BEHAVIOUR WITH PEERS AND PERCEPTIONS OF SELF: CORRELATES OF ATTACHMENT

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The aim of the thesis is to examine relations between patterns of attachment with mother and subsequent behaviour with peers and perceptions of self in young children. The sample consisted of 39 five year-old children (22 girls, 17 boys). Attachment classifications had been determined when the children were 4 1/2 years old, as part of a longitudinal study, using procedures and coding systems originally developed for infants by Ainsworth (Ainsworth, Blehar, Waters, & Wall, 1978) that were modified for 3 - 4 year-old children by Cassidy and Marvin (1988). These were based on behaviour shown in the lab to mother on reunion after a brief separation. Children were classified as: Secure, Insecure-avoidant and Insecure-ambivalent. When each child was five years old, behaviour with peers was assessed through direct observation on the school playground for five 15-minute periods. A continuous commentary of interactions was made into a hand-held microphone, while a radio microphone concealed on the child picked up the child's speech and speech directed toward him/her. A 15-minute video recording was also made. Tapes were transcribed using a coding system based on that used by Hinde, Easton, Meller and Tamplin (1983).

Analysis revealed meaningful patterns of relations between patterns of attachment and subsequent behaviour with peers. Insecure-ambivalent children exhibited more negative behaviour toward peers and sought the attention of peers more than did Secure and Insecure-avoidant children, and they complied to controls less than did Secure children. Insecure-avoidant children tended to engage in more neutral, less involved behaviour (neither 'positive' nor 'negative' with peers (e.g., just listening as a response to peers). Secure children tended to show more playful behaviours (play aggression, play noises, playful teasing and imitating) than did Insecure-avoidant children and tended to exhibit less negative behaviour than did Insecure-ambivalent children. These results are consistent with previous evidence (Arend, Gove & Sroufe, 1979; Sroufe, 1983) characterizing Insecure-avoidant, Secure, and Insecure-ambivalent children on a dimension ranging from over-controlled to under-controlled (Block & Block, 1980). In addition, ratings of security and avoidance upon reunion with the mother in the lab predicted behaviour with peers. Security ratings were positively correlated with playing games alone on the playground and negatively correlated with listening as a response and neutral speaking. Security ratings were also correlated with peer behaviour directed toward the child. Security was positively correlated with peers speaking boastfully and making play noises to the child and negatively related to peers asking the child questions. Avoidance ratings were positively correlated with listening as a response to peers but negatively correlated with neutral activity (doing nothing). Analysis of girls and boys separately revealed further significant relations. For example, for boys, avoidance ratings were positively correlated with speaking with hostility, seeking entry into games and automanipulating, and negatively correlated with positive expressive behaviours and engaging in large muscle play.

Perceptions concerning perceived competence and social acceptance, self-efficacy, perceived popularity with, and liking of, peers and interpersonal problem-solving ability were assessed through a series of four separate interview sessions with each child. Insecure-avoidant children generally reported relatively negative self-perceptions while Insecure-ambivalent children reported very positive (perhaps idealized) perceptions concerning competence, social acceptance, and peer friendships. Results showing different relations for girls and boys indicate a need to consider this potentially important variable when studying links between attachment, behaviour and perceptions.

The results provide support for the predictive validity of the attachment classifications and for Bowlby's (1969/82, 1973, 1980) proposition that the child's attachment relationship with mother forms the basis for behaviour in relationships with others and relates to perceptions concerning the self and others in the absence of mother.

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This thesis is entirely the result of my own work apart from the attachment data which were collected and coded by a colleague, and the help of another observer for inter-rater reliabilities. No part of it has been, or is being, submitted for a degree, diploma, or other qualification at another University. The text does not exceed 80,000 words.

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CONTENTS

1. INTRODUCTION

Relations between children's behaviour at home and functioning in the school context have been examined on different levels and from different perspectives. Studies concerned with child behaviour in the context of the family have focused on levels of social complexity ranging from an emphasis on the individual to a focus on the family system (e.g., Hinde & Stevenson-Hinde, 1988). On an individual level, for example, studies have revealed evidence of individual differences in temperament from infancy (Rothbart & Derryberry, 1981; St. Clair, 1978), which relate in various ways to adjustment and performance at school (e.g., Billman & McDevitt, 1980; Buss, Block & Block, 1980).

A focus on individuals and aspects of their relationships with significant others emphasizes a higher level of social complexity. For example, Hinde and Stevenson-Hinde (1987) found evidence for gender differences in relations between the mother/child relationship and child shyness (temperament) and maternal (mood) characteristics. Boys who were shy tended to have negative interactions with mother whereas shy girls tended to have positive interactions, perhaps attributable to gender stereotypes held by the mother (i.e., it is alright for girls to be shy but not alright for boys) (Stevenson-Hinde, Hinde & Simpson, 1986). In preschool, shy children of both sexes interacted less with peers, shy girls (compared to non-shy girls) interacted less with adults and were disconfirmed less in interactions with peers (Hinde, Stevenson-Hinde & Tamplin, 1985).

Different aspects of relationships (e.g., caregiver/attachment; playmates; teacher/learner) are not necessarily closely related and have differential influences on the developing child. For instance, the ability to be a good playmate or an effective teacher may very well be independent of the quality of the caregiving/attachment relationship (Grossmann, Fremmer-Bombik, Rudolph & Grossmann, 1988). A good teacher/learner relationship with a parent may not relate to developmental sequelae in the same way that a secure attachment relationship will. In terms of research strategies, then, it is necessary to limit one's scope (but, ideally, not one's vision) to address salient issues arising from a particular perspective. The aim of this thesis is to examine relations between patterns of attachment with mother and subsequent behaviour with peers and perceptions of self in young children.

1.1 Attachment Theory: Conceptual Framework

Attachment theory is based on principles arising from psychoanalytic theory and ethology. That a child's primary relationship is the foundation for personality development, and that many social behaviours displayed by humans (and other animals) have been selected in the course of evolution because they have survival value, influenced Bowlby's (1969/82, 1973, 1980) theory of attachment. Bowlby's theory is perhaps better described as a perspective, in that it serves to guide understanding of data and research. Ainsworth (Ainsworth, Blehar, Waters, & Wall, 1978) makes the point that attachment theory does not purport to hinge on a tight network of propositions, that if tested, might disprove or invalidate the theory. Rather, the goal of research is to elaborate and refine the construct of attachment.

1.1.1 Development of Attachment Relationships

Bowlby makes distinctions between attachment behaviours (which are observable), an attachment behavioural system (a construct), and attachment (a construct) (Bowlby, 1969/82; Hinde, 1979):

> To say of a child that he is attached to, or has an attachment to, someone means that he is strongly disposed to seek proximity to and contact with a specific figure and to do so in certain situations, notably when he is frightened, tired or ill. The disposition to behave in this way is an attribute of the child, an attribute which changes only slowly over time and which is unaffected by the situation of the moment. Attachment behaviour, by contrast, refers to any of the various forms of behaviour that a child commonly engages in to attain and/or maintain a desired proximity. At any one time some form of such behaviour may be either present or absent and which is, to a high degree, dependent on the conditions obtaining at the time. (Bowlby, 1969/82, pp. 371-372)

Attachment behaviours in the neonate may be described as fixed-action patterns (Lorenz, 1969; Tinbergen, 1951) and after about 6 months become goal-corrected in accordance with plans (Bowlby, 1982). The set-goal of the infant's attachment behavioural system is to maintain proximity to the mother. The system serves a protective function. Although the advantages of an attachment system can best be

understood when considering the 'environment of evolutionary adaptedness', where the danger of predation was high, the need for protection of the human young, of course, still exists (consider a toddler near a busy street). Ainsworth (1967) noted that infants, when mobile, use the attachment figure as a base from which to explore. This venturing away and periodic return can be seen as the interplay between the exploratory system and the attachment system. The exploratory behaviour ceases if either the child is frightened or the mother moves away.

Attachment behaviours occur when the hypothetical attachment behavioural system is activated; these behaviours include crying, calling, clinging, following, smiling, lifting arms, and approaching. Ainsworth et al. (1978) suggest that other behaviours not usually termed 'attachment behaviours' (i.e., initiations of, and behaviours in, interaction) also operate in the service of attachment. The reciprocal of attachment behaviours expressed by the child is termed maternal caregiving behaviour. Attachment behaviours and reciprocal or complementary maternal caregiving behaviours are adapted to each other in an evolutionary sense and can be seen in all primates (Hinde & Spencer-Booth, 1967; Harlow, 1961). The relationship which develops in respect of the two sets of behaviours is termed an attachment relationship (or attachment-caregiver relationship). Although attachment considerations are not confined to the child's relationship with the primary caretaker, it is this attachment relationship that is considered the major influence on development. Of course, the primary caretaker is not always the biological mother, but since this is often the case, it is usually the attachment relationship with the mother that is studied. Infant-father attachment relationships have not been addressed sufficiently, due perhaps to a limited theoretical focus, but also due to limited access to fathers for study.

This simplistic presentation of terminology is not meant to imply that the attachment relationship is in any way simple. Interpersonal relationships are multidimensional and bidirectional (Hinde, 1979). Attachment relationships are not immune to this complexity. Patterns of interaction which develop between the attachment figure and the child necessarily result from many factors. These include: the contributions of each participant (e.g., temperament, past experience, etc.), the context in which the individuals are embedded (e.g., cultural, familial, etc.), and the nature of the interaction of these components at any one time and over time. It would be highly inappropriate to make *causal* inference concerning variables within attachment work (such as 'maternal sensitivity') without having considered the contributions of all of these factors. Although

interest in these considerations has recently spurred research (e.g., Grossmann, Fremmer-Bombik & Rudolph, 1986; Belsky & Pensky, 1988) on the most part, attachment research has had a forward focus, concerned with relations between 'quality care', the development of patterns of attachment and later functioning.

1.1.2 Internal Representations

In relating attachment concepts beyond infancy, when literal proximity to the attachment figure no longer is seen as the set-goal of the attachment behaviour system, it is necessary to redefine the notion of attachment relationships in terms of 'a move to the level of representation' (Main, Kaplan & Cassidy, 1985). According to Bowlby (1969/82, 1973), children over time develop organizations of expectations and beliefs concerning their attachment figures, termed internal 'representational models' or 'working models'. These terms are useful in providing hypothetical constructs for processes about which we know very little, but have been used as an over-reaching explanatory model (Hinde & Stevenson-Hinde 1988). From birth, a complex 'organization' of expectations and beliefs develop, are modified and are elaborated through experience. Individual differences in experience, then, may be presumed to result in different patterns of organization (Ainsworth et al., 1978). Although the term representational model or working model has been applied to expectations and beliefs concerning the attachment figure, and to the attachment relationship, the influence of attachment relationships on the child's emerging sense of self is understood in terms of an intertwining of expectations and beliefs concerning the attachment figure with the self in relation to that figure. These 'models' are seen as active constructions which guide appraisals of subsequent experience and behaviour.

Feelings (affect and emotion) serve as appraising processes and help select some behaviour in preference to others (Ainsworth et al., 1978). Bowlby (1988) states:

> A feature of attachment behaviour of the greatest importance clinically, and present irrespective of the age of the individual concerned, is the intensity of emotion that accompanies it and the kind of emotion aroused depending on how the relationship between the individual attached and the attachment figure is fairing. If it goes well, there is joy and a sense of security. If it is threatened there is jealousy, anxiety and anger. If broken there is grief and depression. (p.4)

1.1.3 Behaviour with Peers

Developmental theorists have long recognized the importance of peer relationships (Cooley, 1909; Piaget, 1929/73; Erikson, 1950). Interaction with developmentally equal peers provides challenges in a social learning context distinct from challenges presented in interaction with adults. Interaction with peers allow for developing social skills based on reciprocity (Hartup, 1983). Peers provide a basis for comparison, and therefore aid in the development of the child's sense of self in relation to others (Harter, 1983). In order to maintain friendships, children must learn to resolve disagreements, be willing to share, be able to communicate clearly, and engage in coordinated play (Gottman, 1983). In addition, friends (Schwartz, 1972) and acquaintances (Ipsa, 1981) reduce anxiety and promote exploration in novel environments (Hartup, 1983).

Although the nature and quality of relationships with peers are distinct from those with adults, these relationships are not independent. Parent-child relationships generally precede peer relationships, and therefore play a role in influencing what the child can 'get out of' subsequent relationships with peers (Hinde 1987). With respect to relations between attachment relationships and peer interaction, this influence is seen as a major underlying determinant.

There are two ways that these links are conceptualized from a developmental/ethological perspective on attachment (LaFrenière & Sroufe, 1985). First, a secure attachment relationship allows for a flexible organization of behaviour. This flexibility may predispose the child to adapt to new situations and to new people more easily and more successfully. Second, positive expectations and beliefs concerning others and the self, and previous mastery experiences provided by a secure base, may result in both greater confidence and enhanced social and instrumental competence. An insecure attachment relationship, rather than promoting flexibility in behaviour, gives rise to relatively inflexible behavioural strategies, which are geared to maintaining organization in the face of conflicting and disorganizing promoting attachment situations. Negative expectations and beliefs concerning the self and others coupled with fewer opportunities for mastery experience limit both confidence and social and instrumental competence. A clearly restrictive behavioural strategy had first been observed in the patterns of behaviour of children who had been separated for a long period of time from their primary attachment figure (Bowlby, 1969/82). These children showed marked

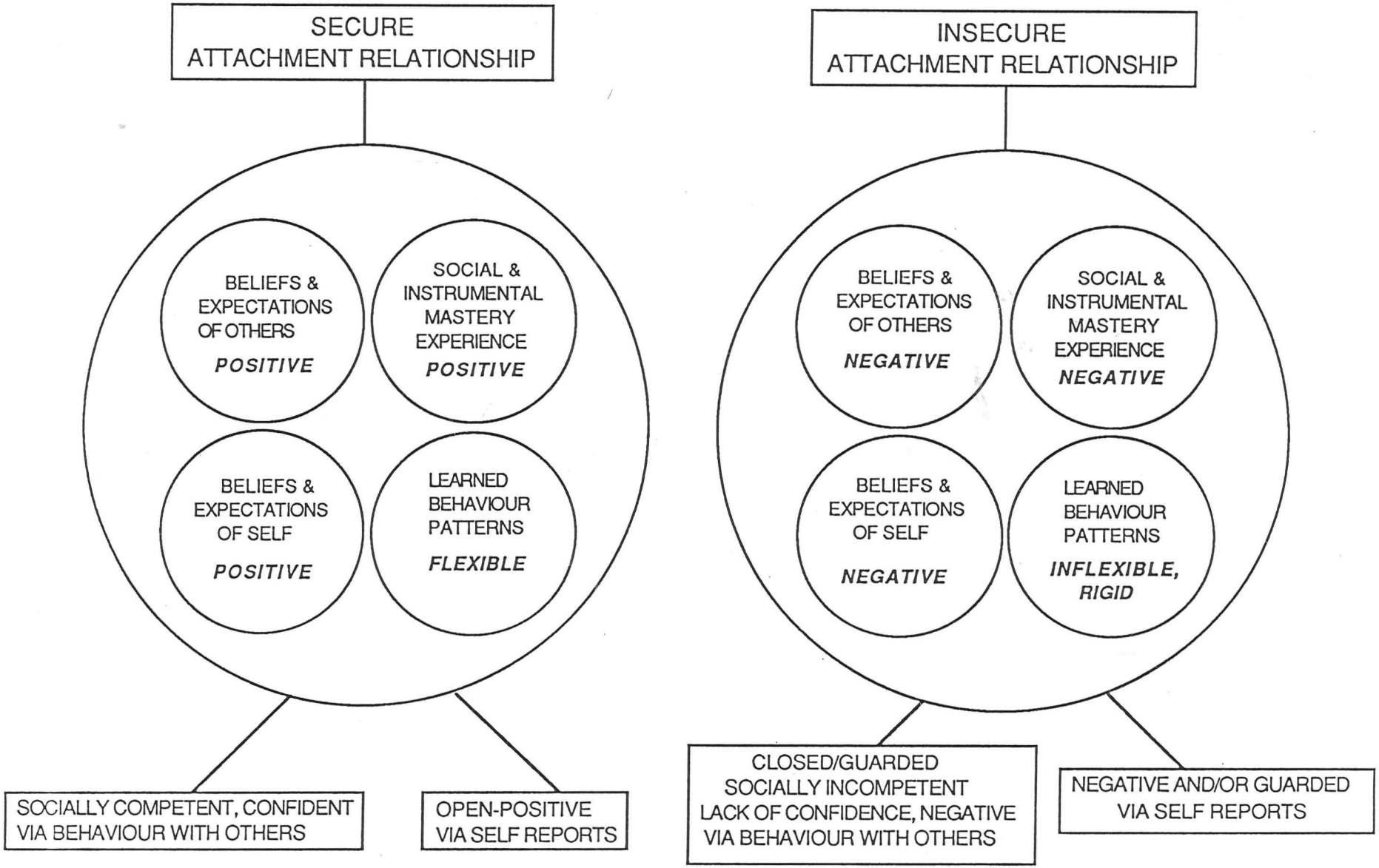
avoidance of the attachment figure on return. This behaviour is interpreted as a strategy for 'cutting off' from, or shifting the attention away from, the disorganization promoting stimuli (the mother and attachment needs). Children showing avoidance patterns in an attachment context have commonly experienced rejection and emotional unavailability (Ainsworth et al., 1978; Egeland & Sroufe, 1981), not necessarily due to long separations. These children might be expected to be interpersonally distant or hostile toward peers. Children showing an insecure resistant behaviour pattern in attachment contexts commonly receive inconsistent or chaotic care (Ainsworth et al., 1978). These children as infants commonly are wary, easily upset and difficult to settle; show a poverty of exploration and at times show explicit anger. LaFrenière & Sroufe (1985) suggest that these children, then, should have a low sense of self efficacy, lack of object skills and social hesitancy and therefore might be expected to "become low status, peripheral members of their peer group and may be more forward with peers but easily overaroused and prone to disorganization in the face of frustration or stress" (p.57). These theoretical predictions reflect an emphasis on the meaning or 'coherence' of behaviour in relation to attachment, rather than merely consistency or stability of behaviour over time. It is the 'manner in which behaviour is *organized* across situations and across individuals' that lends coherence to behaviour (Sroufe & Waters, 1977).

