suggested that the lack of a difference between rejected children and those from other social status groups in the valence of their self-statements might be reflective of increased use of denial and decreased willingness by rejected children to acknowledge and consider negative information about themselves.

Patterson, Kupersmidt & Griesler (1990) examined children's self-perceptions compared to teacher reports of their behavior. They reported that rejected children often overestimated their competence in several important areas whereas none of the children in the other sociometric groups did. In fact, in this study, children from the other sociometric groups tended to underestimate themselves including underestimates of their actual level of acceptance by peers and underestimates of their self-perceived behavioral competence. In contrast, although rejected children did report overall lower levels of behavioral and social competence (consistent with teacher reports) they nonetheless

reported overestimates of their level of acceptance by peers and of their behavioral competence (especially rejected-aggressive children).

Evidence also exists that, in addition to holding inaccurate views of themselves, rejected children also hold distorted views of others and may experience deficits in social information- processing skills (Asarnow & Callan, 1985; Asher, 1983; Crick & Ladd, 1990; Parker & Asher, 1993). It is possible that the inaccuracies of children experiencing peer difficulties reflect an internal working model of the world and other people as hostile and threatening. This possibility was recently proposed by Dodge & Crick (1994) in a review of the social information processing literature. One aspect of internal working models which is likely to be related to both attachment styles and peer experiences is the models' function as an heuristic for anticipating and interpreting the behavior and intentions of others (Berman & Sperling, 1994; Bowlby, 1988; Rothbard & Shaver, 1994). This function, labeled an intent attribution, has been well studied in a relatively independent avenue of research using social information-processing theory. The following is a brief review of social information- processing theory, particularly as it relates to intent attributions. In addition, I will argue that the construct of intent attributions and attributional biases closely approximates one of the functions of internal working models, i.e. that they act as heuristics for anticipating and interpreting the behavior and intentions of others.

Intent Attributions

Social Information-Processing Theory. Social information-processing theory has its roots in attribution theory and cognitive theory and proposes a series of steps which

individuals move through when attempting to understand and react to social situations (Crick & Dodge, 1994). An earlier version of the social information-processing model proposed that children (and adults) move through a series of five steps in a linear and rigid fashion when attempting to understand and make decisions about social situations (Dodge, 1986). However, a recent reformulation of the model (Crick & Dodge, 1994) emphasizes the cyclical nature of social information-processing which acknowledges the probable non-linearity of processing steps as well as the likelihood that individuals process information in several domains simultaneously. In addition, the reformulated model emphasizes the transactional nature of social information-processing including interactions between existing knowledge and processing at each step as well as reciprocity between processing and social adjustment.

The reformulated social information-processing model includes six steps conceptualized to occur both simultaneously and following a logical path from being presented with a social stimulus through enactment of a behavioral response (Crick & Dodge, 1994). The first step in the reformulated model is the encoding of the internal and external cues of a given situation. Step two involves the interpretation of those cues including both causal and intent attributions. After the situation is interpreted, step three represents the clarification or selection of a desired goal or outcome for that situation. In step four, different responses to the situation are either accessed from memory or constructed (if the situation is novel). Step five involves making a response decision. In this step, the potential responses are evaluated in terms of self-efficacy and possible outcomes and the best one is selected for enactment. Finally, the last step, step six,

involves the behavioral enactment of the selected response. The proposed study will focus on step two of the social information-processing model, the interpretation and representation of situational cues.

Attribution Theory. In step two of the social information-processing model, situational cues are interpreted and represented in memory (Crick & Dodge, 1994). The interpretation which takes place represents the individual's search for the causes of another's behavior, labeled an attribution (Dodge & Crick, 1990). Attributions may be causal, reflecting internal/external, stable/unstable, or global/specific interpretations or they may involve interpretations of the other person's intentions. According to Aydin & Markova (1979), the attributional process is generally not engaged when the outcome of another person's actions are positive and when that person's actions are similar to an average person's actions in a similar situation because the actions are consistent with general social expectations. However, when another person's actions are negative, they are usually unexpected and therefore attempts are made to explain the "dispositional qualities of the actor". In addition, in situations in which information about the cause of another's action is unavailable or ambiguous, general assumptions and expectations about people and their actions are likely to play an important role in the way causal attributions and inferences about others' intentions are made. Biases in judging other people's intentions as positive or negative probably reflect an individual's previous experiences with other people (Aydin & Markova, 1979; Crick & Dodge, 1994). However, reliance on past social knowledge and experiences may lead to ignoring relevant social cues and contextual factors (called fundamental attributional error), which is likely to result in

maladaptive behavioral responses (Crick & Dodge, 1994; Dodge & Crick, 1990). For the context of the proposed study, attributions are defined as inferences made of another person's intent in an interaction. Following Aydin & Markova (1979) and Crick & Dodge (1994), biases in judging others' intentions are viewed as reflective of generalizations from previous social knowledge and experience, just the kind of information that is likely to be contained in internal working models.

Attachment and Intent Attributions. In general, family contributions to any of the social information-processing skills have not been well studied. To date, only three recent studies have investigated the relationship between family variables and children's intent attributions. Two of the three studies were based on attachment theory, although rejecting parental behavior, not attachment, was measured for the period of middle childhood (Burks & Parke, 1996; Cassidy, Scolton, Kirsh & Parke, 1996; Downey, Lebolt & Rincón, 1995). Burks & Parke (1996) studied the relationship between children's intent attributions toward parents and separately toward peers. The relationship between children's attributions of parents' and peers' intent was related, but depended on the type of situation presented. Children's intent attributions toward their fathers (but not toward their mothers) and toward their peers during an ambiguous provocation situation were related to each other. In a mild rejection situation, however, children's intent attributions of their mothers (but not fathers) and attributions of their peers were related. Based on the pattern of findings, the authors concluded that children develop representations of family relationships which are used as guides for later relationships with peers.

Downey, Lebolt & Rincón (1995) examined the relationship between rejecting parent behavior (which they defined as hostile and not focused on the child's needs) and children's social information processing. They hypothesized that rejecting parenting would cause children to be rejection sensitive, which in turn would be related to children's expectations of rejection from others, hostile attributions, aggressive behavior, and interpersonal difficulties. The results were consistent with their predictions and they reported that children who experienced parental rejection expected more rejection by peers and teachers. The authors concluded that children's relationships with their parents have implications for children's expectations in social situations outside of the home.

Finally, Cassidy, Scolton, Kirsh & Parke (1996) explored the connection between children's attachment representations and peer-related representations in three age groups. They reported that attachment was significantly related to preschoolers' reports of their behavioral responses following an ambiguous peer provocation story, their opinion on whether or not the actor should be punished, and their expectations of their mothers' responses to the hypothetical story. However, attachment was unrelated to intent attributions for preschoolers. Thus, for preschoolers in this study, attachment was only found to be related to their responses to a hypothetical negative event, but not to what they thought about that event. For kindergartners and first graders, they reported that securely attached children attributed more positive intent to the peer in the story than did insecurely attached children. They also reported that attachment significantly predicted children's peer representations and reciprocal friendships and that the relationship between attachment and peer representations was not mediated by reciprocal

friendships. It is important to note that the sample size in this study was small (N = 33 including both boys and girls), reciprocal friendships were studied, not social status, and levels of aggression were not considered. For the fourth and fifth graders, parental rejection, rather than attachment was measured. In this age group, perceived parental rejection was related to children's attributions of hostile intent to familiar and unfamiliar peers. Children's sociometric status and levels of aggression were not taken into account in this study.

Taken together, these three studies provide initial support for the idea that children apply knowledge that they learn from their relationships with their parents to other social relationships, including relationships with other adults (teachers) and other children (peer relationships). However, none of the studies measured attachment to parents in the fourth/fifth grade age group, nor did they examine whether children's relationships with their parents continue to predict children's attributions of a peer's intent when the quality of the peer relationship is taken into account. They also neglected to control for the effects of displayed aggression. This study will add to the literature and improve on these limitations by directly measuring the attachment relationship, by accounting for the quality of the peer relationships, and by controlling for the effects of relational and physical aggression. Therefore, this study will be able to determine whether children's attachment to their parents is predictive of their attributions of peers' intentions over and above what is predicted by the quality of the peer relationship. The proposed study will also extend this research by examining the relationship between attachment and children's intent attributions within the family context. Finally, many

researchers have noted the lack of attachment research conducted on children in middle childhood (Finnegan, Hodges & Perry, 1996). This proposed study will enhance the attachment literature by investigating the relationship between attachment, children's peer experiences, and internal working models as measured by children's attributional errors in the period of middle childhood.

Social Adjustment and Intent Attributions. The relationship between children's social adjustment and their intent attributions has been comparatively well studied. In this literature, children's social adjustment has been conceptualized and measured as sociometric status, aggressiveness, or a combination of both (Crick & Dodge, 1994). Most of the research attention in this area has focused on rejected, aggressive, and rejected-aggressive boys, although research on gender differences and girls' attributional styles has gained recent attention and indicate that neglected girls may be at risk for aggressive behavior and hostile attributional biases (Cirino & Beck, 1991; Dodge & Feldman, 1990; Feldman & Dodge, 1986; Perry, Perry & Rasmussen, 1986). In general, it is consistently found that aggressive and/or low status children (children who are either rejected or neglected) demonstrate a hostile attributional bias compared to non-aggressive and/or high status children (children who are average or popular; Cirino & Beck, 1991; Crick & Dodge, 1994; Quiggle, Garber, Panak & Dodge, 1992). That is, aggressive and/or low status children tend to make inferences that an actor is behaving with hostile intent when the actual intentions of the actor are either positive, ambiguous, or accidental. One recent study has extended these findings to depressed children as well (Quiggle, Garber, Panak & Dodge, 1992). Studies of children's intent attributions have identified

several factors including qualities of the actor as well as the receiver of the directed action (Dodge & Feldman, 1990; Dodge & Frame, 1982; Hughes, Robinson & Moore, 1991), the type of intention (Dodge & Coie, 1987; Dodge & Feldman, 1990; Dodge, Murphy & Buchsbaum, 1984; Hughes, Robinson & Moore, 1991), the type of situation (Dodge & Feldman, 1990; Dodge, McClaskey & Feldman, 1985; Feldman & Dodge, 1986; Hughes, Robinson & Moore, 1991; Waas, 1988), and the situational context (i.e. peers, teacher, family; Dodge & Price, 1994) as important influences in children's intent attributions.

Studies of children's social status groups as well as studies of aggressive children repeatedly demonstrate that the target of the directed action is an important determinant of children's attributions (Dodge & Feldman, 1990; Dodge & Frame, 1982; Hughes, Robinson & Moore, 1991). These studies consistently show that children have a greater bias toward presumed hostility when they are the recipient of the directed action rather than when they observe an action directed at a peer. Specifically, aggressive and low status children (rejected and neglected) presumed greater hostile intent when the intent of the actor was actually positive or ambiguous when a peer's behavior was targeted directly at them. When asked to infer intent from a peer's behavior directed at another peer, aggressive and non-aggressive children and low and high status children did not differ in their attributional tendencies. Dodge & Frame (1982) suggested two possible explanations for these findings. They suggested that these findings may reflect either aggressive and low status children's expectancies that peers will behave in hostile ways towards them and not towards other peers or that being involved in an interaction interferes with aggressive and low status children's ability to make accurate intent

attributions. In the same article, Dodge & Frame (1982) reported findings consistent with the first hypothesis that low status and aggressive children's tendency toward a hostile attributional bias is a reflection of their expectancies for peer's behavior towards them. They reported that aggressive boys both initiated and received more verbally and physically aggressive behaviors than did average and non-aggressive children, although aggressive children initiated more aggressive acts than they received. From these findings, it appears that rejected and aggressive children actually experience greater levels of hostile behavior from others and may thereby come to expect more hostile behavior from others based on their experience. However, in developmental terms, it still remains to be determined whether aggressive and rejected children's attributional biases precede or result from their experience of receiving greater aggressive behavior from peers.