1.1.4 Conceptual Descriptive Model

Figure 1.1 shows the basic descriptive model Bowlby's attachment theory proposes for links between attachment relationships and behaviour with others and perceptions of self. In the presence of an available, sensitive, attachment figure the child *feels* secure and develops expectations and beliefs that he/she is protected and safe and that others are available when need for them arises. The child also comes to believe that, as the recipient of sensitive care and attention, he/she must be inherently worthy. Given a secure base from which to explore, the child creates opportunities to master new experiences and relate to other people, leading to greater competence and confidence.

If, on the other hand, the attachment figure is absent or unavailable and/or insensitive to signals, the child develops expectations and beliefs that protection, safety, and comfort are not assured and *feels* anxious, and, Bowlby (1969/82) suggests, very likely *feels* angry. These attachment related experiences lead to expectations and beliefs that others

Figure 1.1 Conceptual descriptive model.



may not be available when needed, and beliefs that the self must not be worthy of sensitive care and attention. Anxiety, leading to activation of the attachment system which overrides the exploratory system, results in fewer opportunities to master new experiences and relate to other people. The unsuccessful attempts at terminating the attachment system leads the child to adopt alternative behavioural strategies for maintaining behavioural organization in attachment related situations.

These expectations and beliefs concerning others and the self are carried forward and serve to guide behaviour in new situations and in other relationships. In subsequent interaction with others, and in reporting perceptions of the self and others, the secure child, in drawing on these previous experiences, exhibits openness, flexibility, social competence and confidence in behaviour and in reporting perceptions. The insecure child, in interaction with others and in reports of self and other perceptions, also draws on past experience, resulting in guardedness toward others and the self, and opting for limiting strategies which were effective in maintaining organization with respect to attachment situations and in relating to the attachment figure.

Theoretically then, aspects of the early attachment relationship relate to aspects of other relationships and to perceptions. Bowlby (1973) takes a hard line, arguing that the attachment relationship is the basis on which all other relationships are formed and therefore a fundamental influence on development. He proposes that an insecure attachment relationship gives rise to a personality characterized by mistrust and brittleness and leads to insensitivity, lack of sympathy, and lack of emotional gratification in subsequent relationships. This attachment perspective is in line with Erikson's (1950) contention that relations between early interactions in the family and peer interaction are mediated by a basic trust and autonomy acquired by the child. Waters et al. (1986) suggest that the combination of a secure attachment with age-appropriate child rearing practices serves to initiate processes of identification with the parent, in turn aiding in successful socialization, thereby mediating the influence of secure attachment on later socialization outcomes (i.e., social adjustment with others).

1.2 Empirical Support

1.2.1 Strange Situation

The Strange Situation procedure was originally devised by Ainsworth et al. (1978). The procedure was developed for infants but has recently been modified for older children, ages 3-4 (Cassidy & Marvin, in prep.). Describing infants in terms of the patterning of behaviour led to identification of classifications of the infant's attachment to the mother (Ainsworth et al., 1978), in line with the notion that behaviour must first be described and classified when studying natural phenomena (Hinde, 1974). In a structured, laboratory visit composed of seven 3-minute episodes the attachment figure (usually, as in this study, the mother) and child are observed, particularly on two reunions following a brief separation. Marked individual differences were found in children's responses. Three general patterns of reunion behaviour emerged:

- The child appears open and relaxed with the mother and clearly and openly communicates emotions related to separation. (Group'B')
- The child actively avoids or ignores the mother. (Group 'A')
- The child shows resistance and/or dependence (and sometimes anger) toward the mother. (Group 'C')

Only the children in whom the first pattern predominates are called securely attached. Others are termed insecure-avoidant (Group 'A') and insecure-ambivalent (Group 'C'). In addition to the classification of patterns of behaviour, ratings of security with, and avoidance of, the attachment figure are made. These ratings are not independent of the classification, but provide additional information, on single dimensions, concerning aspects of the attachment relationship. Issues concerning the observed patterns of behaviour include the stability of the behaviour patterns over time with respect to a given parent, the relation of the behaviour patterns observed to antecedent interactions with that parent, the relation of the behaviour patterns observed to the child's behaviour in other settings in the absence of the mother, and the relation of the behaviour patterns observed to the child's perceptions concerning the self and others.

Results of studies addressing these issues provide evidence for the validity of the attachment construct and for the attachment assessment procedure. Since the present

study is concerned with directly addressing the last two issues, particularly in relation to peers, evidence concerning the first and second issues and predictive correlates concerning adults will only briefly be discussed.

1.2.2 Stability

Theoretically, one would expect behaviour patterns on reunion to be stable over time for two reasons. First, the organization of expectations and beliefs with respect to attachment are increasingly more resistant over time, tending to persist as the child grows older and to be modified less and less by current experience (Bowlby 1969/82, 1980; Rutter 1981). Second, where environmental conditions tend to be stable, patterns of interaction between attachment figure and child tend to persist (Bowlby, 1973). In fact, moderately high stability has been demonstrated for the behaviour patterns observed in the Strange Situation. Main and Cassidy (1988) reported 86% stability over a one month period for the 3 major classifications with 6 year-old children, and 84% stability from one to six years for secure (Group B) and insecure-avoidant (Group A) classifications (Group C children were underrepresented and were not considered). Stevenson-Hinde & Shouldice (in prep.) reported 72% stability from 2 1/2 to 4 1/2 years. Wartner & Grossmann (in prep) report 87% stability from 12 months to 6 years for the 3 major classifications. In addition, avoidance ratings at 12 months were highly significantly related to avoidance ratings at 6 years.

1.2.3 Behaviour with Mother: Correlates of Strange Situation

If behaviour on reunion with the attachment figure arises from previous experience in that relationship, one should be able to demonstrate this connection empirically. Home and laboratory observations of infant-mother interaction have provided evidence for this link. Ainsworth, Bell and Stayton (1971) found that mothers of children classified in the 'B' (secure) group showed greater sensitivity to the infant's signals and communications than did mothers of infants classified in the 'A' or 'C' groups (insecure-avoidant and insecure-ambivalent, respectively). More specifically, mothers of secure infants were responsive and permitting of access when the infant cried or approached. In contrast, mothers of insecure-ambivalent infants were found to be more insensitive to crying and other signals but were not notably rejecting. Ainsworth et al. (1978) and others (Main,

1981; Main & Stadtman, 1981) reported that mothers of insecure-avoidant infants were more insensitive to signals and were found to reject infant attachment behaviours (blocking or rejecting the infant's attempts at gaining access). More recent studies (Bates, Maslin & Frankel 1985; Grossmann et al., 1985; Egeland & Farber, 1984) have consistently demonstrated that the quality of attachment, as assessed with the Strange Situation procedure is related to earlier assessments of caregiver responsiveness. In addition, Grossmann & Grossmann (in prep.) reported that infants of sensitive mothers responded more positively to body contact with the mother and were less distressed when body contact was terminated, followed the mother when she left the room but cried less on her departure and generally cried less at 2, 6, and 10 months, and vocalized 'happily' more often at 6 and 10 months than infants of less sensitive mothers. Goldsmith & Alansky (1987) reported that a meta-analysis of studies relating infant-mother interactional variables to attachment classification demonstrated a weak but significant relation between these variables.

1.2.4 Predictive Correlates of Behaviour with Mother Absent

Studies concerned with predictive correlates of attachment classification have focused on patterns of social and play behaviour with both adults and peers in contexts where the attachment figure is absent. These studies provide evidence for developmental continuity of functioning beyond the context of the attachment relationship.

1.2.4.1 Behaviour with Adults

Main & Townsend (1982) found that attachment patterns observed at 12 months predicted both social and exploratory behaviour with an adult stranger 9 months later with the mother absent. Children classified secure played longer, showed more interest in toys and laughed or smiled more frequently than did children classified insecure-avoidant and insecure-resistant. Further evidence has shown that secure infants were more co-operative with an adult stranger (Londerville & Main, 1981; Matas, Arend & Sroufe, 1978). Main & Weston (1981) report that children classified as securely attached showed more readiness to interact with an adult stranger and to show concern when a stranger was apparently in distress than did infants classified insecurely attached.

1.2.4.2 Behaviour with Peers

Previous examination of relations between attachment and behaviour with peers has involved relating attachment patterns (via Ainsworth's classification system) shown in infancy to later behaviour. Relations between both security and avoidance as unidimensional constructs (via ratings in the strange situation) and later behaviour have not as yet been examined.

Several studies by Sroufe, Egeland, and their colleagues have found classifications in the Strange Situation to predict social functioning in the school setting. Two of these studies (Waters, Wippman & Sroufe, 1979; Arend, Gove & Sroufe, 1979), show links between attachment at 15 - 18 months and broad measures of functioning in preschool and Kindergarten.

Waters et al. (1979), with a sample of 32 children, assessed infant attachment patterns in the Strange Situation with the mother at 15 months. Teacher Q-sort assessments were made when the children were 3 1/2 years old for 'social competence' with peers (Vaughn and Waters, 1979), and 'ego strength/effectance', a concept closely related to the Blocks' (1980) concepts of 'ego control' (referring to impulse control and modulation) and 'ego resilience' (referring to adaptability to changing situations). Comparisons were made only between secure and insecure classifications (pooling 'A' and 'C'). Means for secure children were significantly higher than means for insecure children on eleven of the 12 items on the peer competence scale, and five of the 12 items on ego strength/effectance.

Arend et al. (1979) assessed attachment classifications with infants at 18 months old and behaviour with peers when the children were 5-6 years old in a stable, middle-class sample. Teacher Q-sort and lab procedures were employed to relate the Blocks' (1980) concepts of ego-control and ego-resilience to attachment history. Teacher Q-sort revealed relations between ego-control and attachment classification at 18 months: Secure children were seen as moderately controlled, insecure avoidant children over-controlled and insecure-resistant children were seen to be under- controlled by teachers. Secure children were seen to show more curiousity than did insecure ('A' and 'C') children.

Pastor (1981), with Sroufe & Egeland's longitudinal sample of 267 low-income families (only those whose attachment relationships were stable over the 15 -18 month

assessments), related the attachment assessment (Strange Situation) at 18 months to behaviour in a 30-minute play session (with the mother present) when the children were between 20-23 months. Same-sex, same-age dyads were observed with 'A', 'B', and 'C' children each paired with a 'B' partner. Nine out of 28 discrete behaviour measures showed significant differences between some or all groups. 'B' children were more sociable and more positively oriented toward both mother and peer. 'A' children participated actively but were rated as more negative in orientation toward both mother and peer. 'C' children appeared highly stressed, ignored peer offers, and were most negative toward mothers.

Forty subjects from this disadvantaged sample participated in a special nursery program when they were 4-5 years-old (Sroufe, 1983; Sroufe, Fox, & Pancake, 1983; LaFrenière & Sroufe, 1985) In two preschool groups, these children were observed throughout a school year. Behaviour was assessed through teacher ratings of social competence, peer sociometrics, and behavioural measures of social participation, attention structure and social dominance. In addition, rates of positive and negative affect, affiliation, leadership, assertiveness and aggression were recorded both in the classroom and on the playground. Two dimensions of peer competence were evident: an affiliative dimension characterized by emotional warmth, social maturity, and peer popularity; and a power dimension characterized by positive and negative affect and high peer status. All probabilities were one-tailed, given the authors' predictions (in short, that 'B' children would be more socially competent).

Secure children were significantly higher than insecure ('A' and 'C') children on two measures: teacher ranking of social competence and sociometric status. 'B' children were not significantly higher on attention structure, counter to predictions. 'B' children showed less negative affect than did 'A' children, but not less aggression, counter to predictions. 'C' children were significantly lower in social dominance and social participation than were 'A' and 'B' children (pooled), but no differences in rates of social behaviour or affective expression were found. When analysis was made with girls and boys separated, attachment only accounted for individual variation in rates of aggression and negative affect for boys. For girls, attachment was significantly related to all five broad band measures: assessment of peer competence, measures of positive and negative affect, affiliation and assertiveness. Interaction effects of sex with attachment were found for both sociometric status and teacher rankings of social competence, due to significantly

higher scores of securely attached girls over securely attached boys on these measures. The authors conclude that hypotheses concerning relations between attachment relationship and peer competence were strongly supported for girls but only minimally supported for boys.

The above data of 40 children were combined with data from 56 children in other daycare settings (Erickson et al., 1985). One-way analysis of variance, with Student-Newman-Keuls post hoc comparisons was made. These comparisons were between attachment classification and seven preschool rating scales, on factors derived from the Preschool Behavior Questionnaire (Behar & Stringfield, 1974), and on Erickson et al.'s (1985) Behavior Problem Scale. Anxious/resistant children were rated by observers in preschool as being less agentic (confident, assertive) and as having poorer social skills than securely attached children. Anxious-avoidant children were rated by observers as more dependent on teachers and having poorer social skills than securely attached infants. Teachers' ratings indicated that avoidant children were more withdrawn and gave up more easily than securely attached children. In addition, teachers rated avoidant children higher on exhibitionism and impulsiveness than the other groups and as more hostile than resistant children. Avoidant children also received higher total scores on both the Preschool Behavior Questionnaire and the Behavior Problem Scale than either insecure-resistant or secure children. Children with behaviour problems, determined on the basis of the teacher ratings, fell into 3 groups: acting out (disobedient, inconsiderate, easily irritated, and aggressive, fighting with or bullying other children) withdrawn (passive, showing little interest in surroundings, usually not engaging in play, sometimes daydreaming) and attention problems (squirmy, inattentive, having poor concentration). A fourth group who showed no behaviour problems was identified. Among the well-functioning group, 16 of 22 children had been securely attached. The majority of children in all three behaviour problem groups had been anxiously attached, with no overall predominant pattern of problems distinguishing the avoidant from the resistant children.

As part of the Grossmanns' German longitudinal study, Grossmann & Grossmann (in press), examined relations between attachment classification at 12 months and behaviour with peers (employing direct observation with narrative reports), in their preschool classrooms at age five. Only comparisons between children with secure and insecure-avoidant patterns were made, as there were too few cases of insecure-resistant

relationships to be considered.

Secure children played more concentratedly and were less easily disturbed than 'A' children. More 'B' children acted planfully and organized than did 'A' children and appeared more relaxed (judged by facial and gestural expression). 'A' children were more erratic, tense, and fidgety. More 'A' children went from one thing to the next, with motor movements appearing more uncoordinated and aimless. During free play, more 'A' children showed a tendency toward frequent conflicts.

Additionally, analyses were made on an idiographic or individual level, comparing individual patterns (behavioural strategies) actually identified against the statistical odds of the original distribution of the attachment assessment. They report that more 'B's showed a tendency toward friendliness with open facial expressions whereas more 'A's were sober, and more frequently dissatisfied and in poor mood during social encounters. Combining variables into competent and incompetent social strategies, 14 of 21 'B' children showed competent strategies, but only 3 of 11 'A' children did so. In addition, children with 0-1 marginal behaviour problems were distinguished from children who were 'somewhat hostile' or scapegoating or isolated or showing stereotypies or definitely inappropriate behaviours: 18 of 24 'B' children belonged to the 'mentally healthy' group, but only 2 of the 11 'A' children were seen as 'mentally healthy' ($p<.002$). Finally, teachers described secure children more positively and more favourably along the dimensions of ego-control and ego-resilience.

Lieberman (1977) with a sample of 40 3-year-olds, used two assessments of the mother-child attachment relationship; the Strange Situation procedure in the lab and observations of mother-child interaction at home, resulting in a composite measure of the attachment relationship. These assessments were made before the beginning of preschool. Observations were made of behaviour with an unfamiliar same-sex peer in lab playroom four months later. Secure children showed more reciprocal interaction with peers, and engaged in less negative behaviour. In addition, she found a high correlation between security ratings and previous peer experience, as reported by the mother. The author proposes that this result suggests that a secure attachment relationship not only directly promotes peer competence by encouraging a positive orientation toward others, but mothers who encourage or foster secure attachment may also encourage expanded interaction with peers.

Park & Waters (personal communication) examined relations between attachment quality (assessed by Attachment Q-sort) and 'best friend' peer relationships in 33 pairs of children aged 3 1/2 - 5 1/2. Two types of friend dyads were compared: dyads in which both children were securely attached, and dyads in which one was securely attached and the other insecurely attached. The Dyadic Relationships Q-set was developed which was designed to describe the behaviour of a pair of children measuring: positive social orientation; cohesiveness; harmony; control; responsiveness; intimacy; tempo of play; and coordinated play. Four of the eight clusters distinguished secure-dyads from secure-insecure dyads. Behaviour of the secure-secure dyads was characterized by significantly more harmony, less control, more responsiveness and positive social orientation.

Jacobson and Wille (1986) assessed attachment in the Strange Situation at 18 months. At age three, eight secure, eight insecure-avoidant, and eight insecure- ambivalent children were observed with a same-sex, unfamiliar, secure partner. There were no significant differences in measures of the focal child's behaviour between the groups. However, secure focal children were the recipients of more positive interaction bids from peers. Among the insecurely attached children, avoidant children elicited fewer positive responses. Ambivalent children received more disruptive responses, agonistic initiations and resistance from peers. They conclude that attachment affected other behaviours (evidently not measured) which made them more or less attractive as interactive partners.

Previous research, then, provides evidence in support of Bowlby's notion that aspects of the mother/child attachment relationship are related to the child's behaviour and behaviour directed to the child in the absence of the attachment figure. Issues involving these and other studies are addressed in section 1.4.

1.2.5 Perceptions

The recent theoretical emphasis on internal representations of attachment relationships and their influence on appraisals concerning the self and others has lead to studying individual differences in perceptions of self and others in relation to attachment. With the Berkeley longitudinal sample, Main and her colleagues (Cassidy & Main, 1985; Main et al., 1985) related attachment patterns at 12 months to the child's perceptions at 6 years about what a child might do in separation situations. Children who had been classified securely attached were rated higher on a scale of emotional openness and

reported more constructive ideas about what a child might do. Sroufe (1983) reports that preschool children who were classified secure as infants were rated higher on three measures of self- esteem by teachers. These results provide support that representations of self and others may be related to quality of attachment, but do not directly examine relations between attachment and self perceptions as reported by the child. Cassidy (1988) developed a study to investigate these links, particularly in relation to the child's self-esteem. With a sample of 52 children, Strange Situation classifications and ratings (adapted for 6- year- olds by Main & Cassidy, 1985) and assessments of self were made when the children were 6-years-old. Assessments of the self included: assessment of the self within the relationship with the attachment figure (an incomplete doll stories procedure), assessment of the child's perceptions of how an unspecified 'other' views him/her (a puppet interview), two assessments of global self-esteem independent of the attachment relationship, and assessment of perceptions of competence and acceptance (Harter & Pike, 1984).

Particular patterns of attachment behaviour were found to be related to particular patterns of self-views. In general, the children classified secure were more open and positive, both about themselves and about their relationships with their mothers. Views reported by children classified as insecure-avoidant were indicative of a 'defensive-idealization' of the self and/or the mother, with seeming dismissal of the importance of the attachment relationship. Avoidant children did not claim perfection in the Harter measures of global self-esteem. Cassidy suggests that this discrepancy may be due to the instrument, which was designed to reduce defensive tendencies (implying acceptability of flaws). Children classified as insecure-ambivalent were underrepresented in the group (n=4). Although no clear patterns related to the self emerged, their responses tended to be in categories characteristic of other insecure children. Studies reported here have begun to investigate connections between attachment and perceptions of self.

1.3 Theoretical and Methodological Issues

Addressing issues arising from attachment research is basic to the goal of elaborating and refining the construct of attachment. Some of these issues are considered here.

A continuous debate in the literature concerns attachment theory's supposed disregard of temperament in both theory and practice. These are two separate issues.

First, from a theoretical view, the attachment construct is a relationships construct. At this level of analysis, one can consider the nature of aspects of a relationship and how these relate to the ontogeny of the individuals concerned. This is not to say that the contributions each individual brings to the relationship are not influential in the development of that relationship, or in the development of the individuals concerned. Bowlby (1969/82) does not disregard these influences. "The pattern of interaction that gradually develops between an infant and his mother can be understood only as a resultant of the contributions of each, and especially of the way in which each in turn influences the behaviour of the other" (p. 204). The relationship focus allows for examination of variables which may predict developmental sequelae that an individual focus may not. Second, the issue of whether the attachment assessment (Strange Situation) is primarily measuring some temperamental characteristics (e.g., proneness to distress) *rather* than measuring the quality of attachment to the mother has been raised by a number of critics (e.g., Egeland & Farber, 1984; Goldsmith & Alansky, 1987; Lamb, 1987). Studies which include both neonatal temperament assessment and infant-attachment figure interaction can aid in addressing this issue. If infant assessment predicted attachment classification and attachment experience did not, one would have to question the meaning of the attachment assessment. Evidence of this kind is not available. Egeland and Farber (1984), with a high-risk sample of mother-infant pairs, found that maternal, neonatal and interactive factors contributed to the development of qualitatively different attachment relationships. Belsky & Rovine (1987) report that newborn behavioural data related to the infants attachment behavioural style in terms of A1-B2 vs B3-C2 (more avoidant styles vs more dependant/ambivalent styles), where the former displayed more autonomic stability, were more alert, and were more positively responsive as newborns. This evidence suggests that early styles of behaviour may relate to the manner in which security or insecurity is expressed. The evidence does not suggest that the early styles of behaviour determine patterns seen to distinguish secure vs. insecure attachment. Similarly, Bates, Maslin & Frankel, 1985 found that temperament indices did not predict major attachment classification but did predict ratings of contact maintenance during reunion episodes.

Some studies have focused on measuring indices of behaviour which theoretically reflect a molar concept of social competence. The term 'social competence' has been defined in many ways to fit the research perspectives of many social theorists (see Dodge,

et al., 1986). Valid and economical assessments of the construct are difficult to settle upon (Vaughn & Waters, 1981). Given this conceptual vagueness, and given the subjective empirical basis on which the concept is often measured, it would seem most beneficial to measure behaviour on a more systematic, molecular level. Analysis at this level not only provides a more objective assessment, but allows for subsequent analysis at higher levels (comparing individual patterns or strategies). This research strategy is in keeping with the ethological focus on description and classification before explanation (Hinde, 1979).

Although attachment theory predicts that different internal organizations in relation to attachment will result in differences in behaviour and perceptions, previous studies have generally failed to discriminate relations between different patterns of insecure attachment to later functioning. Sroufe (1981) suggests that this failure may be due to focusing on discrete behavioural variables which do not take into account context. As suggested above, complex, context-dependent molar constructs (e.g., sensitivity, flexibility) are more difficult to operationalize.

Similarly, the concept of defensiveness, although theoretically useful, is difficult to test empirically. Cassidy (1988) describes two defensive strategies based in psychoanalytic theory; deactivation of the attachment system with avoidance or denial of the importance of attachment relationships, and idealization of the attachment figure, the relationship and/or the self. Cassidy (in press) suggests that one should consider the possibility of defensiveness (particularly from 'A' children) during measurement construction, research design and interpretation of results. The concept of defensiveness is difficult to get a handle on, however, especially if one considers the possibility that defensiveness may not necessarily be an 'all or none' strategy. Can one, for example, attribute less importance to attachment relationships, but not necessarily disregard them completely? Can one adopt a 'somewhat' defensive strategy by idealizing a negative relationship a little (thereby reporting a rosier picture than might be expected, but not necessarily ideal)? Further theoretical and methodological consideration may lend clarity to these issues thereby lending further clarity to the construct of attachment.

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1.4 Organization of the thesis

The thesis is organized in the following way: Chapter 2 presents the methods and instruments used in the study. Chapters 3-5 describe results concerning observations with peers in relation to; security and avoidance ratings (Chapter 3), attachment classification (Chapter 4), and sex differences (Chapter 5). Chapters 6 and 7 consider both child perceptions of self and others, and teacher perceptions of the child in relation to attachment ratings and classifications (Chapter 6) and sex differences (Chapter 7). In each results chapter and in the final chapter (Chapter 8), results are discussed in light of previous findings and, from an attachment perspective, in terms of coherence.

2. METHODS

2.1 The Sample

The subjects were 42 second-born children, 23 girls and 19 boys, aged 5 years (+ or - 1 month). Two of the boys were diagnosed as having substantial hearing impairment during the course of the study and were therefore dropped from analysis. One girl, who's pattern of attachment was classified Disorganized ('D'), was also excluded from analysis, since it was not considered appropriate to 'force' this pattern into the 'A', 'B', 'C' classification system, given that no clear strategy predominated (see Attachment Assessments 2.7)

The mothers' ages ranged from 28 to 40 years (mean 32.9 years, interquartile range 30 - 35 years). The mothers' employment before having children covered the full range of socio-economic classes (Registrar General's Classification) with 89% of mothers in class 2 or 3 (Intermediate or Skilled). Over half of the mothers (N=21) were working at the time of the 4 1/2 year-old lab assessment but none worked full time. The mothers' education ranged from Ph.D/M.D. qualifications to pre-O-level, 67% having reached A-levels.

The fathers' ages ranged from 28 to 44 years (mean 34.9 years, interquartile range 31-38 years). All fathers were employed. Employment ranged from 1-4 on the Registrar General's Classification, with 80% classified 2 or 3 (Intermediate or Skilled). Fathers' education ranged from Ph.D/M.D. qualifications to pre-O-level. Fifty-nine percent had reached A-levels.

2.2 Selection Procedure

The children were chosen from an ongoing developmental study concerned with attachment relationships and temperament, directed by Dr. Joan Stevenson-Hinde. The sub-sample for the current project was selected on the basis of their attendance at four village primary schools, as it was necessary for practical purposes to limit both the number of children and the number of schools. The children were originally recruited through playgroup or nursery school leaders, who provided names and addresses of mothers with children of suitable ages for the project. These families were sent letters giving a description of the project and were asked to volunteer.

2.3 The Setting

Observations of the children and interviews carried out with the children were made at the child's primary school. The four schools involved, as well as a fifth used for piloting the instruments, were all located in villages on the outskirts of Cambridge. Observations of the children were made in the school playground. The area of each playground was designated by concrete, with no permanent playground equipment (with the exception of a climbing frame in one playground with access by permission only). One school also allowed access to a large grass area beside the concrete when the weather was dry and warm. Inside, head teachers at each school kindly provided me with a small room with a table and chairs in which to carry out the interview measures with the focal children.

2.4 Behavioural Observations

2.4.1 Methodology

Permission for carrying out the study was granted by the Cambridge Education Department, by head teachers and by individual class teachers of the children in the sample. Prior to the study, and after receiving permission from authorities, I visited each school, introduced myself to the head teachers and subsequently to each focal child's teacher and explained my interests and potential procedures. There were nine class teachers involved over the course of the study. The teachers were also asked at this point if they would be willing to complete questionnaires on the focal children during the period of observation. All teachers agreed.

I was introduced to each focal child's class by the class teacher with a short explanation of my presence but not singling out the focal children in any way. All the children were shown two jackets (with a radio microphone hidden in one and a dummy microphone hidden in the other - see below) and were given the opportunity to wear them in the class and on the playground for the following few days. The sleeveless jackets were quite handsome and comfortable with the result of becoming sought after almost immediately. After the first couple of days, I proceeded to choose the children who would be 'allowed' to wear one that day, thereby providing me the opportunity to 'choose' the focal child and to 'choose' another peer who was particularly keen to wear one. This, I believe, increased the likelihood that the focal child would wear the jacket on the

appropriate days.

Pilot observations were made at each school prior to the study for a number of reasons. First, it was necessary to practice the running commentary integral to the chosen observational method (see below). Second, it was hoped that all the children would become accustomed to my presence and to the jackets on the playground, and would come to ignore me as I 'overtly' ignored them. That is to say that I hoped to receive and respond to any overtures in a friendly but aloof manner with the consequence of being accepted but not depended on (to tie shoes, break up arguments, etc.). This strategy, in general, sufficed. If asked, the children were told by me and by their teachers that I was doing a study of children and playtime and was just interested in spending some time on the playground. Third, it was necessary to determine whether morning, lunch and afternoon play periods differed in any systematic way that could affect the behaviour of the children. It was decided that the lunch period was both different from and less favorable than morning and afternoon periods due to the greater variability in accessible peers (some went home for lunch, and children with packed lunches or school dinners alternated lunch and playtime). It was also determined that morning and afternoon playtimes did not differ in any systematic way. For these reasons, observations were made either in the morning or in the afternoon and no attempt was made to differentiate the two. However, no child was observed more than once on a given day.

Observations of each child were made for five 15-minute morning and afternoon play periods. An additional 15-minute video tape was made for the purpose of assessing interobserver reliability. The observations were made between January, 1986 and July, 1987. During all playtimes at each school, the focal child's classmates and children from older classes were present on the playground. At two of the four schools there was a second same-age class on the playground. The number of children in the focal children's class ranged from 14 to 30. The total number of children on the playground ranged from 50 to 150 (approximately).

Observation entailed watching and sometimes following the focal child unobtrusively, whispering a continuous commentary of the child's actions and interactions with peers into a small microphone connected to a concealed tape recorder. The focal child wore a radio microphone, concealed in a light-weight jacket, which picked up both the focal child's speech and any speech directed toward him/her. Five

children showed some objection to wearing the jacket when offered. In these cases it was decided that pressing the issue would perhaps influence subsequent behaviour on the playground, so the jacket was abandoned. This had the effect of making the observational procedure slightly more difficult for me (in that it was then necessary to make a commentary both of the child's verbal and nonverbal behaviour into my microphone). Although I sometimes stood closer to the child in order to hear, this did not seem to have any effect on the child's behaviour, as the focal child was not aware that I was particularly interested in him/her. In fact, it was both a bit of a surprise and a great relief to observe that most of the children most of the time seemed oblivious to my presence.

2.4.2 Coding System

Tape recordings were transcribed using a coding system based on the one used by Hinde, Easton, Meller and Tamplin (1983), which is based on a modification of Lytton's (1973) modification of Caldwell's (1969) coding scheme. Some items were originally devised by Parten (1932) and adapted by Smilansky (1968). Some additions and alterations were made for this study. The observational method entailed a continuous sequential narrative, coding for the activity and the role involvement within the activity (relative role), the degree of social participation, the identities of the two nearest neighbors, and each social action in which the focal child was involved. Coding for interactions represents a "grammar" of observations which uses a specific format. It represents what the child says and does to others (and himself). The interactions are coded in the following general format: subject, verb, object, qualifiers. This format allowed for assessment of both the child's behaviour (e.g., focal child demonstrates to peer) and behaviour directed to the focal child (e.g., peer demonstrates to focal child). One or more teachers or playground attendants were always present on the playground. In addition, 62% percent of the focal children had a sibling on the playground. Although interactions with adults and siblings were coded, these interactions were omitted from analysis, allowing for assessment only of interactions with peers.

2.4.3 Split-half reliability

When all observations had been transcribed and entered into the computer, a split-half reliability test was made. This is an important preliminary analysis, since

interpreting results of behaviour which is not consistent over time (unreliable) would be counter to an individual differences approach to studying behaviour. In effect, one could not be at all confident that a child's behaviour seen today is behaviour likely to be seen tomorrow or even in 10 minutes, and therefore one could not make the assumption that behavioural differences between children were 'due' to consistency within the child. An odd-even split was made, dividing each child observation in two and adding the first half of observations 1,3 and 5 to the second half of 2 and 4, and adding the second half of 1,3 and 5 to the first half of 2 and 4. Non-parametric Spearman rank-order correlation coefficients (Siegel, 1956) were calculated, as preliminary analysis indicated that some of the behavioural items were not normally distributed. Tables 2.1 and 2.2 show all single and combined variables included in final analysis and their split-half reliabilities.

Table 2.1 Split-half reliabilities: Activity, Social Participation and Leader/Follower codes.

Activities	Durations
Large Muscle Play	.32 *
Organized Games With Rules	.48 ***
Role Playing	.73 ***
Social Conversation	.34 *
Transitional	.43 ***
Neutral	.83 ***
Social Participation	
Playing on Own	.82 ***
Group Play	.58 ***
Interactive Play	.72 ***
Leader/Follower	
Leader	.71 ***
Follower	.57 ***
Mutual/Ambiguous	.70 ***

Duration = minutes per 75 minutes, '-' = variable not reliable
Spearman correlations r(42): † = p≤.10, * = p≤.05,

** = p≤.01, *** = p≤.001, one-tailed.

Table 2.2 Split-half reliabilities: Behavioural codes for child as *subject* and child as *object*.