In addition to the influence of whether or not the subject was the target of the directed action, Dodge & Frame (1982) reported that boys' perceptions of the actor as aggressive or non-aggressive also influenced their intent attributions. In this study, in situations in which the action was directed at the subject, all boys (regardless of their aggressiveness or social status) were more likely to make hostile intent attributions if the actor was perceived as aggressive than if he was perceived as non-aggressive. In part, this appeared to result from boys' tendencies to recall intent cues consistent with the label of the actor as aggressive or non-aggressive.

The type of intention portrayed by the actor is also an important determinant of the hostility of aggressive and low status children's attributions (Dodge & Coie, 1987;

Dodge & Feldman, 1990; Dodge, Murphy & Buchsbaum, 1984; Hughes, Robinson & Moore, 1991). It is consistently found that aggressive and/or low status children do not differ from non-aggressive and/or high status children in their accuracy in recognizing an actor's hostile intentions. All children tended to be relatively accurate at identifying a peer's actual hostile intent (Dodge & Coie, 1987; Dodge, Murphy & Buchsbaum, 1984). However, when the peer's actual intent was either accidental or prosocial, aggressive and/or low status children made more attributional errors than did non-aggressive and/or high status children. In addition, the errors made by aggressive and/or low status children were in the direction of presumed hostility (when the actual intent was obviously accidental or prosocial). The study by Hughes, Robinson & Moore (1991) illustrates this point nicely. At the end of their experiment, these authors told participating boys that another boy had left a coupon for two free movie rentals for them. The experimenter then asked the participating boys for their attributions of the other child's intent (why he had left the coupon). In this real-life situation, boys who were both aggressive and rejected attributed fewer prosocial intentions and more hostile intentions to the actor than did non-aggressive-rejected boys, non-aggressive boys, and non-rejected boys. In fact, 74% of boys in the non-aggressive, non-rejected group attributed positive intention to the actor whereas only 37% of the rejected-aggressive group attributed positive intentions. The authors concluded that the tendency of rejected-aggressive boys to under perceive prosocial intent may account for differences in prosocial behavior between rejected and non-rejected boys by causing them to miss opportunities to respond prosocially to peers.

The nature of the situation as well as the type of conflict portrayed has an impact on children's attributional errors (Dodge & Feldman, 1990; Dodge, McClaskey & Feldman, 1985; Dodge, Murphy & Buchsbaum, 1984; Feldman & Dodge, 1986; Waas, 1988). A consistent finding in the literature is that, consistent with theoretical predictions from attribution theory, rejected and/or aggressive boys make more hostile attributions than high status and/or non-aggressive boys when the peer actor's intent is ambiguous. When boys are provided with sufficient social information, all boys regardless of social status or aggressiveness made similar (accurate) attributions (Waas, 1988). Thus, it appears that rejected and aggressive children have a tendency toward a hostile attributional bias; and high status, non-aggressive children have a bias towards inferring positive or prosocial intentions in ambiguous situations.

Researchers have also noted that low status children do not behave equally ineffectively in all situations (Dodge, Coie & Brakke, 1982). As a result, researchers have attempted to specify which types of situations result in the greatest social information-processing differences between high and low status children (Dodge & Feldman, 1990). Dodge & Feldman (1990) suggested that the greatest differences in children's social information-processing skills should occur in potentially stressful or threatening situations which are crucial for a particular age and gender peer group. They identified seven types of situations which are likely to elicit social information-processing differences between high and low status children in middle childhood. The seven types of situations they identified include (1) exclusion by peers, (2) conflict resolution, (3) acquisition of a peer's object, (4) persuasion and peer manipulations, (5) social

comparisons, (6) friendship initiations, and (7) maintaining and enhancing relationships. Of these seven situations, peer group entry (friendship initiations and exclusions by peers) and ambiguous provocations by peers (conflict resolutions) have been the most frequently studied in the intent attribution literature (Dodge & Feldman, 1990; Dodge, McClaskey & Feldman, 1985; Dodge & Price, 1994; Feldman & Dodge, 1986).

These studies of children's intent attributions have consistently found the strongest differences between high and low status children in the ambiguous peer provocation situation, especially when the experienced provocation is teasing from peers (Dodge & Feldman, 1990; Dodge, McClaskey & Feldman, 1985; Feldman & Dodge, 1986). Three studies found that in an ambiguous peer provocation situation, low status children were two times more likely than high status children to make hostile intent attributions (Feldman & Dodge, 1986; Dodge & Feldman, 1990; Dodge, McClaskey & Feldman, 1985). These findings were particularly pronounced in provocations involving teasing. Studies using peer group entry situations have not reported differences between attributions made by high and low status children, although other social information-processing differences are found in this situation with low status children reacting less competently than high status children on most measures (Dodge & Feldman, 1990; Dodge, McClaskey & Feldman, 1985; Feldman & Dodge, 1986).

Finally, few studies have been conducted which look at contextual influences on the relationship between children's social status and social information processing (Dodge, McClaskey & Feldman, 1985; Dodge & Price, 1994). Both studies compared high and low status children's social information-processing skills in peer and teacher

contexts. However, only one study (Dodge & Price, 1994) examined children's intent attributions in these two contexts. Dodge & Price (1994) found age differences, but not social status differences, in children's attributions in the teacher context which used authority demands (staying in at recess, cleaning, etc.) as the hypothetical situation in the teacher context. Specifically, they reported that older children were less accurate at interpreting teachers' intentions than were younger children because older children incorrectly assumed that the teachers' actions were benign. One possible explanation for the absence of differences between high and low status children in the teacher context is that the situations involving teachers (authority demands) were different than the situations involving peers (peer provocation and peer group entry). Perhaps if the situations in both contexts were analogous, social status differences in intent attributions toward teachers would have emerged. Interestingly, Dodge & Price (1994) also found context specificity for the relationship between peer and teacher contexts. In particular, they reported that although in the two peer situations (peer provocation and peer group entry) social information-processing variables predicted behavioral competence cross-situationally (peer provocation predicted competence at peer group entry and vice versa), peer group variables and teacher processing variables did not predict across contexts (peer group variables predicted competence in the peer group context, but not in the teacher context and vice versa). The researchers concluded that although there appears to be situational coherence within a context, there appears to be domain specificity between contexts, at least as far as peers and teachers are concerned.

Taken together, these findings suggest that high and low status children differ in their intent attributions particularly in peer situations which are ambiguous, involve potentially accidental or prosocial intentions, and which are targeted directly at them. In general, low status and/or aggressive children have demonstrated a hostile attributional bias in these situations.

Although researchers are now beginning to investigate children's attributional biases in other contexts (such as with teachers), research in this area has largely ignored potential biases in children's intent attributions within the family context. The proposed study will improve upon this limitation by including the family context in the assessment of children's attributional biases. In addition, several researchers have noted the lack of research on family contributions to children's social information-processing skills in the general literature as well as specifically regarding family contributions to children's attributional biases (Burks & Parke, 1996; Crick & Dodge, 1994; Quiggle, Garber, Panak & Dodge, 1992). Researchers are just beginning to propose contextual questions such as efforts at identifying which previous socialization experiences may contribute to the development of children's social information-processing patterns. The proposed study represents an initial attempt to fill the gap in this literature by assessing familial (attachment) variables in addition to peer adjustment (peer acceptance/social status) variables which will add to our knowledge about which types of social experiences are related to children's attributional biases in two contexts.

Finally, until recently, much of the work on children's social information-processing abilities has focused on boys and, as such, has focused on the relationship

between overt physical and verbal aggression, social adjustment, and social information-processing abilities. However, with the development of new measures of aggression which are more sensitive to the types of aggression girls display (Crick & Grotpeter, 1995), it is possible to more accurately examine the role of relational aggression in girls' information-processing skills. To date, although studies have examined the relationship between girls' social status and relational aggression (Crick, Casas & Mosher, 1997; Crick & Grotpeter, 1995; Tomada & Schneider, 1997), no study has investigated the relationship between relational aggression and girls' intent attributions. This study improves upon this limitation in two ways: by including girls in the sample and by assessing relational aggression, in addition to the more traditional overt aggression measures. In this way, this study will be able to examine the relationship between gender, relational aggression, and attributional bias.

Chapter 2

HYPOTHESES

This study is an evaluation of attachment theory's assumption that children's relationships with their parents provide frameworks for interpersonal understanding in part because of the potential for these early relationship experiences to create expectancies about the nature of future social relationships (Miller, 1990). Following this, if early attachment relationships do influence children's thinking in later social relationships, then they should be predictive of children's expectations of other's intentions in later social relationships after the quality of those later social relationships is taken into account. One such type of later social relationship is children's relationships with their peers. Children's relationships with peers may be either consistent with the internal working models that they have developed through their attachment relationships to their parents or they may be inconsistent with those internal working models (Jacobsen & Wille, 1986; Miller, 1993; Rothbard & Shaver, 1994).

Primary Hypotheses (Please refer to Table 1)

Hypothesis 1: Hostile Attributional Bias in the Family Context. Children's attachment to parents will be predictive of children's hostile attributional bias in the family context. Specifically, it is hypothesized that children who are less securely attached to their parents will demonstrate a greater hostile attributional bias in the family context than will children who are more securely attached. Children's social status will not add to the

prediction of children's attributional bias in the family context after attachment is considered.

Rationale. Attachment theorists have suggested that each attachment style is associated with a unique combination of internal working models (Bartholomew, 1990). Cohn (1990) theorized that securely attached children are likely to have formed positive working models of their parents as responsive and accessible and of themselves of being worthy of love. In contrast, Cohn theorized that insecurely attached children are likely to have formed generally negative internal working models of their parents as either inconsistently responsive and available or unresponsive, rejecting, and unavailable. Therefore, based on theoretical predictions from attachment theory, it is hypothesized that less securely attached children will infer more hostile intentions in the family context than will more securely attached children.

In addition, it is hypothesized that children's peer experiences will not influence their hostile attributional biases in the family context after attachment is considered. This hypothesis is based on the developmental primacy and primary importance placed on children's relationships with their parents by attachment theory. Children's spend cumulatively more time in their families than with peers and internal working models first develop out of children's experiences with their parents. To date, no studies have been conducted with respect to this issue and there is no theoretical basis in attachment theory to expect that children's current peer relationships will be predictive of how they think about their families.

Hypothesis 2: The Relationship Between Peer Status, Attachment, and Hostile Attributional Bias in the Peer Context. Children's social status and attachment security will be predictive of hostile attributional bias in the peer context. Specifically, it is hypothesized that children's attachment security will add to the prediction of hostile attribution bias in the peer context after social status is considered.

Rationale. It has been consistently reported in the social information-processing literature that low status children (neglected and/or rejected) compared to high status children (popular or average) demonstrate a hostile attributional bias toward peers' behavior in ambiguous situations (Cirino & Beck, 1991; Crick & Dodge, 1994; Dodge & Feldman, 1990; Feldman & Dodge, 1986; Perry, Perry & Rasmussen, 1986). Furthermore, attachment theory hypothesizes that internal working models, as developed through experiences with parents, provide a foundation for subsequent interpersonal understanding (Bowlby, 1988; Cohn, 1990; Miller, 1993; Rothbard & Shaver, 1994; Troy & Sroufe, 1987). If these suppositions are correct, then attachment security should add to the prediction of interpersonal understanding, in this case as measured by attributional bias in the peer context, after the quality of existing relationships with peers is taken into account.

Hypothesis 3: Relationship between Attachment/Peer Status Groupings and Hostile Attributional Bias in the Peer Context. Children's relative degree of hostile attributional bias is hypothesized as follows: children who are securely attached to their parents and who are popular or average in social status will have the lowest hostile attributional bias in the peer context, children who are insecurely attached and who are popular or average

will have a greater hostile attributional bias in the peer context, children who are securely attached and who are neglected or rejected will have the next greatest hostile attributional bias in the peer context, and children who are insecurely attached and who are neglected or rejected will have the highest hostile attributional bias in the peer context (Please refer to Table 2). Thus the pattern is as follows: S,P/A < I,P/A < S,N/R < I,N/R.

Rationale. Attachment theory hypothesizes that children's internal working models, as developed through experiences with parents, provide frameworks for later interpersonal understanding which subsequently integrate information about other significant relationships into the existing model (Bowlby, 1988; Cohn, 1990; Miller, 1993; Rothbard & Shaver, 1994; Troy & Sroufe, 1987). In model-confirming situations, theorists have posited that children's internal working models are strengthened and that information is assimilated into the existing model (Jacobsen & Wille, 1986; Miller, 1993; Rothbard & Shaver, 1994).

Cohn (1990) has theorized that securely attached children are likely to have formed working models of others which include a set of optimistic expectations and expectations of positive reactions from others. In model-confirming situations involving securely attached children who are not experiencing peer difficulties, these positive models would be strengthened. Thus, securely attached children who are popular or average are expected to demonstrate the lowest hostile attributional bias in the peer context because, theoretically, they hold the most positive internal working models for relationships.

Insecurely attached children, on the other hand, are theorized to have formed working models of others as unpredictable and/or rejecting. Attachment theory predicts that model-confirming circumstances involving insecurely attached children who are experiencing peer difficulties should result in a strengthened negative working model. Thus, it is hypothesized that these children will demonstrate the greatest hostile attributional bias in the peer context since, theoretically, they hold the most negative internal working models of relationships.

In model-disconfirming situations, children experience peer relationships which are inconsistent with their existing working models of relationships. Under these conditions, attachment theory predicts that children's existing internal working models will be modified in order to accommodate the new social information. When insecurely attached children experience model-disconfirming peer relationships, attachment theory suggests that their negative internal working models are likely to be positively modified. However, because of the primacy afforded to attachment relationships by attachment theory, it is thought that the internal working models of these children, although positively modified, may continue to contain some negative expectations of others based on their negative experiences with their parents. In comparison, the originally positive internal working models of securely attached children are likely to be negatively modified when these children experience peer rejection and neglect. In this situation, children may update their internal working models with the information that although parents do not behave in an unpredictable or rejecting fashion, other children do. These children may develop hostile expectations of their peers, although their expectations of their parents

would remain unchanged (and positive). Based on these theoretical predictions, it is hypothesized that insecurely attached children who are popular or average will demonstrate a smaller hostile attributional bias compared to children who are securely attached and neglected or rejected.

Secondary Hypotheses

Hypothesis 1: Aggression

1a. Girls will be perceived as more relationally aggressive than boys while boys will be perceived as more overtly aggressive than girls.

Rationale. This hypothesis follows directly from recent research findings on overt and relational aggression that girls are perceived as more relationally aggressive than boys and that boys are perceived as more overtly aggressive than girls (Crick & Grotpeter, 1995; Crick, Cass & Mosher, 1997). This hypothesis is a replication of Crick & Grotpeter's (1995) original thesis.

1b. Insecurely attached girls will be perceived as being more relationally aggressive than securely attached girls.

Rationale. Although relational aggression has not been studied in the attachment literature, other forms of aggression have been studied with respect to attachment. Consistent findings indicate that insecurely attached children tend to be more aggressive (defined as physically and verbally aggressive) than securely attached children (Cohn, 1990; Finnegan, Hodges & Perry, 1996; Lyons-Ruth, 1996; Lyons-Ruth, Alpern & Repacholi, 1993).

1c. Avoidantly attached girls will be perceived by peers as being more relationally aggressive than either securely or resistantly attached girls.

Rationale. In addition to the findings regarding the relationship between security of attachment and aggression as reported in 1b above, avoidant attachment, compared to secure and preoccupied attachments, has been associated with increased externalizing problems (Hodges & Finnegan, 1995) including overt aggression (Finnegan, Hodges & Perry, 1996). Because of the hypothesized relationship between gender and relational aggression, girls are the focus of this hypothesis.

1d. Insecurely attached boys will be more overtly aggressive than securely attached boys.

Rationale. The rationale for this hypothesis is similar to that outlined in secondary hypothesis 1b above. Consistent findings in the attachment literature indicate that insecurely attached children tend to be more aggressive (defined as physically and verbally aggressive) than securely attached children (Cohn, 1990; Finnegan, Hodges & Perry, 1996; Lyons-Ruth, 1996; Lyons-Ruth, Alpern & Repacholi, 1993). Consistent with these findings, it is hypothesized that insecurely attached boys will be more overtly aggressive than securely attached boys. Because of the hypothesized relationship between overt aggression and gender, boys are the focus of this hypothesis.

1e. Avoidantly attached boys will be more overtly aggressive than either securely or resistantly attached boys.

Rationale. In addition to the relationship between security of attachment and overt aggression reported in 1d above, avoidant attachment has been associated with

increased externalizing problems (Hodges & Finnegan, 1995) including overt aggression (Finnegan, Hodges & Perry, 1996). Consistent with these findings, it is hypothesized that avoidantly attached boys will be more overtly aggressive than either securely attached or preoccupied boys.

Hypothesis 2: The relationship between attachment and peer status. It is hypothesized that insecurely attached children will experience greater peer difficulties (will be classified more often as either neglected or rejected and less often as popular or average) than securely attached children.

Rationale. There is ample support in the attachment literature for the notion that attachment to parents is moderately predictive of children's social status and victimization (Petit, Dodge & Brown, 1988). In general, secure attachment to parents is associated with peer popularity and non-victimization (Sroufe, Fox, & Pancake, 1983; Troy & Sroufe, 1987) while insecure attachment to parents is consistently associated with peer rejection and victimization (Cohn, 1990; Finnegan, Hodges, & Perry, 1996; Sroufe, Fox, & Pancake, 1983). In fact, one study reported that 67% of rejected boys were insecurely attached compared to only 28% of boys in a non-rejected group (Cohn, 1990). On the basis of these empirical findings, this hypothesis was made.

Table 1

Hypothesized Relationships Between Predictor and Criterion Variables

Model Circumstance	Predictor Variables		Criterion Variable
	Attachment	Peer Status	Hostile Attributional Bias
Confirming	Secure	Popular or Average	Family Context - None Peer Context - None (Least Hostile)
	Insecure	Neglected or Rejected	Family Context - Hostile Peer Context - Hostile (Most Hostile)
Disconfirming	Secure	Neglected or Rejected	Family Context - None Peer Context - Hostile (More hostile than (S, P/A) and (I, P/A) but less hostile than (I, N/R))
	Insecure	Popular or Average	Family Context - Hostile Peer Context - Hostile (More hostile than (S, P/A) but less hostile than (S, N/R) and (I,N/R))

Chapter 3

METHOD

Participants

The participants in this study were 126 male and female children, average age 10 years (range 9 - 11), attending the 4th and 5th grades in three school districts in Michigan and Georgia (Please refer to Table 2 for a summary of student participation by classroom). This age group was chosen because previous studies have singled out the period from age 8 to age 14 as important in the transition from parents to peers as important attachment figures (Hazan & Zeifman, 1994). In addition, consistent findings in the social information-processing literature have not been reported until after 3rd grade (Cirino & Beck, 1991; Dodge & Price, 1994). Finally, children 12 and older were not studied in order to reduce the potential confounds of puberty and adolescence.

The participants were 52% (N=65) female and 48% (N=61) male. Although an attempt was made to include children from a range of socioeconomic and ethnic backgrounds, the children were all Caucasian from middle class school districts. Participants were recruited from classrooms in their school districts, parental consent was obtained, and measures were administered by this author in classroom groups (see Procedure). No children who had parental permission refused to participate. However, at one school a few children did not complete the protocols because the recess bell rang prior to the end of the testing session. There were no differences on any of the independent or dependent variables by school affiliation.

Table 2

Student Participation By School and Classroom

School Participation	Number of Students Participating	Percent Participation
Bath Elementary	40	66%
Classroom 1	15	75%
Classroom 2	12	60%
Classroom 3	13	65%
Union Street Elementary (1998)	15	50%
Atlanta Speech School 4th Grade	18	66%
Classroom 1	9	100%
Classroom 2	9	100%
Classroom 3	0	0%
Atlanta Speech School 5th Grade	12	80%
Union Street Elementary (1999)	41	67%
Classroom 1	16	53%
Classroom 2	25	82%

Procedure

Consent letters were distributed by classroom teachers to parents whose children were attending the 4th or 5th grades in the participating schools. Parents were asked to sign and return the consent form to allow their children to participate in the study.

An assent form was read aloud to the children and they were asked to give their assent to participate prior to beginning the study. The importance of the confidentiality of children's responses both during and after completion of the questionnaires was emphasized. Next, the children were asked to complete a series of questionnaires beginning with a measure of felt security in their relationships with their mothers, followed by peer nomination inventories, a measure of preoccupied and avoidant coping styles in their relationships with their mothers, and a hypothetical-story measure of intent attributions. The measures were presented consistently in this order at the expense of counterbalancing in order to address some of the schools' concerns about children's anxiety about and discussion of the peer nomination measure if it was presented first or last in the packet. The questionnaires were administered in group format in classrooms and were read aloud to the children by this author while they followed along and marked their answers. Total administration time was approximately one hour. Small, school-related tokens of appreciation, such as pencils and erasers, were given to the students after data collection was completed for the day as a thank-you for their participation.

Measures

Attachment to Mother. Two self-report questionnaires were used to assess children's attachments to their mothers: the Coping Strategies Questionnaire and the Security Scale.

The Coping Strategies Questionnaire (Finnegan, Hodges, & Perry, 1996) is a 36-item self-report questionnaire designed for use with children in middle childhood. The questionnaire was intended to measure children's preoccupied and avoidant styles of relating to their mothers during daily stressful situations. It consists of two 18-item scales measuring preoccupied and avoidant coping styles. For each item, children are asked to imagine that they are experiencing the described situation with their mothers and then to indicate their likely response.

The questionnaire is designed in the Harter-type format (Harter, 1982, as cited from Finnegan et al., 1996) in which children are presented with two possible responses to each hypothetical situation. First, children are asked to choose which response they would be most likely to make. Next, they are asked to determine whether the response chosen was "really true" or "sort of true" for them. Response choices on the Preoccupied scale reflect a preoccupied choice and a non-preoccupied choice while the response choices on the Avoidant scale reflect avoidant and non-avoidant choices. The non-preoccupied and non-avoidant choices described children behaving in a more-adaptive (i.e. securely attached) fashion.

Children's responses to each item are scored by assigning one of three values (0, 1, or 2) to the response. A value of 0 indicates that the child chose the non-preoccupied

or non-avoidant response (indicating that the more adaptive response was either "sort of true" or "really true" for him/her). A value of 1 indicates that the chosen response was classified as preoccupied or avoidant and was "sort of true" for the child. A value of 2 indicates that the chosen response was classified as preoccupied or avoidant and was rated as "really true" by the child. Two scale scores are calculated by summing the scores for the avoidant items and by summing the scores for the preoccupied items. High scores on either scale reflect a greater use of that coping strategy by the child with the mother during stressful situations.