	SUBJECT FREQUENCY	SUBJECT RELATIVE FREQUENCY	OBJECT FREQUENCY	OBJECT RELATIVE FREQUENCY
General Communication				
Speaks	.63 ***	.56 ***	.56 ***	.39 **
Informs	.72 ***	.47 ***	.62 ***	.56 ***
Inquires	.51 ***	.44 ***	.54 ***	.52 ***
Agrees	.43 ***	.27 *	.36 **	-
Disagrees	.55 ***	.37 **	.40 **	.27 *
Listens	.40 **	.64 ***	.63 ***	.30 *
Communicates			.38 **	.44 ***
Positive/Playful				
Positive Expressive	.35 *	.25 †	.27 *	-
Prosocial	.38 **	-	.52 ***	-
Hugs	.50 ***	.46 ***	.51 ***	.45 ***
Holds Hands	.72 ***			
Positive			.59 ***	.38 **
Playful Aggression	.70 ***	.61 ***	.75 ***	.71 ***
Playful Teasing	.54 ***	.37 **	.25 †	.37 **
Play Noises	.52 ***	.54 ***	.29 *	.30 *
Imitates	.25 †	.25 †	.44 ***	.45 ***
Playful			.54 ***	.26 *
Aggressive/Negative				
Strong Aggression	.64 ***	.58 ***	.44 ***	.43 ***
Weak Aggression	.52 ***	.33 *	.35 *	.32 *
Disconfirms	.34 *	-	.49 ***	.44 ***
Noncomplies		.27 *		.39 **
Speaks With Hostility	.57 ***	.54 ***	-	-
Negative			.32 *	.39 **
Controlling				
Strong Control	.63 ***	.47 ***	.35 *	.36 **
Leads	.57 ***	.40 **	.59 ***	.55 ***
Suggests	.70 ***	.63 ***	.59 ***	.48 ***
Controlling			.69 ***	.30 *
Control Qualifiers				
W/ Reason		.53 ***		.28 *
W/ Reason Implicit		.71 ***		.69 ***
W/ No Reason		.54 ***		.35 *
Initiating/Attention-Seeking				
Initiates	.42 ***	.34 *	.48 ***	.45 ***
Seeks Entry/Inclusion	-	-	.53 ***	.47 ***
Seeks Attention	.51 ***	.47 ***	-	-
Speaks Boastfully	.44 ***	.37 **	.32 *	-
Noninteractive				
Watches	.54 ***			
Speaks/Mutters to Self	.41 ***			
Automanipulates	.30 *			

Frequency per 75 minutes(f), Relative Frequency (rf) = frequency relative to total interactions
'-' = variable not reliable

Spearman correlations r(42): † = p≤.10 * = p≤.05, ** = p≤.01, *** = p≤.001, one-tailed.

2.4.4 Inter-rater agreement

Inter-rater agreement was assessed with twelve 10-minute video tape segments (6 girls, 6 boys), which were randomly chosen after disregarding those lacking visual and/or auditory clarity. These segments were coded independently by me and by a second observer who was already familiar with the general coding system and who was trained by me in the use of the coding system adapted for this study. The purpose of this reliability assessment is to ensure that what is observed is not unduly a reflection of some idiosyncratic view held by the observer but is 'observable' by trained others. This also ensures that the operational definitions of variables are clear and distinctive enough that observed behaviour is reliably classifiable. The Spearman correlation coefficient was used to assess agreement. Tables 2.3 and 2.4 show inter-rater agreement for single and combined codes used in the final analyses.

Table 2.3 Inter-rater agreement: Activity, Social Participation and Leader/Follower codes.

Activities	**Durations**
Large Muscle Play	.79 ***
Organized Games with Rules	1.00 ***
Role Playing	.92 ***
Social Conversation	.86 ***
Transitional	.59 *
Neutral	.81 ***
Social Participation	
Playing On Own	.76 ***
Group Play	.57 *
Interactive Play	.90 ***
Leader/Follower	
Leader	.60 *
Follower	.41 †
Mutual/Ambiguous	.73 **

Duration = minutes per 75 minutes
Spearman correlations r(42): † = p≤.10, * = p≤.05,

** = p≤.01, *** = p≤.001, one-tailed.

Table 2.4 Interrater agreement: Behavioural codes for child as *subject* and child as *object*.

	SUBJECT	OBJECT
General Communication		
Speaks	.84 ***	.73 **
Informs	.93 ***	.59 *
Inquires	.86 ***	.78 ***
Agrees	.51 *	.59 *
Disagrees	.92 ***	.87 ***
Listens	.55 *	.79 ***
Communicates	.94 ***	.86***
Positive/Playful		
Positive Expressive	.71 **	.68 **
Prosocial	.62 *	.74 **
Hugs	.85 ***	.63 *
Holds Hands	1.00 ***	
Positive	.77 ***	.49 †
Playful Aggression	.57 *	.90 ***
Playful Teasing	.78 ***	.54 *
Play Noises	.96 ***	.57 *
Imitates	.56 *	.73 ***
Playful	.91 ***	.89 ***
Aggressive/Negative		
Strong Aggression	.76 ***	.88 ***
Weak Aggression	.62 *	.62 *
Disconfirms	.50 *	.76 ***
Noncomplies	.54 *	-
Speaks With Hostility	.76 ***	1.00 ***
Negative	.74 **	.58 *
Controlling		
Strong Control	.72 **	.64 *
Leads	.56 *	.69 **
Suggests	.78 ***	-
Controlling	.92 ***	.37
Control Qualifiers		
W/ Reason	.64 *	.67 **
W/ Reason Implicit	.78 ***	.65 *
W/ No Reason	.59 *	-
Initiating/Attention-Seeking		
Initiates	.72 **	.80 ***
Seeks Entry/Inclusion	.75 ***	1.00 ***
Seeks Attention	.55 *	.52 *
Speaks Boastfully	.79 ***	.69 **
Noninteractive		
Watches	.50 *	
Speaks/Mutters To Self	.93 ***	
Automanipulates	.65 *	

Frequency per 75 minutes (f),
'-' = variable not reliable

Spearman correlations r(12): † = p≤.10, * = p≤.05, ** = p≤.01, *** = p≤.001, one-tailed.

2.4.5 Criteria for retaining behavioural codes

Single and combined codes were deemed acceptable when the following four criteria were met:

1. The code was potentially important. (Given the all- encompassing nature of the coding system, and the need to limit endless analyses, some codes - particularly many of the codes used to qualify other codes - were dropped.)

2. At least half of the children exhibited the behaviour at least once (whole sample median > 0).

3. Split-half reliability on the code reached .257 (N=42), $p \leq .05$, one-tailed. (A few codes had correlations of .25. It was decided that the potential importance of these variable overrode observance of strict statistical purity).

4. Inter-rater agreement on the code reached .504 (N=12, $p \leq .05$, one-tailed).

All codes meeting criterion 1 but not meeting criteria 2-4 were either combined with other variables which were functionally similar or were dropped from further analyses. Combined variables had to meet all the above criteria. Exceptions were made for four codes: The activity variable Organized Games With Rules (where the second criterion was not met) on the grounds that, although rare, the activity was qualitatively distinct from other activities; the Follower duration code (where inter-rater agreement did not reach significance (.41 †), as it was determined that coding from video tended to obscure this more global interaction variable; the pooled object Positive and Controlling relative frequency codes (where inter-rater agreement did not reach significance, .49, p=.06; .37, p=.12, respectively), since inclusion was necessary for the global picture of relative frequency patterns. These codes were considered important and were retained, but should be examined with these reliability limitations in mind.

If the code met all criteria, the single variable was either retained or combined with other variables which were functionally similar to obtain a more molar behavioural cluster (e.g., Commands + Inhibits = 'Strong Control'). Given that some of the behavioural codes were dropped from further analyses, remaining codes, expressed as frequencies and frequencies relative to total interactions are not inclusive. That is, they do not represent all of the items observed. With respect to research limitations, Maccoby

and Martin (1983) suggest that one should select the most frequent behaviours and the ones in which the research has theoretical interest and to regard these as 'prototypes' of what is happening with respect to those behaviours not analysed.

2.4.6 Behavioural frequencies, relative frequencies and durations

Analysis was made using frequency measures of behaviour (e.g., X criticized peers 5 times in 75 minutes, X was criticized by peers 6 times in 75 minutes). In addition, each frequency was divided by the total number of interactions for each child to obtain a relative frequency measure of each behaviour. (When coding, all interactions take an appropriate 'group 1' qualifier, which indicates how the interaction relates to the previous one. These are added together for 'X as subject' and 'X as object' in order to calculate the total number of interactions.) These additional derived measures provide insight into patterns of behaviour relative to amount of interaction - the proportion of criticizing while interacting (e.g., out of 270 interactions with peers, X criticized peers 5 times: relative frequency = .02). The two types of measurements here address separate issues. For instance, when considering how often a child criticizes, two out of three total interactions and twenty out of thirty gives the same relative frequency. Both absolute and relative frequency reveal different, potentially important, information. To take another example, criticizing in five out of only five interactions results in the same frequency score as does five criticisms in one hundred interactions, emphasizing the importance of examining relative frequency measures. Hinde (1977) makes the point, "that intuition may suggest that some derived measures are more pertinent to some questions than some absolute measures is not the point: the ultimate test must lie with the data -- which measures are the most reliable, most predictive, or most revealing"(pp.43-44). Given that relative frequency codes were subject to two sources of unreliability, the probability of unreliability was magnified. In fact, a number of the relative frequency codes were found to be unreliable and were dropped. The above considerations precluded omission of either frequency or relative frequency from analysis. Having made that point, results concerning frequency and relative frequency in this study, in general, reveal similar patterns.

Codes concerning Activities, Social Participation and Leader/Follower are expressed in terms of duration. Since each child was observed for a total of 75 minutes, durations

are reported in terms of minutes per 75 minutes.

2.4.7 Operational definitions of behavioural codes

Below are operational definitions of the single behavioural codes retained and the combinations ultimately employed (## indicates single variables which were ultimately combined). All of the combined codes contain single codes which were mutually exclusive. Codes for Activities, Social Participation and Relative Roles were also mutually exclusive within each category.

Activities

The activity codes were used to assess what the child was doing on the playground at any one time.

Large Motor Play (LMP): Large Manipulative Play (SL)+ Large Muscle Play (SH)

Large Manipulative Play (SL): Activities with gross motor manipulative movements.
e.g., gathering up leaves, snow

Large Muscle Play (SH): Activities with gross motor active movements.
e.g., running, chasing, skipping, hopping, rough and tumble, unorganized ball games, climbing around steps

Organized Games With Rules (SG): organized, competitive games with clear and explicit rules.
e.g., 'Mr. Wolf', 'ice cream','red-light green-light'

Role-Playing (SR): Role-playing (pretending) either alone or with other children.
e.g., 'mummies and daddies', 'monster and victim', 'goodies and baddies', 'Thundercats', 'He-man'

Social Conversation (SSS): Conversation consisting of more than three turns and the child is not engaged in any game.

e.g., X: I went to the shops last night.
Y: Did you get anything?
X: Yes, I got some new shoes.

Transitional (STR): In transition between one activity and another. Purposeful space between activities.

Neutral (SNE): Unoccupied and vacant.

Social Participation

Social participation was a measure of the extent to which children interact with one another in the context of an activity. Participation codes were not used in conjunction with the activity codes: Transitional (STR), Neutral (SNE).

Playing On Own (SSL): Playing a game or engaged in an activity alone. Although there may be children nearby, there is no interaction with them.
e.g., Child skips around playground with no others participating.

Group Play (SGP): Group Play (SGR) + Parallel Play (SPR)

Group Play (SGR): Involved in an activity with a moderate degree of interaction with other peers, but cannot be called SIT.
e.g., Group ball game with some but not constant interaction.

Parallel Play (SPR): Involved in an activity where there is little influence by one child on another in their play. Focal child is near another child who is engaged in a similar activity but without overt interactions with the other child.
e.g., Playing 'hopscotch' in the same place, but with little or no interaction.

Interactive Play (SIT): The children are influencing one another almost all the time in their play. Focal child is playing with or talking to another child in such a way that what each child does more or less

continuously influences or is influenced by the other. Social conversation (SSS) is always coded as SIT.
e.g., Role-playing when there is a constant flow of interaction between 'monster' and 'victim'.

Leader/Follower

This measure assessed the relative degree to which the focal child influenced the behaviour of the other(s) within an activity. These codes were not used in conjunction with the activity codes: Transitional (STR), Neutral (SNE).

Leader (L): Focal child is verbally and/or nonverbally continuously controlling (implicitly or explicitly directing, sanctioning behaviour, and coordinating) the game/activity and the other children are following.
e.g., In the context of a running game, the focal child is continuously giving directions to another who is also running and following the focal child's lead.

Follower (F): Focal child is engaged in a game/activity where another child is verbally and/or nonverbally continuously controlling the game/activity (either implicitly or explicitly).
e.g., The reverse of the above.

Mutual/Ambiguous (M): Either the control of the game/activity is shared, with continuous give and take of control or relative roles within the activity are not obvious.
e.g., in the context of a running game, either the children are taking continuous turns directing and then following, or there is no obvious leader.

Neighbors/Alone

Up to two children in close proximity of the focal child were recorded throughout the observation. Neighbors were recorded by name. If the child was involved with more than two children, GLS (two or more girls) or BYS (two or more boys) was recorded. Therefore, the frequencies and durations concerning peers in this category refer to the minimum number of girls or boys present. When there were no children or adults in close proximity the child was recorded as alone (AL).

Verbs and Qualifiers

General Communication

Speaks (SPK): General statements which cannot be coded as anything more specific or when content was not heard by the observer.
e.g., Yes. (response)
e.g., Hi, Linda.

Informs (INF): Gives information - includes statements about what the subject or anyone else is doing.
e.g., It's raining.
e.g., My teacher is outside today.

Inquires (INQ): General inquiries - not to include the interrogative form of 'suggests'.
e.g., Where did David go?
e.g., Is it time to go inside yet??

Agrees (QAG): Qualifies all statements that agree with the preceding one.
e.g., You're right. That was funny.
e.g., Yes, that's true.

Disagrees (QDG): Qualifies all statements which disagree with the preceding one.
e.g., It wasn't a bird.
e.g., No, that wasn't the bell.

Listens (LIS): Attends (ATT) + Nods (NOD)

Attends (ATT): Watching as an initiation or attending without speaking in response. Used where "Mmh" is a response; or on other occasions in which the respondent acknowledges (ie. does not ignore) the speaker, but makes no other response.

Nods (NOD): Nods in reply

General Communication Pool: Speaks + Informs + Inquires + Listens

Positive/Playful

Positive Expressive (POS): Laughs + Smiles + Expresses Pleasure

Laughs (LAU): Laughing (smile with sound) to another child.

Smiles (SMI): Corners of mouth lift, directed toward another child.

Expresses Pleasure (PLE): Smile or laugh with verbal expression of pleasure.
e.g., This is fun.
e.g., We did it!

Prosocial (PRO): Defends (DEF) + Helps (HLP) + Shares (SHA) + Expresses Solicitude (SOL) + Permits (PER) + Cautions (CAU)

Defends (DEF): Child defends verbal or nonverbal behaviour of another or protects another from others.
e.g., He *did* count to 10.
e.g., Leave her alone.

Helps (HLP): Utilitarian helping.
e.g., I'll help you get up.
e.g., I'll button it for you.

Shares (SHA): Sharing objects or giving a turn.
e.g., You can have a bite of my apple.

e.g., Try my car.

Expresses Solicitude (SOL): Verbal or physical comforting (in response to hurt, sadness, etc.).
e.g., You fell over. Are you O.K.?
e.g., What's the matter, Anne? (comforting voice)

Permits (PER): Permits or sanctions. Used in response to dependent bid for holding hands, seeking permission or seeking entry.
e.g., Sure, you can play.
e.g., O.K., you hold my hand.

Cautions (CAU): Warns of danger - must have recipient's well-being in mind.
e.g., It's slippery here. Be careful or you'll fall.
e.g., Watch out. (helping a child out of the way of charging children)

Hugs (HUG): Cuddling, hugging or putting arm around another child. Repeated once every 10 seconds if continuous.

Holds Hands (HHA): Reciprocal holding hands with another child. Repeated once every 10 seconds if continuous.

Positive Pool: *Positive Expressive + Prosocial + Hugs*

Playful Aggression (PAG): Playful aggressive behaviour which appears to have no malicious intent - with absence of hostility.
e.g., X pushes Y playfully, Y laughs.
e.g., X ruffles Y's hair. Y smiles.