The Coping Strategies Questionnaire has been shown to possess good reliability. The Alpha coefficient for the Preoccupied scale was .86 and for the Avoidant scale the Alpha coefficient was .84. Two week test-retest correlations for the Preoccupied and Avoidant scales were .83 and .76, respectively. Finally, the two scales were moderately negatively correlated, $r = -.47$. In this study, the Alpha coefficients were considerably lower than expected; the Alpha coefficient for the Preoccupied scale was .56 while the Alpha coefficient for the Avoidant scale was .68.

The authors of the Coping Strategies Questionnaire cautioned researchers against the use of this questionnaire alone for measuring attachment categories in middle childhood (Finnegan et al, 1996). The authors noted that although the development of their scales was bourne out of attachment theory, the presence of preoccupied and/or avoidant coping styles does not in and of itself necessarily indicate the presence of insecure attachment. Therefore, the authors suggest that combining the Coping Strategies Questionnaire with a measure of felt security would allow researchers to assess and

identify both security/insecurity of attachment as well as the preoccupied and avoidant subgroups of insecure attachment.

The Security Scale (Kerns, Klepac & Cole, 1996) was used to measure felt security in the mother-child relationship. The Security Scale is a 15-item, self-report questionnaire designed to assess children's perceptions of felt security in parent-child relationships in middle childhood and early adolescence. The Security Scale assesses three aspects of felt security with respect to a particular attachment figure: (1) the child's perceptions of the responsiveness and availability of the caregiver, (2) the child's reliance on the caregiver in stressful situations, and (3) the child's perceptions of the ease of communication with the caregiver.

The 15 items on this questionnaire are presented to children in Harter-type format (Harter, 1982, cited from Finnegan et al, 1996) in which children are first asked to choose between two response choices and then secondly are asked to choose whether the response they chose is "sort of true" or "really true" for them. Each item is scored on a 4 point scale with higher scores reflective of secure attachment. A total security score is computed by summing the child's response scores across the 15 items.

The Security Scale has been shown to have good reliability and validity (Kerns, Klepac & Cole, 1996). In studies on three samples by the same authors, the alpha coefficient for internal consistency ranged from .81 to .93. In this study, the alpha coefficient was .81. Test-retest reliabilities over 8 to 28 day periods averaged to .75, indicating stability in children's reports of felt security over a short period of time. In addition, 71 children participated in a discriminant validity study which indicated that, as

consistent with predictions from attachment theory, children's reports of felt security were significantly positively correlated with self-esteem, peer acceptance, behavioral conduct, scholastic competence, and physical appearance and were not significantly correlated with athletic competence or IQ. Furthermore, moderate positive correlations were obtained between children's perceptions of felt security in the mother-child relationship and other measures of mother-child relationship quality including companionship, intimacy, and affection and moderate negative correlations were obtained with conflict and antagonism. These patterns of findings between the felt security measure and other qualities of the mother-child relationship indicate that this measure of security is related to, but not redundant with, these other qualities of parental relationships.

Assignment to Attachment Groups. According to the method suggested by Kerns, Klepac & Cole (1996), children's scores on the Security Scale and the Coping Strategies Questionnaire were converted to z-scores within each measure. For analyses that required a continuous measure of attachment security, z-scores on the Coping Strategies Questionnaire were subtracted from the z-score on the Security Scale. The highest z-score above 0 on the Coping Strategies Questionnaire Preoccupied or Avoidant scale was subtracted from the z-score of the Security Scale, resulting in an overall attachment z-score based on attachment security and the most apparent insecure coping style. In cases in which neither Preoccupied or Avoidant coping z-scores were above 0, the lowest z-score below 0 was subtracted from the Security Scale z-score, also resulting in an overall attachment z-score based on attachment security and the coping style that showed the

least insecurity. The resulting z-score was used as a continuous measure of attachment security for the regression analyses in Hypotheses 1 and 2.

For the analyses that required a categorical attachment variable, the children with the top third positive attachment z-scores were labeled as securely attached. The remaining children with z-scores below the top third were labeled as insecurely attached. This resulting attachment grouping variable was used to assign children to the secure or insecure attachment group for testing Hypothesis 3. This method of assigning children to the secure and insecure groups was used because it allowed a sufficient number of children to be represented in each security type, especially for the breakdown of the insecure group into preoccupied and avoidant types for the secondary hypotheses.

For several of the secondary hypotheses, children in the insecurely attached group were divided into Preoccupied and Avoidant subgroups on the basis of their highest positive z-score on the Coping Strategies Questionnaire. Thus, children were placed in the Preoccupied insecure group if their z-score on the Preoccupied scale was higher than their Avoidant scale z-score. Children were placed in the Avoidant insecure group if their Avoidant coping z-score was greater than their Preoccupied coping z-score. If the positive z-scores of the Preoccupied and Avoidant coping scales were equal or if both z-scores were in the negative direction, the children were not assigned to an attachment category.

Peer Status. A peer nomination method was used to classify children into social status groups. In peer nomination methods, children are provided with class rosters and are asked to identify the three children who they like most and the three children on the

list who they like the least (Coie, Dodge & Coppotelli, 1982). There are two main disadvantages to the peer nomination method for assessing peer status. One disadvantage is that children are usually restricted in the number of nominations that they can make for a given dimension (generally to three choices) which leaves open the possibility that some children who are liked but who are not liked best do not receive nominations (or who are disliked, but are not disliked the most). Alternatively, this may be an important limitation which causes children to carefully consider which children they *most* like or dislike. A second disadvantage is that children are asked to explicitly express dislike for some of their peers. However, despite concern about the impact of expressing dislike for peers, there is both formal and anecdotal evidence that asking children for negative peer nominations does not change children's interactions or conversations (Asher & Dodge, 1986; Bell-Dolan, Foster & Sikora, 1989; Cirino & Beck, 1991; Coie, Dodge & Coppotelli, 1982; Hayvren & Hymel, 1984). In fact, in the study by Hayvren & Hymel (1984) the children did not discuss the peer evaluation procedure with each other at all.

The peer nomination measure was presented second in order to further reduce the potential for children to remember and discuss their negative nomination responses with each other. In addition, the confidentiality of the children's responses was emphasized. The traditional peer nomination procedure was used (Coie, Dodge & Coppotelli, 1982). Children were provided with a class roster with classmates' names including only those classmates whose parents signed consent forms. Each name was followed on the roster by a three-digit number. The children were told to record their responses with the child's number only. Children were then asked to write the numbers corresponding to the names

of three children whom they like most and to write the numbers corresponding to the names of the three children who they like least.

Scores for the "liked most" and "liked least" dimensions were calculated separately by summing the number of nominations a child receives on each dimension. These scores were then standardized within classrooms. Two scores were calculated from the peer nomination information according to the procedure developed by Coie, Dodge & Coppotelli (1982): a social preference score and a social impact score. The social preference score was calculated by subtracting a child's "liked least" score from his or her "liked most" score (social preference = LM - LL). The social impact score was calculated by summing a child's "liked most" and "liked least" scores (social impact = LM + LL).

A child's social impact and social preference scores were combined and used to place children into social status categories following the procedures used by Coie & Dodge (1983) and Coie & Dodge (1988). Children were assigned to the popular status group if their social preference standard score is greater than 1.0, their liked most nominations standard score is greater than zero, and their liked least standard score is less than zero. Children were assigned to the rejected social status group if their social preference standard score is less than -1.0, their liked most standard score is less than zero, and their liked least standard score is greater than zero. Children assigned to the neglected social status group had social impact standard scores that are less than -1.0, liked most standard scores below zero, and liked least standard scores that are below zero. Children classified as controversial had social impact scores that are greater than 1.0,

liked most standard scores which are greater than zero, and liked least standard scores greater than zero. The remaining children were referred to as average. (Please refer to Table 8 for a frequency table for the attachment and social status categories).

In a five-year longitudinal study, children's social preference and social impact scores were found to be stable (Coie & Dodge, 1983). In addition, although some variability in the five social status categories occurred over the five year period, these categories demonstrated some stability over time, particularly with respect to categorization into high and low status groups.

Intent Attributions. Children's intent attributions were measured by presenting them with 6 hypothetical stories (3 peer situations and 3 family situations) and then asking them to decide (in Harter-type format) whether or not the character in the story was intentionally trying to be mean. This method for assessing children's intent attributions has been used often in the social information-processing literature (Cirino & Beck, 1991; Dodge & Price, 1994; Quiggle, Garber, Panak &Dodge, 1992).

The three peer stories consisted of one peer group entry story in which a child approaches another child and is rebuffed (the peer has ambiguous intent) and two peer provocation stories in which a child is provoked by a peer with ambiguous intentions (such as teasing). These two types of situations were chosen because they are studied most frequently and have been found to have the greatest potential for detecting attributional biases in children (Cirino & Beck, 1991; Dodge, Petit, McClaskey & Brown, 1986; Dodge & Price, 1994; Quiggle, Garber, Panak & Dodge, 1992; Volling, Mackinnon-Lewis, Rabiner & Baradaran, 1993).

For this study, three hypothetical stories depicting mothers acting with ambiguous intent towards their child were also used. One of the stories consisted of an authority demand, one of the stories consisted of parent provocations (with ambiguous intent), and one consisted of family group entry with mild rejection in order to reflect the types of situations currently under investigation in the teacher and peer contexts.

The children were instructed to imagine that each situation described in the stories is happening to them. This instruction was given because it has been consistently reported that attributional biases are generally found only when the subject child is the "receiver" of the action

but are not found when other peers receive the action (Dodge & Frame, 1982; Hughes, Robinson & Moore, 1991). Each story was read aloud to the children who then answered the forced-choice question.

Two attributional bias scores were calculated. The forced-choice question was scored by assigning a value of 0 to the two non-hostile choices, a value of 1 to the "sort of" hostile choice, and a value of 2 to the "very" hostile choice. The child's score on the forced-choice component is the sum of his or her choices, calculated separately for each context (parent and peer). This format has been demonstrated to possess good reliability and to have good predictive validity in that hostile attributional biases have been shown to predict generation of hostile responses to peer provocations (Waas, 1988) and later aggressive behavior (Dodge & Coie, 1987; Dodge, Murphy, & Buchsbaum, 1984). The scale reliabilities for this study were .54 for bias in the classmate context and .51 for bias in the parent context.

Aggression. Both overt and relational aggression were assessed by the peer nomination method following Crick & Grotpeter's (1995) procedure. Children were asked to refer to their classroom rosters which they used in the preceding peer nomination procedure. They were then asked to nominate the three classmates who they feel best fit each behavioral description. Overt aggression was assessed by two items including: (1) someone who hits, kicks, or pushes others, (2) starts fights. Relational aggression was assessed by three items including: (1) someone who tries to make other kids not like a certain person by spreading rumors about them or talking behind their backs, (2) someone who gets even when they are mad by keeping people from being in their group of friends, (3) someone who tells friends that they will stop liking them unless they do what he/she said.

Scores for overt and relational aggression were calculated separately by summing the number of nominations a child received from peers for each item. The number of nominations per item was then added together to arrive at overt and relational aggression scores. These scores were standardized within each classroom.

Crick and Grotpeter (1995) performed a principal components factor analysis on these two measures of aggression as well as two other behavioral dimensions that are not relevant to this proposal. In their factor analysis, overt and relational aggression emerged as separate factors. Factor loadings on these two subscales ranged from .73 to .90. In addition, Cronbach's alpha indicated that both scales were highly reliable (.94 for overt aggression and .83 for relational aggression). The reliabilities for the aggression scales in the present study were .90 for physical aggression and .69 for relational aggression.

Chapter 4

RESULTS

The means and standard deviations of the predictor and criterion variables are presented in Table 3. Table 4 presents the frequencies of the categorical variables. The first section presents the correlational relationships between the demographic and predictor and criterion variables and between the predictor variables. The following sections present results from the primary and secondary hypotheses.

Preliminary Analyses

Relationships Between Demographic and Main Study Variables.

Correlational analyses were used to examine the relationships between the continuous demographic and study variables (see Table 5). Age was significantly correlated with class size and with children's use of dependent coping strategies. One-way Analyses of Variance were conducted in order to explore the relationships between the demographic variables and the categorical predictor variables. These ANOVA analyses also revealed a significant main effect for age on children's model group affiliation, $F(3,104) = 3.21$, $p = .03$, with children in the insecure attachment/ peer problems model group being approximately 10 months younger, on average, than children in the secure attachment/no peer problems model group. T-tests were computed in order to determine the effect of gender on the predictor and criterion variables. The results revealed a significant difference between boys and girls on age, $t(120) = 2.10$, $p = .04$, with boys tending to be approximately 6 months older than the girls, on average.

There was also a significant difference between boys and girls on the use of dependent coping, $t(118) = -2.88$, $p = .005$, and avoidant coping, $t(117) = 2.44$, $p = .02$, with girls endorsing more items related to dependent coping than did boys while boys endorsed more items related to avoidant coping than did girls. Finally, there was a gender difference for physical aggression, $t(124) = 4.37$, $p = .000$, with boys demonstrating significantly more physical aggression than girls.

Relationships Between Predictor Variables.

Correlational analyses were conducted to explore the relationships between the continuous predictor variables (see Table 5). Children's attachment security was significantly related to avoidant coping. Children's social preference standard scores were signficantly related to social impact, physical aggression, and relational aggression, such that as children were nominated more frequently as preferred play partners, social impact and physcial and relational aggression decreased. Social impact standard scores were also significantly related to physical and relational aggression, such that as children received more total (positive and negative) nominations, so too were they viewed as exhibiting more physical and relational aggression. Physical and relational aggression standard scores were significantly related to each other.

ANOVAs were conducted to examine the relationships between continuous and categorical predictor variables. There was a significant main effect for children's social status on physical aggression, $F(4,117) = 8.95$, $p = .000$ and relational aggression, $F(4,117) = 6.38$, $p = .000$. Post-hoc analyses using Tukey's Honestly Significant Difference Test revealed that children in the rejected and controversial social status

groups demonstrated significantly more physical aggression than did children in the neglected and average social status groups and significantly more relational aggression than children in the neglected status group, $p < .05$. Children in the rejected social status group also demonstrated significantly more relational aggression than children in the average social status group, $p < .05$. There was also a trend for the effect of children's model group affiliation (model confirming/model disconfirming group) on physical aggression, $F(3,75) = 2.63$, $p = .056$. A post-hoc analysis using Tukey's Honestly Significant Difference Test revealed that children in the insecurely attached/no peer problem group demonstrated significantly more physical aggression than children in the securely attached/no peer problem group, $p < .05$. The relationship between model group and relational aggression was not significant, $F(3,75) = 1.82$, $p = .15$.

Finally, chi-square analyses were conducted in order to examine the relationships between the categorical predictor variables including the three attachment groups, five social status groups, and four model-confirming and -disconfirming groups. No significant relationships emerged.

Tests of Hypotheses

Hypothesis 1: Prediction of Hostile Attributional Bias in the Parent Context. It was hypothesized that children's hostile attributional bias in the parent context would be predicted by attachment security and that children's social status would not add to the prediction of hostile attributional bias in the parent context over attachment security. This hypothesis was tested using hierarchical multiple regression. Children's hostile attributional bias total score in the family context was used as the criterion variable. In

the first step, physical and relational aggression were entered simultaneously as control variables. Children's attachment security was entered in the second step followed by children's social impact and social preference standard scores (social status) in the third step. The results of the multiple regression analysis supported the hypothesis. As expected, children's attachment security significantly predicted children's hostile attributional bias in the parent context. Furthermore, there was a trend for relational aggression to predict hostile attributional bias in the parent context. Children's hostile attribution bias in the parent context was not significantly predicted by physical aggression, nor by children's social status, although the overall regression equation was significant. Table 6 presents the summary of the regression analysis for this hypothesis.

Hypothesis 2: Prediction of Hostile Attributional Bias in the Peer Context. It was hypothesized that children's hostile attributional bias in the peer context would be significantly predicted by children's social status and that children's attachment security would add to the prediction of bias in the peer context. This hypothesis was tested using hierarchical multiple regression analysis. Physical and relational aggression were entered simultaneously in the first step as control variables. Children's social impact and social preference standard scores were entered simultaneously in the second step followed by attachment security, which was entered into the regression on the last step. The results partially supported the hypothesis. Children's attachment security significantly predicted children's hostile attributional bias scores in the peer context. However, children's social status, as well as physical and relational aggression, did not significantly predict children's attributional bias in the peer context. The overall equation regressing all five

predictor variables on children's hostile attributional bias in the peer context approached significance. Table 7 presents the summary of the regression analysis for this hypothesis.

Hypothesis 3: Prediction of Hostile Attributional Bias in the Peer Context by Model-Confirming and Model-Disconfirming Social Experiences. It was hypothesized that the attachment security/peer status model-confirming and -disconfirming comparison would predict children's hostile attributional bias in the peer context. Specifically, it was predicted that children in the securely attached/no peer problem group would demonstrate less hostile attributional bias in the peer context than would children in the insecurely attached/no peer problem group, followed by children in the securely attached/peer problem group, followed lastly by children in the insecurely attached/peer problem group (hypothesized to demonstrate the most bias). This hypothesis was tested using a 2X2 ANOVA. This hypothesis was not supported. The main effect for social status approached significance, $F(4,110) = 2.10$, $p = .09$. There was no main effect for attachment group, $F(2,112) = 1.01$, $p = .37$ or for the attachment by social status interaction, $F(8,106) = 1.0$, $p = .44$. Please refer to Table 8 for a summary of the group means.

Secondary Hypotheses 1a - 1e: Gender and Attachment Style Differences in Physical and Relational Aggression. It was hypothesized that gender differences would exist in the expression of physical and relational aggression with boys demonstrating more physical aggression than girls and girls demonstrating more relational aggression than boys. These hypotheses were tested using t-tests. The results of the t-tests suggested that there was a significant gender difference between boys and girls in the

expression of physical aggression with boys exhibiting more physical aggression than girls, $t(120) = 4.44$, $p = .000$. However, the effect of gender on relational aggression was nonsignificant, $t(120) = .66$, $p = .51$. Because of this nonsignificant finding, subsequent analyses pertaining to relational aggression were conducted on the entire sample rather than only on girls. However, the analyses pertaining to physical aggression were conducted only on the boys, as hypothesized.

It was predicted that children's attachment security would be significantly related to their expression of physical and relational aggression. Specifically, it was hypothesized that insecurely attached children would demonstrate greater levels of physical and relational aggression than would securely attached children. These hypotheses were tested using t-tests. The t-test for the effect of security of attachment on physical aggression was significant for the entire sample, $t(117) = 2.10$, $p = .04$ and for boys, $t(54) = 2.34$, $p = .02$, but was not significant for girls, $t(57) = -.57$, $p = .57$. However, the effect was not in the predicted direction. In fact, inspection of the means revealed that securely attached boys exhibited significantly more physical aggression (mean = .80, SD = 1.5) than insecurely attached boys (mean = .07, SD = .85). This finding also held true for the entire sample (mean = .21, SD = 1.2 for secure; mean = -.17, SD = .72 for insecure). It was also hypothesized that boys in the avoidant attachment group would exhibit significantly more physical aggression than boys in either the dependent or secure attachment groups. This hypothesis was tested using planned comparisons within the framework of Analysis of Variance. The planned comparison was not significant, $t(53) = .249$, $p = .80$. A post-hoc ANOVA for the effect of

attachment category on physical aggression was significant for boys, $F(2,53) = 4.11$, $p = .02$. Post-hoc analysis using Tukey's Honestly Significant Difference Test revealed that boys in the secure attachment group exhibited significantly more physical aggression than boys in the dependent attachment group, $p < .05$.

With respect to relational aggression, no significant differences were found between securely and insecurely attached children, $t(116) = .65$, $p = .51$. Planned comparisons were used to test whether children in the avoidantly attached group demonstrated more relational aggression than children in the other two attachment groups. The planned comparison was not significant, $t(116) = -.132$, $p = .89$. A post-hoc ANOVA for the effect of attachment category on relational aggression was also not significant, $F(2,116) = .23$, $p = .79$.

Secondary Hypothesis 2: The Relationship Between Attachment Security and Social Status. It was hypothesized that insecurely attached children would be classified more often as neglected or rejected and less often as popular or average compared to securely attached children. This hypothesis was testing using a chi-square analysis comparing the two attachment security groups (securely and insecurely attached) with the five social status groups (popular, average, controversial, neglected, and rejected). This analysis was not significant indicating that there was not a clear relationship between security of attachment and children's social status, $\chi^2(4,115) = 5.60$, $p = .22$ (Please refer to Table 9).

Table 3

Means and Standard Deviations of Predictor and Criterion Variables

	Mean	SD
Control Variables		
Age[c]	9.83	.90
Class size	32.62	9.39
Attachment Variables		
Security Scale Total	20.74	5.89
Dependent Coping[b]	6.31	3.26
Avoidant Coping[a]	2.37	2.71
Social Status Variables		
Positive Nominations	2.21	1.67
Negative Nominations	2.39	2.24
Social Preference	-0.18	2.96
Social Impact	4.60	2.62
Physical Aggression Variables		
Kicks/Hits Others	1.79	3.02
Starts Fights	1.91	3.25
Total Physical Aggression	3.70	6.07
Relational Aggression Variables		
Stops Liking Others	.98	1.19
Isolates Others	1.29	1.50
Spreads Rumors	1.32	1.63
Total Relational Aggression	3.59	3.54
Criterion Variables		
Hostile Attributional Bias Parent Context[d]	1.10	1.22
Hostile Attributional Bias Peer Context	2.37	1.63

Note: N=126 except where noted. [a] N=119 [b] N=120 [c] N=122 [d] N=124

Table 4

Frequencies of Categorical Predictor Variables

Variable Label	Frequency	Percent
Attachment Group		
Secure	43	34.1
Dependent	43	34.1
Avoidant	33	26.2
Social Status		
Popular	10	7.9
Average	76	60.3
Neglected	12	9.5
Rejected	16	12.7
Controversial	12	9.5
Model Group		
Secure Attachment/Popular or Average	27	21.4
Secure Attachment/Neglected or Rejected	9	7.1
Insecure Attachment/Popular or Average	54	42.9
Insecure Attachment/Neglected or Rejected	18	14.3

Table 5

Correlations Between Main Study Continuous Variables

Variable	1	2	3	4	5	6	7	8	9	10	11
Control Variables											
1. Age	--	.31***	.06	-.22*	.13	-.02	.09	.10	.05	.02	.04
2. Class size		--	-.08	-.14	.12	.00	.00	.00	.00	.15	-.12
Attachment Variables											
3. Attachment security			--	-.11	-.59***	.08	-.06	.03	-.04	-.42***	-.20*
4. Dependent coping				--	-.38***	.13	-.12	-.20*	-.02	.11	-.01
5. Avoidant coping					--	-.17†	.14	.20*	.11	.19*	.15
Social Status Variables											
6. Social preference						--	-.31***	-.18*	-.22*	.09	-.14
7. Social impact							--	.31***	.43***	-.09	.17†
Aggression Variables											
8. Physical								--	.57***	-.09	.04
9. Relational									--	.08	.09
Attributional Bias											
10. Parent context										--	.17†
11. Peer context											--