Playful Teasing (TPL): Teasing in fun or threatens playfully - with absence of hostility.
e.g., You're so silly (in friendly voice).
e.g., I'm going to throw you in the river.

Play Noises (PLN):	Noises made to another child in the context of play; imaginative noises. e.g., Brm, brm, brm. e.g., Grrrrrrrrrrr.
Imitates (IMS):	Imitates (QIT) + Follows (FOL)
## Imitates (QIT):	Qualifies verbal and nonverbal behaviour which is in imitation of another child (excluding hostile, teasing imitation). e.g., X makes a funny face, Y responds with imitation of the funny face. e.g., X rolls his sleeves up, Y rolls his sleeves up in imitation.
## Follows (FOL):	Follows as a response to another child. e.g., X says 'let's run along the line' (suggesting then demonstrating), Y follows in imitation.
Playful Pool:	*Playful Aggression + Playful Teasing + Play Noises + Imitates*

Aggressive/Negative

Strong Aggression (STA):	Specific Aggression (SAG) + Non-specific Aggression (TAG) + Games Aggression (GAG) + Defensive Aggression (DAG)
## Specific Aggression (SAG):	Trying to get an object or a position by means of aggression, such as pushing, snatching, grabbing, etc. e.g., X pushes (with hostility) in front of Y in line. Y resists. e.g., X grabs Y's stickers. Y cries.
## Non-specific Aggression (TAG):	Hurting another physically or verbally (without a specific object as above as in SAG).

e.g., X punches Y with hostility. Y runs away (submits).
e.g., X says with hostility 'You're so stupid.' Y cries.

Games Aggression (GAG): Hurting that arises out of a rough and tumble or other game.
e.g., While play-fighting, X hits hard. Y cries.
e.g., While roll-playing, X swings Y around wildly. Y gets angry.

Defensive Aggression (DAG): Hurting physically or verbally as a defensive reaction to aggressive or negative behaviour directed to the subject.
e.g., Y pushes (with hostility) in front of X in line (SAG). X hits Y.
e.g., Y kicks X (TAG). X kicks Y back.

Weak Aggression (WKA): Threatens (THR) + Criticizes (CRI) + Resists (RES)

Threatens (THR): Hostile threats of aggressive behaviour, hostile accusation and/or hostile teasing.
e.g., I'm going to get you! (with hostility)
e.g., You stupid idiot! (with hostility)

Criticizes (CRI): Milder form of TAG - criticizing another's behaviour.
e.g., Can't you do any better than that?
e.g., You sure can't run very fast.

Resists (RES): Opposing another child's behaviour directed toward the subject; opposing aggression that would not be called DAG, and opposing hugs, hand holding, etc.
e.g., Y tries to go past X. X restrains Y (doesn't allow it).
e.g., Y tries to hug X. X pushes Y away.

Disconfirms (QDS): Qualifies all verbal and nonverbal responses when the subject ignores the previous speech or behaviour directed to him/her.
e.g., Y says 'watch me' (SAT), X pays no attention.

e.g., Y says 'where is the dinner lady?' X says 'why don't you go play with Chris?'

Noncomplies (QNC): Qualifies replies to control statements when the listener does not comply either verbally or non-verbally.
e.g., Y says 'Let's play horses' (SUG), X says 'No'.
e.g., Y says 'Go get the ball!' (COM), X says 'You go get it'.

Speaks With Hostility (QHS): Qualifies all statements which are spoken in a hostile tone of voice, but are none of the above.
e.g., Don't touch that, it's *mine*!!!
e.g., You're not playing!

Negative Pool: *Strong Aggression + Weak Aggression + Disconfirms + Speaks With Hostility*

Controlling

Strong Control (STC): Commands (COM) + Inhibits (INH)

Commands (COM): Ordering a child to do something.
e.g., Go get Mark!
e.g., Come on!

Inhibits (INH): Ordering a child not to do something.
e.g., Don't go that way.
e.g., Wait!

Leads (LED): Guides (GUI) + Rule-sets (RLS) + Demonstrates (DEM)

Guides (GUI): Verbal or Nonverbal behaviour which is both controlling and informational.
e.g., We have to go this way to get to the path.
e.g., Now we put our battle gear on (in a role-playing context).

Rule-Sets (RLS): Pointing out rules or violation of a rule.
e.g., We're not allowed to go in yet.
e.g., You're supposed to have your coat on.

Demonstrates (DEM): Showing, demonstrating how to do something.
e.g., This is how you skip. (shows child)
e.g., You run fast like this and then jump.

Suggests (SUG): Gentle control, suggesting further activity (often joint).
e.g., Let's play chase.
e.g., Do you want to play mummies and daddies?

Controls W/ Reason (QRE): Qualifies all control statements when a reason is given.
e.g., Go get David 'cause he wants to play too. (COM QRE)
e.g., Let's go sit down. I'm too tired to play any more. (SUG QRE)

Controls W/ Reason Implicit (QIM): Qualifies all control statements where the reason is implied.
e.g., Let's go get a drink of water. (SUG QIM)
e.g., Don't step on my foot. (INH QIM)

Controls W/ No Reason (QNR): Qualifies all control statements when no reason is given.
e.g., Come here! (COM QNR)
e.g., Let's go over there. (SUG QNR)

Controlling Pool: *Strong Control+Leads+Suggests*

Initiating/Attention-Seeking

Initiates (INS): Initiates (QA) + Topic Change (QTC)

Initiates (QA): Qualifies any verbal or nonverbal behaviour which initiates interaction - at least 30 seconds have elapsed since any previous interaction with the recipient.
e.g., X initiates interaction by saying 'hey, wanta play

ball? (X SUG Y QA QIM)

## Topic Change (QTC):	Qualifies all utterances which involve a change in topic. e.g., X: It's a nice day. Y: Yeah, it is. X: Where's Lisa?
Seeks Entry/Inclusion (SEN):	Dependent statement seeking permission to join in a game/activity. e.g., Can I play? e.g., Are you going to let me play?
Seeks Attention (SAT):	Verbal or nonverbal behaviour seeking to elicit the attention of another child. e.g., Watch me! e.g., Mike, Mike, Mike. (tugging on arm)
Speaks Boastfully (QBO):	Qualifies statements in praise of oneself or one's possessions. e.g., *I* can run faster than anyone. e.g., *I* have more Lego than you do.

Noninteractive

Watches (WAT):	Focussed observation of a child or the activity in which the child is engaged. Repeated every 10 seconds if continuous. e.g., X watches Y, as Y plays chase with Z. e.g., X watches a group of children playing jump-rope.
Speaks/Mutters To Self (ASP):	Speaking aloud or muttering to self. e.g., Where is Robert? I can't find him. e.g., The rocks go here and the dirt goes there.
Automanipulates (AUT):	Includes sucking objects, twiddling hair, playing with self. Repeated every 10 seconds if continuous.

Table 2.5 shows an example of a coded sequence.

Table 2.5 Example of a coded behaviour sequence.

TIME	ACTIVITY	ROLE	SOCIAL PART.	NEIGHBORS	SUBJECT	VERB	OBJECT	QUALIFIERS	
00 00	SL	L	SIT	OSAAA OSBBB					
The focal child and two other girls (AAA AND BBB) are playing in the snow (SL = large manipulative play). The focal child is leading the activity (L) continuously interacting (SIT).									
00 35					X	GUI	AAAO	QA	QRE
X guides (GUI) AAA, in initiation (QA), with reason stated (QRE). (''The snow has to be put in this pile because it won't blow away here.'')									
00 39					AAA	SPK	XO	QCM	
AAA speaks (SPK) to X in compliance. ('' O.K.'')									
00 42					X	COM	BBBO	QA	QNR
X commands (COM) BBB, in initiation (QA), with no reason (QNR). ('' Bring me some snow ''.)									
00 46					BBB	INF	XO	QNC	
BBB informs (INF) X, in noncompliance. ('' No, we need all this snow for our other pile.'')									
00 50					X	SAT	BBBO	QEX	
X seeks BBB's attention (SAT) in extension. ('' Look at me. I can carry all of this snow.'')									
00 59					BBB	ATT	XO	QYE	
BBB attends (ATT) X in answer.									
01 10					AAA	INF	XO	QA	
AAA informs (INF) X in initiation. ('' I'm going to make the head now.'')									
01 14					X	RLS	AAAO	QDG	
X rule sets (RLS) to AAA in disagreement (QDG). (''You musn't make the head before you make the body.'')									
01 20					AAA	SUG	XO	QEX	QIM
AAA sugests (SUG) to X in extension (QEX), with reason implied (QIM). (''Why don't you make the body and I'll make the head?'')									
01 27					X	SPK	AAAO	QCM	
X expresses pleasure (PLE) in compliance. (''Yeah, that will be great!'')									
01 29					AAA	INQ	XO	QEX	
AAA inquires (INQ) to X in extension (QEX). (''Which pile shall I use?'')									
01 36					X	PAG	AAAO	QDS	
X play aggresses (PAG) disconfirmingly (QDS). (Grabbing AAA's arm and swinging her around in fun.)									
01 42					AAA	LAU	XO	QEX	
AAA laughs (LAU) in extension (QEX).									
01 45					X	SMI	AAAO	QAN	
X smiles (SMI) in answer (QAN).									

2.5 Child Interviews

2.5.1 Methodology

Four interviews were given to each focal child on separate days, either before or after playtime. At least two focal children at any one time were eligible (one month either side of their birthday) for observation and interview. The interviews were organized such that they were made around the time that the child was being observed (usually about a 2 week period), but were not made before or after the observations in which the child was the focus. This was done in order to avoid singling out the child to be observed. Non-focal children also were sometimes asked to 'play games' with me. This also served to take the 'focus' away from the focal child.

None of the children showed any strong hesitation in going with me. Each child before the first interview was told:

> It's your turn to play a game with me. Over the next couple of weeks we're going to play four games together. I think you will like them. When we finish the last game, you will get a special sticker like this (a fuzzy cat or airplane).

The interviews were made in the same order for each child. They were ordered in such a way as to minimize the influence of one instrument on any successive one and to maintain the child's cooperation: Popularity/Liking, Self-efficacy, Interpersonal Problem-Solving, Perceived Competence and Acceptance.

2.5.2 Perceived Competence and Acceptance

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1984) was used (see Appendix A). The version of the scale for 6-7 year-olds was administered according to directions given in the manual. Since the children had previously been given the younger version twice, it was decided to use the one for slightly older children. Pilot tests indicated that the version used was appropriate for this age group. The Scale, utilizing a pictorial format, consists of four subscales of six items each rated by the child from 1 (low competence/acceptance) to 4 (high competence/acceptance) in each of four domains: cognitive competence (e.g., 'knows a lot at school', physical competence (e.g., 'good at running'), peer acceptance (e.g., 'has

lots of friends') and maternal acceptance (e.g., 'mum talks to you'). Item scores are averaged across the six items for each subscale. Three additional summed scores were computed; one derived by summing across all four subscales ("overall" score) one derived by combining the cognitive and physical subscales to form a "competence" score, and one derived by combining the peer and maternal acceptance subscales to form a "social acceptance" score. Acceptable levels of reliability (internal consistency) and validity (convergent, discriminant and predictive) have been documented for this measure (Harter & Pike, 1984).

2.5.3 Self-Efficacy

The Children's Self-Efficacy for Peer Interaction Scale (CSPI) was administered to each child (Wheeler & Ladd, 1982). The scale was designed as a self-report measure for 8 to 10 year-olds. It was deemed suitable for 5 year-olds, given alteration to an interview format - presenting each question to the child orally. Pilot tests with 5 year-olds also provided evidence for the scales applicability for this age group. Acceptable levels for psychometric properties (internal consistency, test-retest reliability and construct validity) are reported for the instrument (Wheeler & Ladd, 1984). The scale consists of 22 items depicting (12) conflict and (10) nonconflict social situations. The child is first told: I'm going to tell you some little stories. I want you to pretend that each story is happening to you. Then I want you to tell me how easy it would be to do the things in each story. Some children your age think these things are hard to do, other children think they're easy to do. I want you to tell me what is really true *for you.* Remember, this is not a test and there are no wrong answers. Below are examples of conflict and nonconflict 'stories':

Conflict: A child is shouting at you. Telling the child to stop is 'easy' or 'hard' for you? Is it very {easy/hard} or just {easy/hard}?

Non-conflict: Some kids want to play a game. Asking them if you can play is 'easy' or 'hard' for you? Is it very {easy/hard} or just {easy/hard}?

Scores per item (very hard = 1, hard = 2, easy = 3, very easy = 4) are added together to obtain a conflict and a nonconflict score. The two are further summed for a total self-efficacy score.

2.5.4 Perceived Popularity and Liking

The Perceived Popularity and Liking Post was designed for this study to assess perceptions concerning popularity with, and liking of, peers. It follows a similar rating-scale procedure to that proposed by Asher et al. (1979) but is not a sociometric procedure in that it is administered only to the focal child. The name of each classmate was posted into one of three boxes labeled with a smiling face (likes a lot), neutral face (likes a little) or frowning face (doesn't like). The first time through the (red) cards, the child was asked, 'Do you like (classmate) a lot, a little, or you don't?' The child then placed the card in the corresponding box. The second time through the (blue) cards, the child was asked, 'Does (classmate) like you a lot, a little, or doesn't like you?' For each round, each box provided three scores: The number of boys' names (weighted by the total number of boys), the number of girls' names (weighted by the total number of girls) and the total number of names (weighted by total boys and girls in class).

In addition, the number of names which fell into the same box on round 1 and 2 provided a (weighted) 'mutual' score, of mutual liking a lot or mutual not liking for girls, boys and total. Mutual liking a little was not recorded. Further, the number of names which were posted in the 'likes a lot' box on round 1, but were posted in the 'don't like' box on round 2 provided a (weighted) 'perceived rejected' score for girls, boys and total. (e.g., I like Sue a lot - and later... Sue doesn't like me.) Similarly, the number of names which were posted in the 'don't like' box on round 1, but were posted in the 'likes a lot' box on round 2 provided a (weighted) 'rejecting' score for girls, boys and total. (e.g., I don't like Tom - and later... Tom likes me a lot.)

To assess the test-retest reliability of this instrument, one class of 4 - 6 year-olds, 10 girls and 15 boys (mean age= 63 months, age range: 58-69 months) was administered the 'liking post' once over two days and then again two weeks later. Table 2.6 shows Spearman correlation coefficients for girls, boys, and total. For the whole sample, 60% of measures were significantly correlated at $p \leq .05$.

Table 2.6 Test - retest reliability: Perceived Popularity, Liking, Mutual and Discrepant relationships. Spearman correlation coefficients for whole reliability sample, girls and boys.

Popularity		**WHOLE SAMPLE** n=25	**GIRLS** n=10	**BOYS** n=15
% Total (like me)	A Lot	.30 †	.15	.35 †
	A Little	.65 ***	.43	.66 **
	Don't	.38 *	-.08	.43 †
% Girls (like me)	A Lot	.49 **	.53 †	.19
	A Little	.59 ***	.74 **	.43 *
	Don't	.49 **	.33	.33
% Boys (like me)	A Lot	.46 **	-.04	.43 *
	A Little	.54 **	.12	.57 **
	Don't	.47 **	-.13	.70 ***
Liking				
% Total (I like)	A Lot	.30 †	-.05	.38
	A Little	.56 **	.04	.62**
	Don't	.32 †	.04	.43 †
% Girls (I like)	A Lot	.47 **	-.03	.51 *
	A Little	.42 *	.06	.38 †
	Don't	.42 *	.15	.41 †
% Boys (I like)	A Lot	.28 †	-.02	.19
	A Little	.59 ***	.20	.64 **
	Don't	.33 †	.05	.50 *
Mutual				
% Mutual Girls	A Lot	.59 ***	.52 †	.50 *
	Don't	.36 *	-.01	.31
% Mutual Boys	A Lot	.49 **	.25	.40 †
	Don't	.38 *	-.06	.62 **
% Total	A Lot	.40 *	.44 †	.32
	Don't	.29 †	-.20	.43 *
Discrepant				
X % Rejecting	Girls	.09	.42	-.04
	Boys	.22	.41	.23
	All	.06	.59 *	-.12
X % (perceived) Rejected	By Girls	.26 †	-.13	.62 **
	By Boys	.12	.19	.07
	By All	.27 †	.20	.31

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, *** = p≤.001, one-tailed.

It is noteworthy that boys showed more stability of popularity perceptions and liking than did girls. This difference may be attributed to differences in girls' and boys' conceptions of 'liking' and 'not liking'. Perhaps girls' perceptions are related more to assessments of momentary or short term dynamics of relationships (e.g., I argued with her today so I don't like her), whereas boys may make more general inferences concerning 'liking' or 'not liking' based on more global or general dynamics (e.g., We always play together so I like him'). The 'likes a little' choice may have muddied the waters somewhat, but this choice was considered a necessary element as it allowed for a clear distinction between liking 'a lot' and 'don't like'. The results here warrant further study. Given lack of psychometric tests of construct validity, the results concerning perceived popularity and liking must be considered with caution.