†p < .10 * p < .05 ** p < .01 *** p < .001

Table 6

Regression Predicting Children's Hostile Attributional Bias in the Parent Context

	Beta	ΔR	ΔF	Adjusted R^2
Step One (Control)				
Physical aggression	-.166			
Relational aggression	.207†	.031	1.78	
Step Two				
Attachment status	-.395***	.155	20.83***	
Step Three				
Social impact	-.155			
Social preference	.103	.034	2.47†	
Entire Model			6.13***	.186

†p < .10 *** p < .001

Table 7

Regression Predicting Children's Hostile Attributional Bias in the Peer Context

	Beta	ΔR	ΔF	Adjusted R^2
Step One (Control)				
Physical aggression	-.010			
Relational aggression	.125	.014	.81	
Step Two				
Social impact	.127			
Social preference	-.115	.033	1.90	
Step Three				
Attachment status	-.213*	.044	5.36*	
Entire Model			2.20†	.050

†p < .10 * p < .05

Table 8

Hypothesis 3: Cell Means for Hostile Attributional Bias by Attachment Status and Social Status

Attachment Status	Social Status				
	Popular	Average	Rejected	Neglected	Controversial
Secure	2.0	1.9	3.0	1.3	2.1
Insecure	1.2	2.5	3.0	1.9	3.8

Table 9

Summary of Chi-Square Analysis: The Relationship Between Attachment Security and Social Status

Variable Label	Popular	Average	Neglected	Rejected	Controversial	Totals
Attachment						
Secure	2	23	5	4	7	42
Insecure	6	46	6	12	4	73
Totals	8	69	11	16	11	115

Chapter 5

DISCUSSION

The following section evaluates the implications of the study's findings for attachment theory and social information-processing theory, organized by hypothesis for each topic. Next, the study's methodological limitations are evaluated. Finally, the clinical implications of the study are discussed, including suggested directions for future research.

Implications of Findings for Attachment Theory

Attachment theorists have suggested that internal working models function, in part, as heuristics for anticipating and interpreting the behavior and intentions of others (Berman & Sperling, 1994; Bowlby, 1988; Rothbard & Shaver, 1994) and have also suggested that internal working models may influence future interactions by providing frameworks for interpersonal understanding and guidelines for responding (Troy & Sroufe, 1987; Miller, 1993; Downey, Lebolt & Rincón, 1995; Burks & Park, 1996;). The results from this study support these two assertions and are consistent with previous findings demonstrating a relationship between parental rejection and children's expectations of rejection from peers and teachers (Downey, Lebolt & Rincón, 1995) and hostile attributions toward familiar and unfamiliar peers (Cassidy, Kirsh, Scolton, & Parke, 1996). The results of the present study improved upon these earlier studies by investigating the effects of attachment, per se, not limited to rejecting parenting behavior,

and included controls for social status, rather than friendship pairs, and physical and relational aggressive behavior.

In this study, as expected, it was found that children's attachment security significantly predicted hostile attributional bias in the parent context after controlling for the potential effects of aggression. As security of attachment decreased, children's hostile attributional errors increased. An examination of group means revealed that insecurely attached children demonstrated significantly greater hostile attributional bias than securely attached children. Furthermore, children with a dependent attachment style made significantly more hostile attributional errors in the parent context than did securely attached children. This trend also held true with avoidantly attached children demonstrating greater hostile attributional bias compared with securely attached children, but was not significant.

These findings provide support for the notion that internal working models function as heuristics for anticipating and interpreting the behavior and intentions of *parents* and supports the inclusion of the construct of attributional bias as a feature of internal working models. The finding that insecurely attached children demonstrated greater hostile attributional bias towards parents than securely attached children also provides evidence in support of Bartholomew (1990) and Cohn's (1990) hypothesis that securely attached children develop working models of their parents as responsive and accessible while insecurely attached children develop working models of their parents as inconsistent, unresponsive, or rejecting.

Furthermore, when children's hostile attribution biases were examined in the peer context, the results of this study were also strongly supportive of attachment's role in predicting children's hostile attribution bias in the peer context. It was found that children's security of attachment was the only significant individual predictor of hostile attributional bias in the peer context after levels of physical and relational aggression and social status were taken into account. As attachment security decreased, the number of hostile attributional errors children made increased. Social status, physical aggression, and relational aggression were not significant predictors of attributional bias in the peer context, although the overall equation approached significance.

In interpreting this finding, it is important to remember that the actor's intent in the attribution stories was actually ambiguous. Social information-processing theorists believe that in ambiguous situations general assumptions and expectations about people and their actions are likely to play a role in the way causal attributions about others' intentions are made (Aydin & Markova, 1979). They further believe that biases in judging other people's intentions as positive or negative probably reflect an individual's previous experiences with other people (Aydin & Markova, 1979; Crick & Dodge, 1994). The findings from this study indicate that, not only are children's experiences with each other important in making inferences about a peer's actions, children's experiences with their parents are also important for children's expectations of non-family members, and according to this study, even more of a driving force in guiding young children's inferences than are their actual experiences with their peers. This study supports the notion that, as Miller (1990) suggested, attachment may influence future relationships by

providing frameworks for interpersonal understanding and guidelines for responding. It also provides support for Bartholomew (1990) and Cohn's (1990) predictions that securely attached children are likely to have formed working models of their parents as responsive and accessible and may be more likely to anticipate positive reactions from their peers while insecurely attached children are likely to have formed working models of their parents as inconsistent, unavailable, and rejecting and may be more likely to anticipate unpredictable behavior or rejection from peers. The results are consistent with previous studies which have demonstrated a relationship between rejecting parenting and children's intent attributions (Cassidy, Kirsh, Scolton & Parke, 1996) and expectations of rejection from teachers and peers (Downey, Lebolt & Rincón, 1995) and supplement these previous studies by controlling for the effects of aggression and social status.

When attachment and social status were combined to form model-confirming and model-disconfirming social experience groups, the model group variable did not significantly predict hostile attributional bias in the peer context. Bowlby (1988) hypothesized that a gradual updating of internal working models would occur over time in response to new information. In contrast, this study found that attachment is predictive of hostile attributional bias in the peer context and that working models may not be updated in response to new information. Yet, attachment was not a perfect predictor of hostile attributional bias, and the numerous reports in the literature regarding the strong relationship between social status and children's hostile attributional bias suggest otherwise. Another possible explanation becomes apparent upon examination of the stability of children's social status. Coie & Dodge (1983) found that, although social

status at year one predicted social status at year five, significant variability existed in children's social status. They reported that the rejected social status group was the most stable across time, with 30-45% of children in this group remaining so classified five years later; whereas only 25% of neglected children were also classified as neglected 5 years later. Based on these findings, a large portion of children experience very different peer relationships from one year to the next and it would be possible for a child to experience peer rejection one year and be neglected or average the next. Perhaps the children experiencing model-disconfirming social experiences did not have adequate exposure to the model-disconfirming experience for a general, *gradual* updating to their internal working models to occur. It is possible that the children experiencing peer problems learned information about how certain individual children responded to them, but did not generalize from these relationships to other children or other relationships. Conceivably, children who repeatedly experience peer problems over longer periods of time may then update their internal working models with model-disconfirming information, but determining this is beyond the scope of the current investigation. Longitudinal studies investigating the impact of sustained model-disconfirming social experiences on internal working models are needed to address this question.

Mixed results were obtained when the relationship between attachment and physical and relational aggression were explored. Contrary to findings in the literature, children in the secure attachment group were rated by their peers as more physically aggressive than were children in the insecure attachment groups. One possible explanation for this finding may be the result of using a self-report measurement of

attachment in middle childhood. Researchers have recently identified a third insecure attachment category, disorganized attachment, in which children seemed to begin to evidence avoidant or ambivalent attachment behaviors which were halted mid-stream (Bowlby, 1988). Other studies have found that disorganized attachment was the strongest single predictor of hostile behavior towards peers (Lyons-Ruth, Alpern & Repacholi, 1993; Lyons-Ruth, 1996). The self-report measures of attachment used in this study did not include a classification of disorganized attachment. It may be that when attachment is measured using self-report instruments, children who would be behaviorally classified as disorganized would halt avoidant or ambivalent response tendencies and would respond by choosing the secure response alternative. Thus, the secure attachment group may include some children who would be classified as disorganized if the assignment to attachment category had been made behaviorally. This possibility is supported by Main's (1990) report that many misclassifications of disorganized attachment strategies are into the secure group.

However, results were consistent with the literature when securely and insecurely attached children who were not experiencing peer problems were compared. When these children were compared, insecurely attached children who were not experiencing peer problems were rated as more physically aggressive than were children who were securely attached and not experiencing peer problems. This finding suggests that children's experiences with their peers may moderate the relationship between attachment and aggression. Perhaps the experience of peer problems is a risk factor for aggressive behavior, regardless of attachment status. It is also possible that, if children in the

disorganized attachment category are misclassified as securely attached based on self-report measures, they may account for many of the securely attached children who are experiencing peer problems. Thus, when the aggressiveness of children without peer problems are compared by security of attachment, the attachment categories may be more accurate, resulting in the expected secure versus insecure differences in physical aggression.

Attachment status was not predictive of children's demonstration of relational aggression at school. To date, relational aggression, per se, has not been studied in the attachment literature. However, other studies have shown that avoidant attachment to parents was positively associated with increased externalizing problems including dishonesty and immaturity (Finnegan, Hodges & Perry, 1996) while disorganized attachment has been associated with overall hostility towards peers (Lyons-Ruth, Alpern & Reacholi, 1993). Again, it is possible that children in the disorganized attachment category could have been misclassified as securely attached due to the use of self-report measures in the current study.

In this study, attachment security was not predictive of children's social status. Although this study is inconsistent with some reports that attachment is moderately predictive of peer rejection and victimization (Petit, Dodge & Brown, 1988; Sroufe, Fox & Pancake, 1983; Troy & Sroufe, 1987; Cohn, 1990; Finnegan, Hodges & Perry, 1996), it is consistent with a more recent study which found that attachment generalized primarily to the quality of close peer relationships, but not to peer popularity and reciprocated friendship (Lieberman, Doyle & Markiewicz, 1999).

Implications of Findings for Social Information-Processing Theory

This study contributes a developmental variable, attachment security, to the social information-processing literature that seems to influence children's interpretations of another person's intentions (step two in the social information-processing model; Crick & Dodge, 1994). This study demonstrated that children's attachment relationships with their parents significantly predicted their interpretations of parent figures' and peers' intents in ambiguous situations. These findings also extend the attribution theory literature by investigating contextual influences (family and peer settings) on the relationship between children's social status and social information-processing by including attributions in family contexts in addition to the more frequently studied peer context. By the inclusion of girls, it supplements much of the current literature, which is very often restricted to boys' social information-processing, especially in investigations of hostile attributional bias.

In this study, children's security of attachment was the strongest single predictor of hostile attributional bias in the parent and peer contexts. This supports Aydin and Markova's (1979) and Crick & Dodge's (1994) hypothesis that biases in judging other people's intentions as positive or negative probably reflect an individual's previous experiences with other people and that reliance on past social knowledge and experiences may lead to ignoring relevant social cues and contextual factors (Dodge & Crick, 1990; Crick & Dodge, 1994). It is interesting to note that in the present study, children did not only seem to rely on their experiences with people similar to the actor, but may have

relied more on their experiences with parents to make inferences about peers' behaviors in ambiguous situations.

The finding that attachment security was predictive of children's hostile attributional bias in the peer context is consistent with previous findings that rejecting parenting is associated with children's attributions of peers' behaviors (Cassidy, Kirsh, Scolton & Parke, 1996; Burks & Parke, 1996; Downey, Lebolt & Rincón, 1995) and supports these authors' conclusions that children develop representations of family relationships which are used as guides for later relationships with peers and have implications for children's expectations in social situations outside of the home. This is an especially important finding in contrast to two other studies which have found context specificity for children's social information-processing skills and intent attributions in teacher and peer contexts (Dodge, Mcclaskey & Feldman, 1985; Dodge & Price, 1994). The current findings suggest that children do not use previous experiences with all adults to guide expectations and inferences in ambiguous situations with other children, but that there is something important about children's attachment relationships with their parents that influences attributional biases with peers.

It is somewhat unexpected that the physical and relational aggression and social status variables were not significant predictors of hostile attribution bias in the classmate context. However, the majority of studies demonstrating a strong relationship between social status, aggression, and attributional errors were conducted on boys. Studies concerning girls' social information-processing skills are not as consistent in demonstrating a relationship between aggression, social status, and attribution bias,

although some have suggested that neglected girls are at risk for aggressive behavior and hostile attribution biases (Cirino & Beck, 1991; Dodge & Feldman, 1990; Feldman & Dodge, 1986; Perry, Perry & Rasmussen, 1986). The current study is somewhat unique in that it included both boys and girls in the sample. It is possible that social information-processing skills in general, and hostile attributional biases in particular, develop differently for boys and girls. Social status and aggression may be weaker predictors of hostile attributional biases for girls, resulting in the non-significance for these predictors in the current study. Furthermore, children in the neglected social status group are similar to average children in that their social preference scores are average, that is they are not actively preferred or disliked by peers (Coie, Dodge & Coppotelli, 1982). In contrast to average children, neglected children have lower social impact scores, that is, they tend to be less visible to the peer group and have little influence on other children. Because neglected girls have been identified as being at a greater risk for social information-processing deficits, as have rejected boys, it is possible that social impact would be a stronger predictor of hostile attributional bias for girls whereas social preference may be a stronger predictor of hostile attribution errors for boys. These differences could account for the decreased prediction of the social status and aggression variables when the regression analyses were conducted on the entire sample.

Post-hoc analyses were conducted to examine this possibility. Regression analyses identical in format to those presented earlier were calculated separately for boys and girls. Results partially supported the argument that social information-processing styles may develop differently for boys and girls. Neither of the aggression variables

significantly predicted hostile attribution bias in the peer context for either gender. However, social preference was a significant predictor of hostile attributional bias in the peer context for boys (β = -.30, $p < .05$) but not for girls (β = .08, $p = .53$). In contrast, there was a trend for social impact to be a marginally significant predictor for girls (β = .20, $p < .15$) but not for boys (β = .04, $p = .79$). Furthermore, attachment security was a stronger predictor for girls' hostile attributional bias (β = -.28, $p < .05$) but was only a trend for boys (β = -.19, $p = .13$).

Limitations of Study

There are several methodological limitations to the current study. One methodological difficulty lies in the self-report measurement of attachment. The questionnaires used to measure attachment in this study are relatively new (Finnegan, Hodges & Perry, 1996; Kerns, Klepac & Cole, 1996) and, even though they have been shown to possess good reliability and validity, they have not yet been validated in longitudinal studies that have infant attachment classifications using the Strange Situation. Furthermore, the results of this investigation suggest the possibility that children with a disorganized attachment style may be misclassified as securely attached using self-report measures. Because children with a disorganized attachment style exhibit avoidant and resistant/ambivalent attachment behaviors which are inhibited prematurely, they may still be observed when attachment is measured behaviorally. In this instance, disorganized attachment may be misclassified as avoidant or anxious/ambivalent attachment in studies when attachment is measured behaviorally, but at least would remain in the insecure attachment category. However, when self-report measures are

used, if children with a disorganized attachment status inhibit avoidant or anxious/ambivalent responses, it is possible that they then select the responses more reflective of secure attachment and are so classified by the self report measures.

Another problem inherent in using self-report measures of attachment is the danger that children's responses on self-report measures are more reflective of their internal working models of relationships than of their actual behavioral attachment status. However, to the extent that as infants and toddlers mature into young children, teenagers, and adults, cognitions become an increasingly important variable in the attachment behavioral system, this may be less of an issue because self-report measures may tap into an increasingly vital aspect of attachment in middle childhood and adulthood. The self-report measures utilized in this study attempt to minimize the chances that internal working models are assessed instead of attachment by asking children to rate their most likely *behavior* in a given hypothetical situation rather that what they *think* about the situation.

A third methodological limitation involves the variable rate of student participation in this study. The rate of participation was extremely variable, from a low of 50% to a high of 85% across classrooms. In some classrooms, an overwhelming majority of children did not participate, which could have affected the aggression and social status categories either because of the decreased number of available raters or because some of the more aggressive or popular, rejected, and neglected children were not given permission to participate. This could have influenced the strength of the

prediction of the social status and aggression variables, both of which were assessed by peer nomination measures.

Finally, almost all of the children who participated were Caucasian and were attending public schools in the south-eastern and mid-western United States. Caution should be exercised in extending the results to children with other ethnic backgrounds, geographic locations, and life experiences.

Conclusions

The purpose of this study was to explore how children's relationships with their parents and with peers combine to influence their social knowledge as contained in internal working models. The results provide support for attachment theory's claims that children's relationships with their parents influence future interactions by providing frameworks for interpersonal understanding and guidelines for responding (Miller, 1993). Furthermore, the results provide additional evidence that children develop representations of family relationships which are used as guides for later relationships with peers (Burks & Parke, 1996) and have implications for children's expectations in social situations outside of the home (Downey, Lebolt, Rincón, 1995). Although the results of this study did not support the conclusion that children update their internal working models in response to new, model-disconfirming information, this study's limitations make it difficult to fully interpret this result.

Directions for Future Research. The method and results of this investigation point to several different avenues for study. First, the self-report measures of attachment used in this study were only recently developed for use with kids in middle childhood.

Longitudinal studies are needed that follow infants through middle childhood in order to validate the questionnaires with attachment information from the Strange Situation. Currently, the authors of the self-report measures have not suggested cut-off points for classification of attachment categories. Information from longitudinal studies with Strange Situation classifications of attachment could be used to identify potential cut-off scores for classification of attachment categories by self-report questionnaires in middle childhood. Future longitudinal research should also include infants in the disorganized attachment classification and should focus on how to identify disorganized attachment styles by self-report.

The results of this study also suggest that longitudinal research is needed to investigate how consistency of social status over time impacts internal working models of relationships in model-confirming and model-disconfirming situations. This type of research would enable a determination of how children who repeatedly and consistently experience peer problems integrate information about how they are treated by peers with information about their relationship experiences with parents and other family members, such as siblings. Studying children's internal working models in model-confirming and model-disconfirming sibling relationships would add another relationship context to both the attachment and social information-processing literature.

Furthermore, it would be interesting to investigate the differential prediction of attachment and social status in children from different ages, ethnicities, and psychosocial backgrounds including children with abuse histories and with a family history of divorce and remarriage. The current investigation included attachment data only as it related to

mothers. Future investigations should be conducted which also include attachment to fathers in the differential prediction of internal working models of social relationships.

Clinical Implications. This study's findings that children's attachment relationships were better predictors of their internal working models of peer relationships than was social status suggests avenues for intervention with children who are experiencing peer problems and behaving aggressively. Social information-processing research has indicated that children, especially boys, who anticipate negative interactions with others tend to react more aggressively. The current study's results suggest that children's anticipation of negative interactions with others is related to the security of their relationships with their mothers. Currently, interventions for children who behave aggressively or who have low social status are conducted primarily using social skills training with same age peers. The results of this study suggest that interventions should include a component focusing on parent-child relationships either by actively involving parents in the treatment process in the context of family therapy or by including family components in individual or peer group sessions.

Singer & Singer (1992) propose that the phenomenon of transference in psychotherapy may reflect normal social information processing in which people use past knowledge and experiences to interpret the meaning of unfamiliar or novel current events and contexts as they occur in daily life and in the therapeutic relationship. In this light, the children's tendencies to use information about their relationships with their parents to anticipate and understand interactions with peers in this study is suggestive of one mechanism by which transference may operate in psychotherapy. It is possible that

psychotherapy clients use information contained in internal working models based on attachment relationships with parents in social information processing steps prompted by ambiguous, novel, or unfamiliar therapist behavior. Furthermore, especially for therapy clients with insecure attachment histories with parents, it may be that model-disconfirming interactions in the therapeutic relationship is one of the essential ingredients that promotes positive personal growth and change. Future investigations of therapy process and outcome with children and adults should include measurement of clients' attachment relationships with parents, therapists' model-confirming and -disconfirming behaviors, clients' attributions for therapist intent and actions pre-, during, and post-therapy, and therapy outcome, as well as clients' own perceptions of their satisfaction throughout the therapy process.

APPENDICES

APPENDIX A

APPENDIX A

Coping Strategies Questionnaire

Name: _____

Age: _____

Circle which: Boy or Girl

Practice Story

One day at school you get your test back from your teacher and you see that you scored a low grade on the test. When you get home your mother can tell that you feel bad and she asks if you want to talk about it. Some kids would want to talk to their mother about it, but other kids would want to be left alone. Which is more like you?

	Some kids would want to talk to her about it.	BUT	Other kids would want to be left alone.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

1. You and your mother go to a carnival one evening. Some of the rides look a little scary but they look fun and exciting too. You want you mother to go on some of the rides with you, but your mother says she is tired and just wants to sit on a bench and watch. Some kids would go on the rides alone, but other kids wouldn't go on the rides alone. Which is more like you?

	Some kids would go on the rides alone.	BUT	Other kids wouldn't go on the rides alone.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

2. One the way home from school a bully stops you and threatens you. This makes you upset and afraid. When you get home you talk to your mother about it. Some kids would stay close to their mother and talk about it for a long time, but other kids would talk to their mother for a short time and then get over it. Which is more like you?

	Some kids would stay close to their mother and talk about it for a long time.	BUT	Other kids would talk to her for a short time and then get over it.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

3. You get sick and have to spend a few days in the hospital. Some kids would want their mother to spend the whole time with them in their hospital room, but other kids wouldn't mind if their mother just visited them once or twice a day during visiting hours. Which is more like you?

	Some kids would want their mother to spend the whole time with them.	BUT	Other kids would not mind if she just visited them during visiting hours.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

4. Your mother takes you to the doctor's office for a check-up. While you are sitting in the waiting room, she says she is going to run an errand and will be back to pick you up later. Some kids wouldn't care if their mother left them waiting alone, but other kids would prefer that their mother wait with them. Which is more like you?

	Some kids wouldn't care if their mother left them alone to wait.	BUT	Other kids would prefer that their mother wait with them.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

5. You are at the movies with your mother and you have to go out to the bathroom. When you come back in the movie it is so dark that you can't find your mother. Some kids would calmly look for their mother and not be too worried, but other kids would look for their mother and be very upset until they found her. Which is more like you?

	Some kids would calmly look for her and not be worried.	BUT	Other kids would look for her and be upset until they found her.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

6. You have been at summer camp for two weeks and many kids in your section have received letters or phone calls from their mothers. You have not received any letters or phone calls from your mother. Some kids would not care that they have not heard from their mother, but other kids would be disappointed that they have not heard for their mother. Which is more like you?

	Some kids would not care that they haven't heard from their mother.	BUT	Other kids would be disappointed that they haven't heard from their mother.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

7. Your class is going to Washington, D.C. on a field trip for several days. Your mother has agreed to go along as a room mother. But the day before your class is supposed to go your mother decides that she is too busy to go along on the trip. Some kids would still want to go with their class on the trip even if their mother didn't go, but other kids would not want to go on the trip if their mother didn't go. Which is more like you?