2.5.5 Interpersonal Problem-Solving

The Preschool Interpersonal Problem-Solving (PIPS) Test (Shure & Spivack, 1974) was administered to each child. It was designed to assess the preschool (4-5 year-old) child's cognitive ability to generate solutions to interpersonal problems. Only the peer situations were used for this study. The interview began with the following explanation:

> We want to know how children think about things. I've got some pictures and I'm going to tell you some stories about children. I'm going to tell you the first part of the story, and I want you to tell me what you think the child could do in the story. Pretend all the children are age 5. O.K?

A series of stories, using cardboard cutouts of same-sex children and a toy, were then related. Below is an example:

> Here's Mark and here's Brian. Mark is playing with this truck and he has been playing with it for a long time. Now Brian wants a chance to play with the truck, but Mark keeps on playing with it. What can Brian do so he can have a chance to play with the truck?

The child then answers. If the child gives an irrelevant response, no response or repeats a previous response he/she is given a probe (e.g., What could Brian say?). If the child fails to give a relevant solution after three probes, the next story is presented. The child is presented with a minimum of 7 stories and if seven different relevant solutions are given, stories continue until the child can no longer offer new options. Relevant

responses fall into a number of different categories which are classified as either force or nonforce solutions. Scores are given for total force, total nonforce and all relevant solutions generated. In addition, a force ratio and a score for extraneous solutions (PIPS Talk) is given. An example and scoring sheet are given in Appendix B.

2.6 Teacher Questionnaire

Teachers were given the Teacher's Rating Scale of Child's Actual Competence and Social Acceptance (Harter & Pike, 1984) which parallels the Pictorial Scale of Perceived Competence and Acceptance for Young Children (see Appendix A). They were asked to complete the questionnaire during the period of the focal child's observation (+/- 1 month of the child's 5th birthday). Teachers rated the child's cognitive and physical competence and peer acceptance. Physical competence was not rated for four children. The teachers of these children felt that they had not had ample experience of the child's physical abilities to judge. These scores were treated as missing.

2.7 Attachment Assessments

The attachment assessments were made in the laboratory by independent observers when the child was 4 1/2 years old. The lab procedure was as follows:

Mother and child entered the testing room. The mother remained with the child in the room while:

- child was greeted and given the Peabody Test by a female stranger
- child was given a joint task with mother
- height and weight was taken by a male stranger

One minute after the male stranger left, the mother left the room. The child was then:

- left alone for one minute
- given the Separation Anxiety Test by the experimenter

The mother then returned for the reunion episode.

The reunion episode was coded from video-tape, using a system devised by Cassidy and Marvin (in prep.). This system modified Ainsworth's original system for classifying

patterns of attachment in infants (Ainsworth et al., 1978), and that of Main and Cassidy (1985; 1988) for 6 year-olds. Inter-rater reliabilities (done with R. Marvin, one of the authors of the system) were adequate (89% agreement for main classes, 78% for subclass) and the stability of the classifications was moderately high (72%) from 2 1/2 to 4 1/2 years (Shouldice, 1988). The main classifications and subgroups are listed in Table 2.7, with the number of girls and boys fitting into each in this study. For brevity, the main classifications will be referred to as A/B/C (analogous to, although not the same as, Ainsworth's infant patterns). Because of low n's, only the main classifications were used. In addition, following current practice, the children placed in the Controlling and Insecure Other classifications were 'forced' to 'A' or 'C' classifications, according to which behavioural strategy was predominant.

Table 2.7 Attachment classification and subgroups with numbers of girls (n=22) and boys (n=17) in each subgroup.

'B' Secure	**Insecure**			
	'A' Avoidant	'C' Ambivalent	Controlling	Insecure Other
Very Secure 2 girls 3 boys	**Ignoring** 1 boy	**Resistant** 3 girls 3 boys	**Controlling-Caregiving**	2 boys (both forced to 'C')
Secure-Reserved 3 girls 1 boy	**Neutral** 3 girls	**Dependent** 3 girls	**Controlling-Punitive**	
Secure-Controlling 2 girls 1 boy			**Controlling-General** 1 boy (forced to 'A')	
Secure-Ambivalent 1 girl 2 boys			**Disorganized**	
Secure-Other 5 girls 3 boys				

Descriptions of the characteristic patterns of behaviour seen in children classified upon reunion as Secure ('B'), Avoidant ('A'), and Ambivalent ('C') are given below (Cassidy & Marvin, in prep.):

Secure ('B'):

Children in this group characteristically show relaxed pleasure on return of the mother, and exhibit little or no avoidance, ambivalence, or controlling behaviour. The relationship between the child and mother appears to be very 'special', involving smooth, full, warm, positive, calm and comfortable interaction in which the child seems to enjoy and respect the mother. The general strategy guiding the child's behaviour seems to be the use of the mother as a secure base for exploring and interacting with the novel social and physical environment.

Avoidant ('A'):

Maintenance of neutrality seems to be the general strategy guiding behaviour of children in this group. Neither positive, affectionate nor negative, hostile behaviour toward the mother is expressed. The mother is treated as one might treat a neighbor or teacher, in a civil but not a personal way. The child behaves as if the mother's return has no special significance for him/her. It appears that the goal of this pattern of behaviour is to avoid interaction altogether in order to avoid calling attention to the relationship. This avoidance behaviour, however, does not typically include outright punitive or stubborn behaviour (e.g., refusing to answer a direct question) as this would serve to focus on the relationship. Coolness and distance epitomizes behaviour of the children in this group. It can be seen that at least some of these children, although they prefer to engage in minimal interaction, do appear to want the mother available (in the room).

Ambivalent ('C'):

For children in this group, behaviour seen on reunion with the mother is characterized by dependence and immaturity. This behaviour takes the form of: sucking fingers, showing the abdomen, wriggling the body, cocking the head, using 'baby talk', and tugging clothes. These behaviours are often seen as coy and attractive to strangers (Marvin &

Mosler, 1976), but always have an element of uncertainty, ambivalence and self-consciousness. Coy expressions also may be accompanied by big 'toothy' grins. In addition to the immature behaviours, there is a large element of ambivalence taking the form of mild anger, resistance, or avoidance. Often this ambivalence is seen in relation to proximity and contact, where the child may talk to the mother with his/her back turned, or approaching and leaning against the mother from the back. The child's behaviour may appear scattered and fragmented, flitting from one activity to another, and wandering back and forth to the mother.

Security and avoidance ratings:

In addition to the classification assessment (a nominal scale based on the patterns of behaviour seen with the mother), ratings of security and avoidance with the mother were made. These additional scales permit correlational analyses of relations between attachment and other variables.

Each child recieved a security rating on a 9-point scale, ranging from (1) Highly insecure: Child is either highly avoidant, highly ambivalent, highly controlling, highly disorganized, or some combination of these; to (5) Probably secure: Indications of both insecurity and security, but on balance, child seems secure; to (9) Highly secure: Child initiates interaction, proximity, or contact with complete ease and no ambivalence; child indicates that the relationship is special; child is particularly calm, yet at the same time particularly pleased to the see mother on reunion. Scores of 2,3,6,7, and 8, may also be given (Cassidy & Marvin, in prep.).

Each child also received an avoidance rating on a 7-point scale, ranging from (1) No avoidance of mother; to (3) Brief but limited, or persistant but faint avoidance; to (5) Brief but strong avoidance, or persistant low-key avoidance; to (7) High avoidance: extreme neutrality in relation to mother. Scores of 2,5, and 6 may also be given (Cassidy & Marvin, in prep.).

The two rating scales were not designed to be independent. A high rating of avoidance necessitates a low rating of security but the converse is not true. A low rating of avoidance is in accord with a low, medium, or high rating of security.

2.8 Peabody Picture Vocabulary Test

The Peabody Picture Vocabulary Test (revised) was given during the 4 1/2 year laboratory visit, by an independent observer. This instrument is reported to have high test-retest reliability, and its scores correlate well with other measures of verbal ability and mental age. Administration and scoring procedures matched those described in the user's manual (Dunn, 1981).

2.9 Preliminary analyses: sex differences

When sex was treated as an independent variable, significant differences on some behaviour and perception measures were evident for the whole sample, and more importantly for this study, within the attachment groups (See Chapters 5 & 7 for results). These results highlighted the importance of examining relations between behaviour and perception variables and attachment measures for both the whole sample and for girls and boys separately. This often provided a clearer pattern of relations, since nonsignificant results for the whole sample could often be seen to be due to differential relations for girls and boys on these variables. This approach also revealed the relative influence of girls' and boys' scores on significant results with the whole sample. For example, if p=.05 for the whole sample, p=.30 for girls, and p=.01 for boys (for a given correlation), then boys' scores can be seen as primarily responsible for the significant whole sample result. This approach, however, was hindered by small n's in some groups.

2.10 Statistics

Preliminary results indicated that some variables were not normally distributed and skewed. Nonparametric statistics were therefore employed: Spearman Correlations, Kruskall Wallis and Mann-Whitney U Tests, Friedman two-way ANOVA, and Wilcoxon Matched-Pairs Signed-Ranks Test (Siegel, 1956). Since a difference between any two groups was potentially informative, Mann-Whitney U Tests were performed for each variable, even if the overall difference on the Kruskall-Wallis was nonsignificant. In reporting p values for Kruskall Wallis and Mann Whitney U Tests, Siegel's (1956) convention was followed: the probability is corrected for ties when 'the proportion of ties is quite large, if some of the t's are large, or if the p which is obtained without the

correction is very close to one's previously set value of probability' (pp.126).

3. ATTACHMENT RATINGS AND BEHAVIOUR

3.1 Introduction

This chapter examines relations between security and avoidance ratings made as part of the attachment assessment when the child was 4 1/2 years old, and behaviour on the playground with peers. To my knowledge, no previous studies have attempted to examine these relations. The ratings provide information on dimensions of security and avoidance that the A/B/C classification may mask. For example, children classified as secure ('B') in this sample were given security ratings ranging from 5 to 8.5. Further, children given low security ratings could be placed in either the 'A' or 'C' classification, according to the *pattern* of behaviour seen with the mother on reunion. The chapter is divided into two main sections; first, examining relations between the security ratings and behaviour with peers, and second, the avoidance ratings and behaviour with peers.

3.2 Security Ratings and Behaviour

Spearman correlations were used to assess relations between security ratings with mother at 4 1/2 years, and behaviours with peers in the playground at 5 years, for the sample as a whole and for girls and boys separately. Correlations of $p \leq .10$, two-tailed, are presented, as these trends or tendencies often follow a predictable pattern or may uncover potential real differences that may have been masked by small sample sizes.

3.2.1 Activities, Social Participation, Leader/Follower, and Neighbours/Alone

Table 3.1 shows correlations for the whole sample, girls and boys.

Activities: There were no significant correlations between security ratings and duration of engaging in particular Activities on the playground.

Social Participation: There was a significant positive correlation (.33) between security ratings and time spent Playing Games On Own for the whole sample.

Leader/Follower: There were no significant correlations between security ratings and duration of taking Leader, Follower, or Mutual/Ambiguous Roles.

Neighbours/Alone: There was a trend, for boys, for security ratings to be negatively

Table 3.1 Activities, Social Participation, Leader/Follower and Neighbors/Alone with Security ratings - Spearman correlations for the whole sample, girls and boys.

		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Activities				
Large Muscle Play	(d)	.21	.07	.33
Organized Games With Rules	(d)	-.16	-.22	-.12
Role Playing	(d)	-.05	-.08	-.02
Social Conversation	(d)	.05	.10	-.02
Transitional	(f)	.02	.00	.05
	(d)	-.10	.06	-.24
Neutral	(f)	-.07	.02	-.18
	(d)	.04	.12	.04
Social Participation				
Playing On Own	(d)	.33 *	.15	.45 †
Group Play	(d)	.02	.20	-.16
Interactive Play	(d)	.02	-.09	.08
Leader/Follower				
Leader	(d)	.12	.23	.04
Follower	(d)	-.03	.18	-.27
Mutual/Ambiguous	(d)	-.04	-.29	.14
Neighbours/Alone				
Total Peers	(f)	-.08	-.14	.00
	(d)	-.09	-.04	-.19
Girl Peers	(f)	-.09	-.23	-.25
	(d)	-.10	-.19	-.42 †
Boy Peers	(f)	-.01	.11	-.03
	(d)	.06	.27	-.13
Alone	(f)	-.02	-.03	-.04
	(d)	.06	.07	.15

Frequency per 75 minutes (f)
Duration (d) = minutes per 75 minutes
Spearman correlations: † = $p \leq .10$, * = $p \leq .05$, ** = $p \leq .01$, two-tailed.

related to time spent with Girl Peers (-.42). All other correlations were non-significant.

3.2.2 Total Interactions

There were no significant correlations between security ratings and total number of interactions with peers (see top of Table 3.2).

3.2.3 Specific Interactions

Table 3.2 shows the correlations between specific interactions and the security ratings.

There were only a minimal number of significant correlations between security ratings and specific interactions for the whole sample, yet patterns emerged, particularly when taking into account trends ($p \leq .10$), and significant correlations concerning girls and boys separately. Regarding the focal child's behaviour, 1 out of 28 correlations was significant ($p \leq .05$) for frequency of the behaviour, and 1 out of 26 was significant for frequency of behaviour relative to the total number of interactions. For peer behaviour toward the focal child, 3 out of 22 were significant for frequency of behaviour and 1 out of 21 was significant for relative frequency.

General Communication:

Child's behaviour: For the whole sample, there was a significant negative correlation between security ratings and both Speaks (relative frequency) and Listens (frequency). For girls, there was a significant negative correlation for Agrees (relative frequency), and for Listens (frequency). For boys, there was a significant positive correlation for Agrees (relative frequency) and a tendency for a negative correlation for Inquires (frequency and relative frequency).

Peer behaviour: There was a significant negative correlation between security ratings and Inquires (frequency) for the whole sample and a significant negative correlation for Listens (relative frequency), for boys.

Table 3.2 Behavioural categories with security ratings – Spearman correlations for the whole sample, girls and boys.

		CHILD AS SUBJECT			CHILD AS OBJECT		
		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Total Interactions		.07	-.02	-.09	-.13	-.07	-.19
General Communication							
Speaks	(f)	-.27 †	-.19	-.28	-.25	-.21	-.32
	(rf)	-.33 *	-.33	-.28	-.26	-.30	-.31
Informs	(f)	-.13	-.17	-.11	-.01	-.06	.08
	(rf)	-.16	-.22	-.11	.06	-.03	.18
Inquires	(f)	-.22	-.06	-.43 †	-.31 *	-.39 †	-.33
	(rf)	-.21	-.05	-.45 †	-.27 †	-.37 †	-.22
Agrees	(f)	-.02	-.30	.34	-.12	-.12	-.10
	(rf)	.01	-.42 *	.55 *	-	-	-
Disagrees	(f)	.04	.18	-.01	.06	.27	-.08
	(rf)	.09	.15	.07	.11	.35	-.01
Listens	(f)	-.38 *	-.44 *	-.26	-.21	-.14	-.34
	(rf)	-.28 †	-.35	-.19	-.23	-.07	-.48 *
Positive/Playful							
Positive Expressive	(f)	.19	.34	.10	.24	.22	.17
	(rf)	.29 †	.27	.38	-	-	-
Prosocial	(f)	.17	-.05	.29	.01	-.14	.16
Hugs	(f)	-.01	.23	-.26	.07	.03	.10
	(rf)	-.06	.21	-.29	.09	.06	.10
Holds Hands	(f)	-.03	-.14	.02			
Playful Aggression	(f)	.05	.15	.12	.14	.42 *	-.13
	(rf)	.04	.18	.04	.20	.46 *	.04
Playful Teasing	(f)	.07	.06	.13	-.05	.00	-.10
	(rf)	.12	.14	.16	.00	.01	.01
Play Noises	(f)	.15	.19	.17	.41 **	.55 **	.27
	(rf)	.18	.20	.14	.41 **	.55 **	.27
Imitates	(f)	.11	-.05	.27	.18	.33	.02
	(rf)	.09	-.10	.26	.25	.38 †	.11
Aggressive/Negative							
Strong Aggression	(f)	-.11	-.02	-.10	.03	.28	-.13
	(rf)	-.10	-.05	-.02	.06	.30	-.02
Weak Aggression	(f)	.15	.32	-.02	.15	.06	.19
	(rf)	.15	.30	-.03	.21	.16	.27
Disconfirms	(f)	-.11	-.08	-.15	-.18	.11	-.61 **
	(rf)	-.04	-.10	.03	-.05	.05	-.15
Noncomplies	(rf)	-.18	-.09	-.27	-	-	-
Speaks With Hostility	(f)	-.11	-.02	-.24	-	-	-
	(rf)	-.15	-.02	-.34	-	-	-

Frequency per 75 minutes (f)
Relative Frequency (rf) = frequency relative to total interactions

'-' = variable not reliable
Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Positive/Playful:

Child's behaviour: For the whole sample, there was a positive correlation between security ratings and Positive Expressive behaviours (relative frequency), although this tendency failed to reach significance.

Peer behaviour: There was a highly significant positive correlation between security ratings and Play Noises received from peers (frequency and relative frequency) for the whole sample and for girls. Also for girls, security ratings were significantly positively correlated with Playful Aggression received from peers (frequency and relative frequency) and positively correlated with the relative frequency of peers Imitating them, ($p \leq .10$).

Aggressive/Negative:

Child's behaviour: There were no significant correlations between security ratings and Aggressive/Negative behaviours.

Peer behaviour: For boys, there was a highly significant negative correlation between security ratings and peers Disconfirm (frequency).

Controlling:

Child's behaviour: There were no significant correlations between security ratings and Controlling behaviours. There was a tendency for security ratings to be positively correlated with Leads (relative frequency), for the whole sample.

Peer behaviour: Similarly, there was a tendency for security ratings to be correlated with peers Lead (relative frequency), with the correlation reaching significance for girls (relative frequency).

Table 3.2 continued.

		CHILD AS SUBJECT			CHILD AS OBJECT		
		WHOLE SAMPLE	GIRLS	BOYS	WHOLE SAMPLE	GIRLS	BOYS
		n=39	n=22	n=17	n=39	n=22	n=17
Controlling							
Strong Control	(f)	.07	.11	-.01	.04	.30	-.34
	(rf)	.10	.10	-.10	.06	.34	-.24
Leads	(f)	.20	.26	.10	.26	.41 †	.03
	(rf)	.29 †	.35	.18	.27	.44 *	.00
Suggests	(f)	.12	.17	.10	-	-	-
	(rf)	.21	.24	.12	-	-	-
Control Qualifiers							
W/ Reason	(rf)	.09	-.02	.26	.00	.05	.02
W/ Reason Implicit	(rf)	.18	.23	.13	-.06	-.03	-.12
W/ No Reason	(rf)	-.13	-.04	-.19	.09	.09	.13
Initiating/Attention-Seeking							
Initiates	(f)	-.02	.08	-.06	-.11	-.19	-.01
	(rf)	.02	.09	-.01	.08	-.12	.30
Seeks Entry/Inclusion	(f)	-.21	.26	-.66 **	.07	.17	-.01
	(rf)	-	-	-	.07	.17	-.06
Seeks Attention	(f)	-.19	-.05	-.35	-	-	-
	(rf)	-.23	-.09	-.37	-	-	-
Speaks Boastfully	(f)	.02	.08	.07	.31 *	.30	.44 †
	(rf)	.05	.15	.02	-	-	-
Noninteractive							
Watches	(f)	-.03	.11	-.18			
Speaks/Mutters To Self	(f)	.06	.13	.12			
Automanipulates	(f)	-.10	.00	-.23			

Frequency per 75 minutes (f)
Relative frequency (rf) = frequency relative to total interactions
'-' = variable not reliable
Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Initiating/Attention Seeking:

Child's behaviour: For boys there was a highly significant negative correlation between security ratings and frequency of Seeks Entry/Inclusion.

Peer behaviour: There was a significant positive correlation between security ratings and the frequency of peers Speak Boastfully, for the whole sample and tending toward significance for boys.

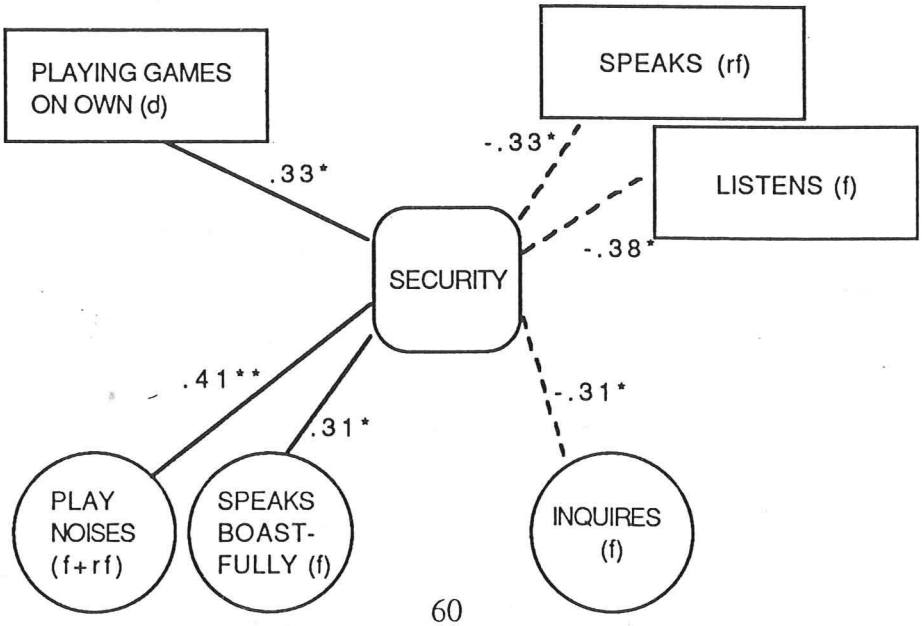
Noninteractive: Security ratings were unrelated to Noninteractive behaviours.

3.2.4 Summary and Discussion

Although the number of significant correlation coefficients was not high, meaningful patterns of correlations demonstrated that there were relations between the child's attachment security rating at age 4 1/2 with the mother and behaviour with peers at age 5. Some relations appear to apply either for girls or for boys separately.

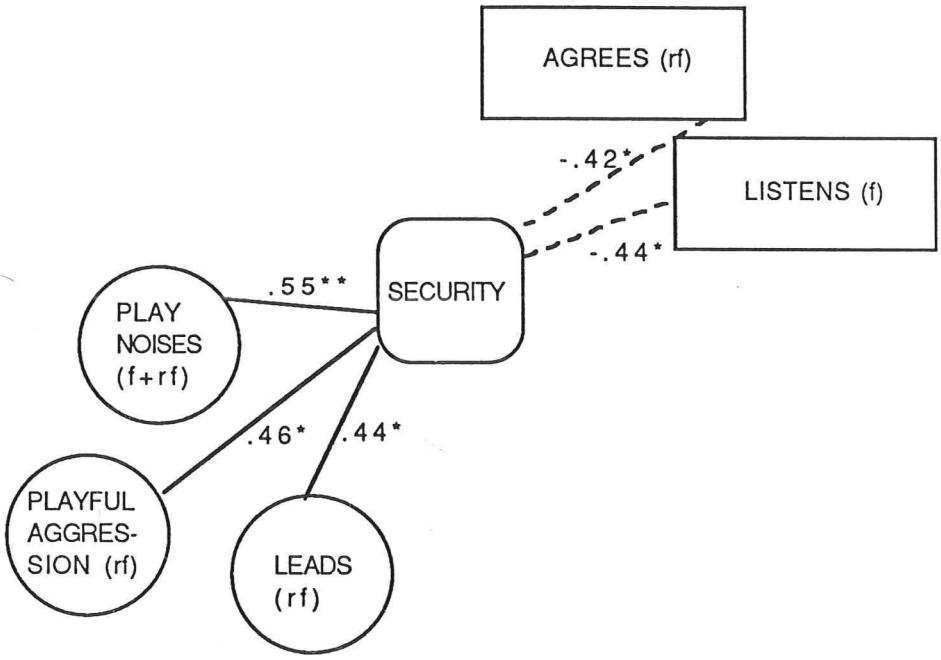
Concerning the whole sample, security ratings were positively related to Playing Games On Own and negatively related to Speaking and Listening as a response, (Diagram 1).

Diagram 1: Security ratings and behaviour - whole sample - significant relations
Child's behaviour ☐ and peer behaviour ○



At first glance, Playing games alone might be interpreted as reflecting social isolation. This might be the case if the children were spending most play time playing games alone and little time playing with peers. (Rubin, in press; Scarlett, 1983). This is not the case here. For the whole sample, duration of Playing Games on Own range from 0.12 to 17.73 per 75 minutes of play. This measure is also distinct from duration Alone, which in fact was not related to security ratings. Given the above considerations, Playing Games Alone can be seen as indicative of incidences of independent, self confident behaviour rather than as behaviour characteristic of behaviourally isolated children.

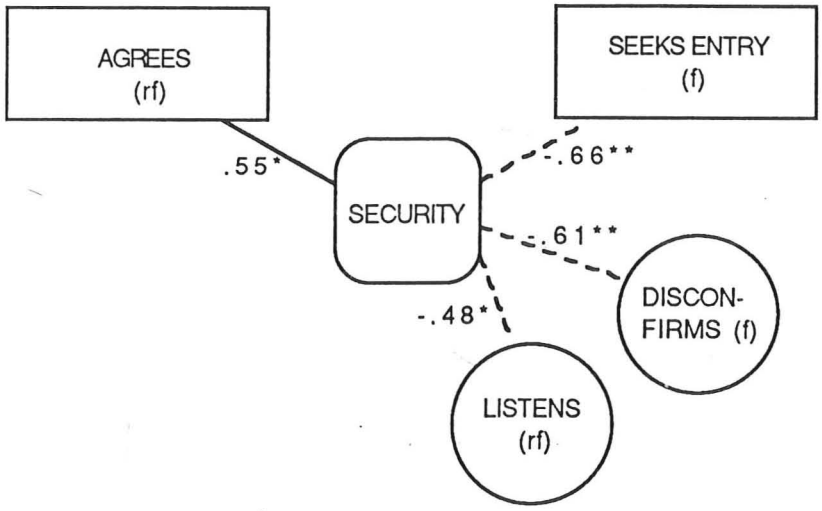
Diagram 2: Security ratings and behaviour - girls - significant relations
Child's behaviour ▭ and peer behaviour ○



Results concerning Agreeing are interesting as the behaviour was positively related to security for boys (.55) but not girls (-.42) (see Diagrams 2 & 3). It could be argued that both supportive behaviours (Agreeing) and assertive, independent behaviours (absence of Agreeing), might well be considered instrumental in competent social interaction. The results here suggest that different aspects of socially competent behaviour may be salient for girls than for boys. In light of prevalence of particular activities and general behavioural differences found between girls and boys, the concept of 'social competence'

certainly may be manifested in different behavioural repertoires. For instance, although Role Playing was coded as the same kind of activity for girls and boys, behaviour within the Role Playing context often was very sex-role oriented and also reflected differential interests of girls and boys. Girls tended to play 'family oriented' (mother-baby, sisters, going shopping, etc.) role-playing games where the plot was relatively loose and open-ended. Boys, on the other hand, tended to play 'action-man' games based on television superheroes (He-Man, Thundercats, A-Team, etc.) where roles were more defined and the repertoire more rigid. These contexts might very well promote and demand different manifestations of social competence.

Diagram 3: Security ratings and behaviour - boys - significant relations
Child's behaviour ☐ and peer behaviour ○



Also for boys, security ratings were negatively related to Seeks Entry/Inclusion. This behaviour takes the dependent form "Can I play (too)", rather that "Let's play..." (Suggests), or nonverbal self-inclusion. It was obvious (and frustrating) to me that plans for what to play and with whom to play were often made before emerging from the classroom. From this point of view it may be that for boys, this seeking entry is indicative of previous verbal or nonverbal exclusion or disregard from peers.

When looking at behaviours of peers toward the child, security ratings were positively related to peers making Play Noises and peers Speaking Boastfully (Diagram 1). These behaviours appear to be indicative of a relatively high level of involvement, interest and responsiveness on the part of peers. This interest and responsiveness is especially evident when considering peer Boastfulness, as this peer behaviour seems to reflect dependency on and respect for the 'boastee'. Security ratings were negatively related to peers Inquire.

For girls, security rating was positively related to peers engaging in playful actions (Play Noises and Playful Aggression) and peers Lead (Diagram 2). Taking into account the similar positive relation between security ratings and focal child Leads (although non-significant), a pattern of relatively high level involvement emerges, characterized by a give and take of control and by playful conflict. For boys (Diagram 3), security was negatively related to peers Listen and peers Disconfirm, consistent with the pattern of low level involvement or maintenance of neutrality emerging for less secure children. The result concerning peers Disconfirm is directly in line with the attachment theory premise that the child continues and reestablishes relationships that are congruent with the child's past experiences in relationships (Sroufe & Fleeson, 1988). Theoretically then, the more secure child expects peers to be available and responsive, and the less secure child expects peers to be unavailable and unresponsive. It is particularly noteworthy and sadly predictable that, through this disconfirming behaviour toward the less secure child, negative expectations concerning availability and responsiveness of others are 'confirmed'.

3.3 Avoidance Ratings and Behaviour

Spearman correlations were again used to assess relations between the avoidance ratings in reunion with mother at 4 1/2 years and behaviours with peers, for the sample as a whole and for girls and boys separately.

3.3.1 Activities, Social Participation, Leader/Follower, and Neighbours/Alone

Table 3.3 shows correlations for the whole sample, girls and boys.

Activities: For the whole sample, there was a significant negative correlation between avoidance ratings and time spent Neutral (-.34). Girls particularly reflected this trend (-.44). For the boys, there was a significant negative correlation between avoidance ratings and duration of engaging in Large Muscle Play (-.50).

Social Participation: There were no significant correlations concerning Social Participation.

Leader/Follower: There were no significant correlations between avoidance ratings and duration of taking Leader, Follower, or Mutual/Ambiguous Roles.

Neighbours/Alone: For the whole sample avoidance ratings tended to be negatively correlated with duration of being Alone (-.30). This correlation was significant for girls (-.42). Similarly, avoidance ratings tended to be positively correlated with time spent with Total Peers for girls (.40).

Table 3.3 Activities, Social Participation, Leader/Follower and Neighbors/Alone with Avoidance ratings - Spearman correlations for the whole sample, girls and boys.

		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Activities				
Large Muscle Play	(d)	-.18	.06	-.50
Organized Games With Rules	(d)	.25	.33	.15
Role Playing	(d)	.23	.29	.12
Social Conversation	(d)	-.07	-.24	.34
Transitional	(f)	-.13	-.29	.04
	(d)	.07	-.06	.22
Neutral	(f)	-.23	-.37 †	.04
	(d)	-.34 *	-.44 *	-.13
Social Participation				
Playing On Own	(d)	-.21	-.20	-.23
Group Play	(d)	.04	.05	-.06
Interactive Play	(d)	.16	.25	.07
Leader/Follower				
Leader	(d)	-.07	-.04	-.10
Follower	(d)	.16	.16	.16
Mutual/Ambiguous	(d)	.11	.35	-.26
Neighbors/Alone				
Total Peers	(f)	.10	.25	-.20
	(d)	.22	.40 †	.02
Girl Peers	(f)	.06	.17	.10
	(d)	.08	.24	.14
Boy Peers	(f)	-.01	.01	-.14
	(d)	.00	-.02	-.02
Alone	(f)	-.09	-.05	-.12
	(d)	-.30 †	-.42 *	-.29

Frequency per 75 minutes (f)
Duration (d) = minutes per 75 minutes
Spearman correlations: † = $p \leq .10$, * = $p \leq .05$, ** = $p \leq .01$, two-tailed.

Table 3.3 Activities, Social Participation, Leader/Follower and Neighbors/Alone with Avoidance ratings - Spearman correlations for the whole sample, girls and boys.

		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Activities				
Large Muscle Play	(d)	-.18	.06	-.50
Organized Games With Rules	(d)	.25	.33	.15
Role Playing	(d)	.23	.29	.12
Social Conversation	(d)	-.07	-.24	.34
Transitional	(f)	-.13	-.29	.04
	(d)	.07	-.06	.22
Neutral	(f)	-.23	-.37 †	.04
	(d)	-.34 *	-.44 *	-.13
Social Participation				
Playing On Own	(d)	-.21	-.20	-.23
Group Play	(d)	.04	.05	-.06
Interactive Play	(d)	.16	.25	.07
Leader/Follower				
Leader	(d)	-.07	-.04	-.10
Follower	(d)	.16	.16	.16
Mutual/Ambiguous	(d)	.11	.35	-.26
Neighbors/Alone				
Total Peers	(f)	.10	.25	-.20
	(d)	.22	.40 †	.02
Girl Peers	(f)	.06	.17	.10
	(d)	.08	.24	.14
Boy Peers	(f)	-.01	.01	-.14
	(d)	.00	-.02	-.02
Alone	(f)	-.09	-.05	-.12
	(d)	-.30 †	-.42 *	-.29

Frequency per 75 minutes (f)
Duration (d) = minutes per 75 minutes
Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

3.3.2 Total Interactions

There were no significant correlations between avoidance ratings and total number of interactions with peers (see top of Table 3.4).

3.3.3 Specific Interactions

Correlations concerning Avoidance rating and specific interactions with peers are presented in Table 3.4.