	Some kids would want to go if their mother didn't go.	BUT	Other kids would not want to go if their mother didn't go.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

8. You and your mother are visiting a new shopping center to see what it is like. Your mother suggests that the two of you explore the center together. Some kids would only want to explore it on their own, but other kids wouldn't mind exploring it with their mother. Which is more like you?

	Some kids would only want to explore it on their own.	BUT	Other kids wouldn't mind exploring with their mother.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

9. One of your teachers says something mean to you at school one day. Some kids would let their mother know they were upset and would talk with her about it, but other kids would not let their mother know they were upset and would not talk to her about it. Which is more like you?

	Some kids would let their mother know they were upset and would talk to her about it.	BUT	Other kids would not let her know they were upset and wouldn't talk to her about it.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

10. You and your mother go to the movies together. When you go into the theater, you see that it is crowded and you can't find two seats together. Some kids would be sorry that they can't sit with their mother, but other kids would prefer to sit away from their mother anyway. Which is more like you?

	Some kids would be sorry they can't sit with their mother.	BUT	Other kids would rather sit away from her anyway.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

11. You and your mother drive to Detroit to explore a new mall. When you get there your mother suggests that you explore on your own for an hour and then meet up with her at a particular store. Some kids wouldn't explore a new mall without their mother, but other kids would explore a new mall alone. Which is more like you?

	Some kids would not explore the new mall without their mother.	BUT	Other kids would explore the new mall without her.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

12. One day your and your mother go to the zoo. Your mother says that because she has not seen you much lately, she would like the two of your to look at the animals together. Some kids would be willing to look at the animals with their mother, but other kids would rather look at the animals alone and meet up with their mother later. Which is more like you?

	Some kids would be willing to look at the animals with their mother.	BUT	Other kids would rather look at the animals alone and meet their mother later.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

13. You have to go to the doctor for a check-up and you are in the waiting room with your mother. Your mother wants to leave you at the doctor's office while she does some shopping. Some kids would be upset and try to make their mother stay, but other kids would not be so upset and wouldn't try to make their mother stay. Which is more like you?

	Some kids would be upset and try to make their mother stay.		Other kids would not be so upset and wouldn't try to make their mother stay.	
Really true for me	Sort of true for me	BUT	Sort of true for me	Really true for me
☐	☐		☐	☐

14. One day you have a problem with a friend at school. When you get home, your mother can tell that you are upset and starts talking to you about it. Some kids would feel comfortable talking to their mother about their feelings and problems, but other kids would just want their mother to leave them alone. Which is more like you?

	Some kids would feel comfortable talking to their mother about their feelings and problems.		Other kids would just want their mother to leave them alone.	
Really true for me	Sort of true for me	BUT	Sort of true for me	Really true for me
☐	☐		☐	☐

15. There is an after-school sports team that you really want to join, but you realize that you don't know anyone on the team. You ask your mother to go to the try-outs with you. She says she can drive you there but can't stay there with you. Some kids would go only if their mother could stay during the try-outs, but other kids would go even if their mother couldn't stay. Which is more like you?

	Some kids would go only if their mother would stay.	BUT	Other kids would go even if she couldn't stay.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

16. One day at school the teacher tells the class about a new class project, a class play, and asks everyone to decide overnight if they want to play a part in it. The teacher suggests that kids discuss being in the play with their mother before deciding whether to be in it. Some kids wouldn't want to discuss being in the play with their mother before deciding, but other kids would want to discuss it with their mother before deciding. Which is more like you?

	Some kids wouldn't want to discuss it with their mother before deciding.	BUT	Other kids would want to discuss it with her before deciding.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

17. You and your mother are at a busy shopping mall in Detroit, and suddenly you can't find your mother. You are upset, but a little later you find each other. Some kids would soon get over being upset, but other kids would stay worried for a long time that they might get separated again. Which is more like you?

	Some kids would soon get over being upset.	BUT	Other kids would stay worried that they might get separated again.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

18. Your mother comes home after being away for a week or two. Some kids would stop what they are doing and run to greet her with a hug or kiss, but other kids would not stop what they are doing to greet her. Which is more like you?

Some kids would stop to greet her with a hug or kiss.		Other kids would not stop to greet her.
	BUT	

Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

19. One day at school the teacher misunderstands something you did and scolds you for it. You become upset. Some kids would stay very upset until they talk to their mother about it, but other kids wouldn't be so anxious to talk to their mother about it. Which is more like you?

Some kids would stay upset until they talked to their mother about it.		Other kids wouldn't be so anxious to talk to her about it.
	BUT	

Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

20. One day you come home from school upset about something. Your mother asks you what the problem is. Some kids wouldn't want to talk to her about it, but other kids would want to discuss it with her. Which is more like you?

Some kids wouldn't want to talk to her about it.		Other kids would want to talk to her about it.
	BUT	

Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

APPENDIX B

APPENDIX B

Security Scale

Name: _____

Now we're going to ask you some questions about you and your mom. We are interested in what each of you is like, what kind of person you are like. First let me explain how these questions work. Each question talks about two kinds of kids, and we want to know which kids are most like you. Here is a sample question.

Practice Question

	Some kids would rather play outdoors in their spare time.	BUT	Other kids would rather watch T.V.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

What I want you to decide first is whether you are more like the kids on the left side who would rather play outdoors, or more like the kids on the right side who would rather watch T.V. Don't mark anything yet, but decide which kid is most like you and go to that side of the sentence. Now, decide whether that is sort of true for you, or really true for you, and check that box.

For each sentence, you will only check one box, the one that goes with what is true for you, what you are most like.

Now we're going to ask you some questions about you and your mom. If you have both a mom and a stepmom, tell us about the one you live with.

1.

	Some kids find it easy to trust their mom	BUT	Other kids are not sure if they can trust their mom.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

2.

	Some kids feel that their mom butts in a lot when they are trying to do things.	BUT	Other kids feel like their mom lets them do things on their own.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

3.

	Some kids find it easy to count on their mom for help.	BUT	Other kids think it's hard to count on their mom.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

4.

	Some kids think their mom spends enough time with them.	BUT	Other kids think that their mom does not spend enough time with them.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

5. Some kids do not really like telling their mom what they are thinking or feeling. BUT Other kids do like telling their mom what they are thinking and feeling

Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

6. Some kids do not really need their mom for much. BUT Other kids need their mom for a lot of things.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

7. Some kids wish they were closer to their mom. BUT Other kids are happy with how close they are to their mom.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

8. Some kids worry that their mom does not really love them. BUT Other kids are <u>really</u> sure that their mom loves them.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

9. Some kids feel that their mom really understands them. BUT Other kids feel like their mom does not really understand them.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

10. Some kids are really sure their mom would not leave them. BUT Other kids sometimes wonder if their mom might leave them.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

11. Some kids worry that their mom might not be there when they need her. BUT Other kids are sure that their mom will be there when they need her.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

12. Some kids think their mom does not listen to them. BUT Other kids do think their mom listens to them.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
□	□		□	□

13. Some kids go to their mom when they are upset. BUT Other kids do not go to their mom when they are upset.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

14. Some kids wish their mom would help them more with their problems. BUT Other kids think their mom helps them enough.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

15. Some kids feel better when their mom is around. BUT Other kids do not really feel better when their mom is around.

Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

APPENDIX C

APPENDIX C

Peer Nomination Inventory

Name: _____

Instructions: Look at your class roster and choose the names of 3 of your classmates who best fit each description. In the space provided, write the code number that matches each of the classmates names that you have chosen. Please do not share your answers with others.

Question A

Choose the names of three classmates who are good at sports. Please write their code numbers in the space below:

1. _____

2. _____

3. _____

Question B

Choose the names of three classmates who you like to play with the least. Please write the code numbers that match their names in the spaces below.

1. _____

2. _____

3. _____

Question C

Choose the names of three classmates who start fights. Write their code numbers in the spaces below.

1. _____

2. _____

3. _____

Question D

Choose the names of three classmates who kick, hit, or push others. Write the code numbers that match their names in the spaces below.

1. _____

2. _____

3. _____

Question E

Choose the names of three classmates who are helpful. Write their code numbers below.

1. _____

2. _____

3. _____

Question F

Choose the names of three classmates who tell friends that they will stop liking them unless they do what he/she said. Write the code numbers that match the classmates' names below.

1. _____

2. _____

3. _____

Question G

Choose the names of three classmates who you get even when they are mad by keeping people from being in their group of friends. Write the code numbers that match their names below.

1. _____

2. _____

3. _____

Question H

Choose the names of three classmates who try to make other kids not like a certain person by spreading rumors about them or talking behind their backs. Write the code numbers that match their names below.

1. _____

2. _____

3. _____

Question I

Choose the names of three classmates who you like to play with the most. Write the code numbers that match their names below.

1. _____

2. _____

3. _____

APPENDIX D

APPENDIX D

Attributional Bias Questionnaire

Name: _____

Instructions: When you read each story, pretend that it is happening to you. Answer the questions that follow. Be sure to read each answer choice carefully.

Practice Story

1. Let's imagine that you are looking forward to being with your friends at recess. The bell rings and you get up to go outside. Your teacher tells you to stay in because she wants you to help her clean the erasers during recess.

Which is more like you? Choose one response and mark an "X" in the box.

	Some kids would think that the teacher was being mean	BUT	Other kids would think that the teacher was not being mean	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

Story 1

Let's pretend that some kids you know are playing kickball on the playground. You would really like to play too, so you walk up to them and ask them if you can play. One of the kids says that you can't play right now.

Which is more like you? Choose one response and mark an "X" in the box.

	Some kids would think that the kid was being mean.	BUT	Other kids would think that the kid was not being mean.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

Story 2

Let's pretend that your mom and brother (or sister) are playing a board game that you like to play. They are laughing and having a good time and you'd like to join them. You walk up to them and ask if you can play too. Your mom says, "Not right now."

Which is more like you? Choose one response and mark an "X" in the box.

	Some kids would think that the mom was not being mean.	BUT	Other kids would think that the mom was being mean.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

Story 3

Let's imagine that you are standing on the playground talking to some kids you know. All of a sudden, you get hit hard in the back with a ball thrown by another kid you know.

Which is more like you? Choose one response and mark an "X" in the box.

Some kids would think that the kid was being mean.		BUT	Other kids would think that the kid was not being mean.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

Story 4

Let's imagine that on the way home from school, you are thinking about how much fun you are going to have (playing video games, watching t.v., talking on the phone, etc.) when you get home. You get inside the door and your mom is standing there with a rake in her hand. She tells you to go outside to rake the leaves.

Which is more like you? Choose one response and mark an "X" in the box.

Some kids would think that the mom was being mean.		BUT	Other kids would think that the mom was not being mean.	
Really true for me	Sort of true for me		Sort of true for me	Really true for me
☐	☐		☐	☐

Story 5

Let's pretend that a new classmate that you want to meet is sitting next to you in class. You whisper to him or her during class. The new classmate does not respond to you.

Which is more like you? Choose one response and mark an "X" in the box.

Some kids would think that the kid was not being mean.	BUT	Other kids would think that the kid was being mean.

Really true for me	Sort of true for me	Sort of true for me	Really true for me
☐	☐	☐	☐

Story 6

Let's pretend that after school you went outside to play with some kids you know in your neighborhood. You come inside around 5:30pm for dinner. You go into the kitchen to see what your mom has made for dinner. You discover that she has made something that she knows you don't like.

Which is more like you? Choose one response and mark an "X" in the box.

Some kids would think that the mom was not being mean.	BUT	Other kids would think that the mom was being mean.

Really true for me	Sort of true for me	Sort of true for me	Really true for me
☐	☐	☐	☐

REFERENCES

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