When looking at the whole sample, there was only one significant correlation concerning specific interactions, yet trends and significant correlations for girls and boys separately seem to fall into meaningful patterns. For the child's behaviour, (and only reviewing whole sample results) there was only one significant correlation out of 28 for absolute frequency of behaviours, and none out of 26 for frequency relative to total interactions. With regard to peer behaviours for the whole sample, none out of 22 were significant for frequency and none out of 21 for relative frequencies.

General Communication:

Child's behaviour: For the whole sample, Listens (frequency) was significantly positively correlated with avoidance ratings. For girls, this correlation was highly significant (frequency and relative frequency). There was also a tendency for avoidance ratings to be positively correlated with Inquires (relative frequency).

Peer behaviour: Similarly, for the whole sample, there tended to be a positive correlation between avoidance ratings and peers Inquire (frequency).

Positive/Playful:

Child's behaviour: For boys, there was a significant negative correlation between avoidance ratings and Positive Expressive behaviour (relative frequency). This was the only significant correlation in this category.

Peer behaviour: There were no significant correlations concerning peer Positive/Playful.

Table 3.4 Behavioural categories with avoidance ratings – Spearman correlations for the whole sample, girls and boys.

		CHILD AS SUBJECT			CHILD AS OBJECT		
		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Total Interactions		.09	.03	.14	.22	.19	.23
General Communication							
Speaks	(f)	.24	.20	.30	.21	.17	.38
	(rf)	.26	.29	.20	.14	.14	.25
Informs	(f)	.05	-.08	.26	.03	-.03	.04
	(rf)	.07	-.06	.35	-.09	-.11	-.04
Inquires	(f)	-.04	-.29	.37	.28 †	.33	.22
	(rf)	-.10	-.36 †	.38	.18	.23	.13
Agrees	(f)	.05	-.02	.12	.18	.13	.22
	(rf)	-.02	.03	-.06	-	-	-
Disagrees	(f)	.07	.04	.05	.11	.05	.10
	(rf)	.06	.10	.03	.04	-.01	.05
Listens	(f)	.43 **	.70 **	-.14	.10	.06	.17
	(rf)	.24	.53 **	-.25	.01	.03	.04
Positive/Playful							
Positive Expressive	(f)	-.17	-.23	-.18	-.12	-.12	-.21
	(rf)	-.25	-.13	-.55 *	-	-	-
Prosocial	(f)	.05	.15	-.16	.16	.15	.17
Hugs	(f)	.20	.13	.31	.13	.14	.06
	(rf)	.22	.15	.32	.10	.11	.04
Holds Hands	(f)	-.06	-.03	.02			
Playful Aggression	(f)	.04	.05	-.17	-.01	-.09	-.07
	(rf)	.05	.05	-.15	-.08	-.13	-.28
Playful Teasing	(f)	.03	-.04	.10	.23	.20	.32
	(rf)	-.01	-.07	.07	.13	.10	.22
Play Noises	(f)	.00	-.06	.02	-.20	-.21	-.22
	(rf)	.00	-.07	.04	-.26	-.31	-.25
Imitates	(f)	-.05	.05	-.28	.06	.10	-.09
	(rf)	-.04	.09	-.33	.01	.07	-.18
Aggressive/Negative							
Strong Aggression	(f)	-.08	-.27	.32	-.27 †	-.56 **	-.11
	(rf)	-.09	-.27	.26	-.30 †	-.55 **	-.17
Weak Aggression	(f)	.08	.03	.12	-.05	.07	-.21
	(rf)	.05	.00	.08	-.14	-.06	-.29
Disconfirms	(f)	.10	.09	.17	-.02	-.30	.58 **
	(rf)	-.01	.02	.03	-.21	-.37 †	.05
Noncomplies	(rf)	-.01	-.15	.20	-	-	-
Speaks With Hostility	(f)	-.12	-.41 †	.42 †	-	-	-
	(rf)	-.09	-.40 †	.58 **	-	-	-

Frequency per 75 minutes (f)
Relative Frequency (rf) = frequency relative to total interactions

'-' = variable not reliable
Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Aggressive/Negative:

Child's behaviour: For the boys, there was a highly significant positive correlation between avoidance ratings and Speaks With Hostility (relative frequency, frequency $p \leq .10$). Conversely for girls, there was a negative correlation ($p \leq .10$) for Speaks With Hostility (frequency and relative frequency).

Peer behaviour: There was a tendency toward a significant negative correlation for peer Strong Aggression (frequency and relative frequency) for the whole sample. For girls, this correlation was highly significant (frequency and relative frequency). For boys, there was a highly significant positive correlation for peers Disconfirm (frequency). Conversely, for girls there was a tendency for a significant negative correlation for peers Disconfirm (relative frequency).

Controlling Behaviours:

Child's behaviour: There was a positive correlation ($p \leq .10$) for giving No Reason when Controlling (relative frequency), for the whole sample.

Peer behaviour: There were no significant correlations between avoidance ratings and Controlling peer behaviour.

Initiating/Attention Seeking:

Child's behaviour: There was a positive correlation ($p \leq .10$) for Seeks Entry/Inclusion (frequency) for the whole sample. This correlation was highly significant for boys, ($p \leq .01$). For girls, there was a significant negative correlation for Speaks Boastfully (frequency and relative frequency).

Peer behaviour: There were no significant correlations between avoidance ratings and peer behaviours.

Table 3.4 continued.

		CHILD AS SUBJECT			CHILD AS OBJECT		
		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Controlling							
Strong Control	(f)	-.12	-.21	.04	.06	.03	.06
	(rf)	-.18	-.23	.06	.00	.01	-.04
Leads	(f)	.12	.13	.15	.15	.07	.40
	(rf)	.10	.16	.07	.13	.03	.40
Suggests	(f)	-.05	-.17	.07	-	-	-
	(rf)	-.13	-.18	.01	-	-	-
Control Qualifiers							
W/ Reason	(rf)	.01	-.04	.09	.07	-.06	.30
W/ Reason Implicit	(rf)	-.27	-.21	-.40	-.01	.01	.00
W/ No Reason	(rf)	.29 †	.26	.33	-.02	.05	-.21
Initiating/Attention-Seeking							
Initiates	(f)	.00	-.09	.08	.24	.34	-.02
	(rf)	-.09	-.06	-.07	-.11	.15	-.55 *
Seeks Entry/Inclusion	(f)	.29 †	-.01	.76 **	-.07	-.17	.10
	(rf)	-	-	-	-.12	-.23	.11
Seeks Attention	(f)	.03	-.17	.38	-	-	-
	(rf)	.04	-.17	.40	-	-	-
Speaks Boastfully	(f)	-.20	-.44 *	.07	-.25	-.24	-.32
	(rf)	-.22	-.45 *	.02	-	-	-
Noninteractive							
Watches	(f)	-.06	-.04	.02			
Speaks/Mutters To Self	(f)	-.09	-.35	.23			
Automanipulates	(f)	.06	-.18	.53 *			

Frequency per 75 minutes (f)
Relative frequency (rf) = frequency relative to total interactions
'-' = variable not reliable
Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

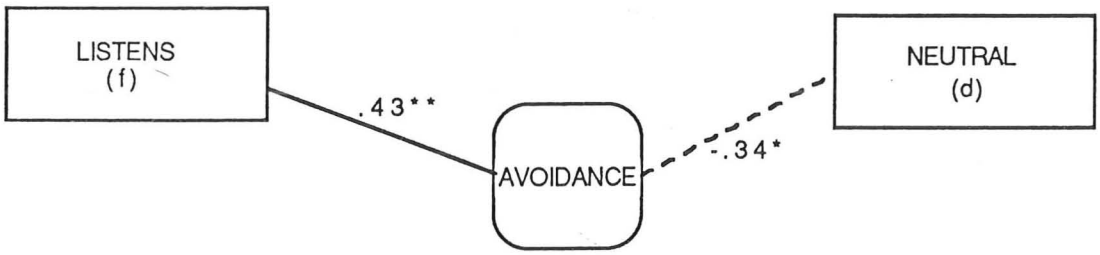
Noninteractive:

There was a significant positive correlation for avoidance ratings and Automanipulating for boys. This was the only significant correlation in this category.

3.3.4 Summary and Discussion

When examining the child's behaviour with peers in relation to the child's avoidance ratings with mother in reunion in the Strange Situation, results showed that avoidance was positively related to Listening as a response to peers, particularly for girls, and negatively related to time spent Neutral (Diagram 4).

Diagram 4: Avoidance ratings and behaviour - whole sample - significant relations
Child's behaviour ☐ and peer behaviour ○



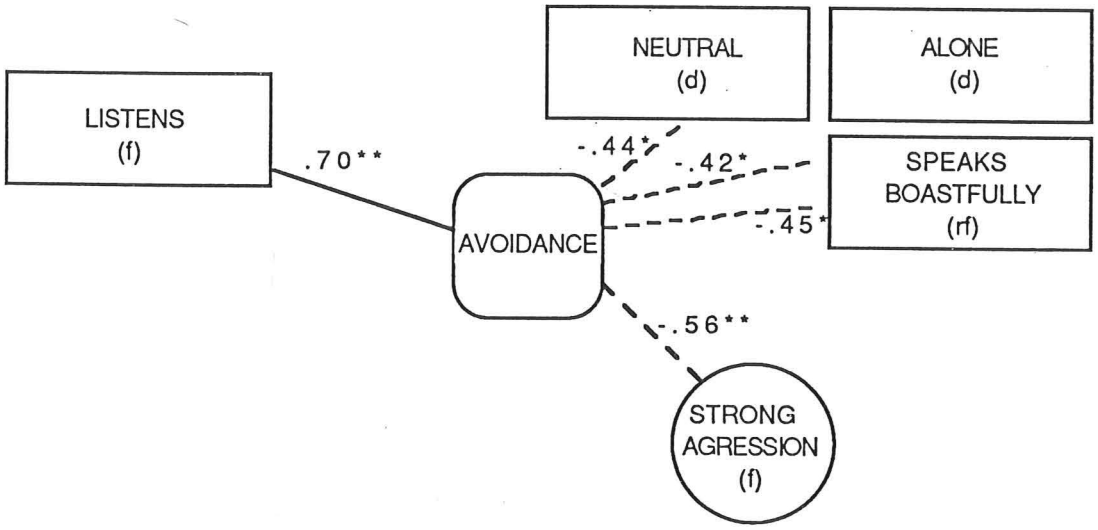
These results can be interpreted in terms of what the child was doing, and perhaps more cogently, in terms of what he was not doing. 'Listening' was coded when the child attended or nodded as a response to a peer. In terms of involvement, this behaviour could be considered the most unassertive, neutral response possible, as the child in this case is making little or no active contribution to the interaction. Although concerned with classification groups rather than ratings, Waters, Wippman and Sroufe (1979) found that anxiously attached children were 'typically in the role of listener (not full participant in group activities)' more than were securely attached children. Sroufe (1983) further observed that the children classified as 'A' (Avoidant) tended to be 'distant' in their

interactions with peers. Results here with the avoidance ratings are consistent with previous results employing classifications and reinforce the notion that the assessment of level of involvement in interactions may be a particularly fruitful research focus. 'Neutral' was coded when the child appeared to be doing nothing, with no obvious intentions. Main and Weston (1982) proposed that avoidant behaviour in the insecurely attached, threatened and physically rejected child is an attempt to avoid behavioural disorganization in relation to the attachment relationship with the mother. This avoidance behaviour is explained as a necessary shift of attention away from the disorganization promoting stimulus (the mother or thoughts of her) and onto either another stable caregiver or onto the inanimate environment. Extending the above to the child on the playground with peers, it is possible that feelings arising from uncertainty/insecurity, in promoting disorganization of behaviour would not lead to 'doing nothing'. Rather a shift of attention from attachment related feelings could only be achieved on the playground by finding something to do. Certainly it makes intuitive sense that a child feeling uncertain of a relatively strange environment would not likely be playing games alone but would perhaps seek the proximity (but, for the avoidant child, not necessarily the assurance) of others. The avoidance behaviour pattern is seen *in proximity* of the mother. There is no indication in the Strange Situation that children with an avoidant pattern toward the mother prefers her absence. On the contrary these children often appear quite pleased to see her. Further evidence of this pattern of 'avoidance in proximity' with peers, at least for girls, is discussed below. All other relations here between avoidance ratings and behaviour were significant only for girls or boys separately.

For girls, avoidance ratings were positively related to Listening and negatively related to time spent Alone, time spent Neutral, and Speaking Boastfully (Diagram 5). It appears that, although a low level of involvement may characterize interactions of the more avoidant children (and absence of Speaking Boastfully reinforces this impression), actual physical avoidance of peer interaction did not occur. Indeed, the more avoidant with the mother on reunion, the less time spent alone. Contrasting this behaviour with security ratings results, where the more secure children were playing games alone more, this maintenance of proximity with peers might, for the more avoidant children, reflect uncertainty rather than sociability. That this proximity maintenance may result in further difficulties in relating to peers for the avoidant child also seems to follow (given inferred

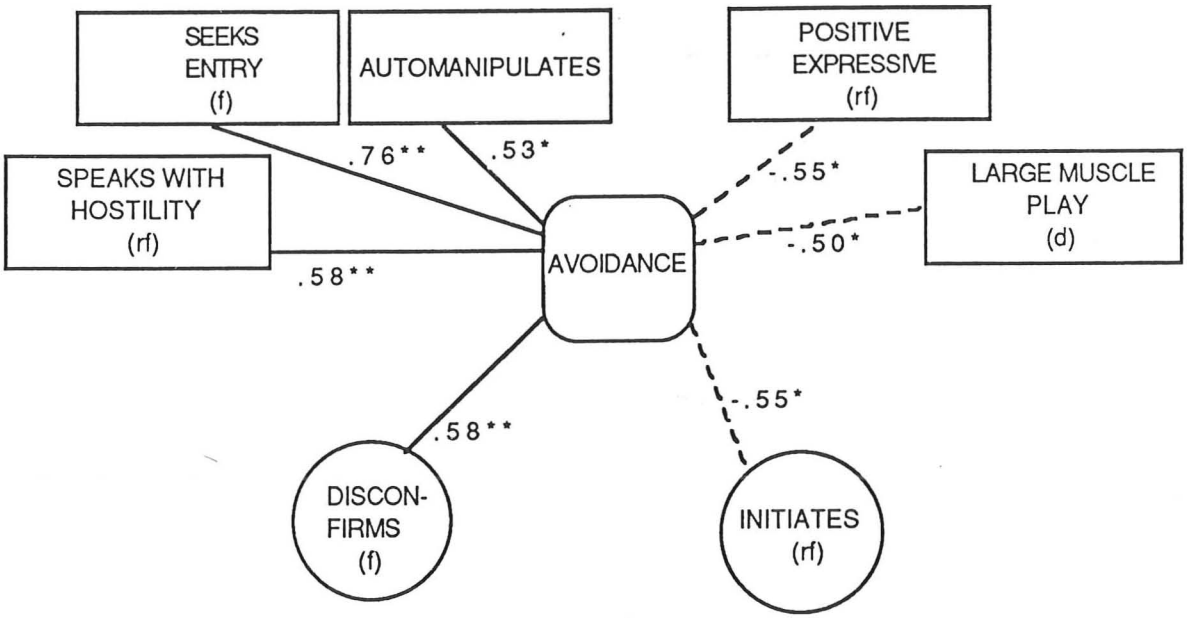
past experiences in the attachment relationship), perhaps explaining the minimal participation and 'distance' observed by Sroufe (1983) and emerging here. The above interpretation assumes that the avoidant child is experiencing some distress or uncertainty in the playground. However, results here are also consistent with a more general interpretation of past experience in relationships carried forward to new ones and lend support to the theoretical notion of the child as an active recreator of aspects of relationship systems previously experienced (Sroufe & Fleeson, 1988). That is, that even in the absence of inferences concerning heightened feelings of uncertainty (due to the early insufficient availability of an attachment figure), behaviour patterns learned in the attachment relationship with the mother may be carried over and repeated in subsequent relationships.

Diagram 5: Avoidance ratings and behaviour - girls - significant relations
Child's behaviour ☐ and peer behaviour ○



For boys, relations between avoidance ratings and behaviour with peers also present a meaningful pattern (Diagram 6). Avoidance ratings were positively related to Seeking Entry, Automanipulating, and Speaking with Hostility and negatively related to engaging in Large Motor Play and Positive Expressive behaviours.

Diagram 6: Avoidance ratings and behaviour - boys - significant relations
Child's behaviour ☐ and peer behaviour ○



These results suggest that, for boys avoidance was related: (a) to attempts to get involved with others (this attempt took the dependent form "Can I play (too) ?", rather than either the more assertive "Let's play.." , or nonverbal self- inclusion with peers), (b) to anxious behaviour (thumb sucking, etc.) (c) to a higher degree of verbal hostility characterizing peer interactions. Sroufe (1983) found that his children classified 'A' (Avoidant) also tended to be more 'hostile'. This trend was not followed by the girls in this study, however. The more avoidant boys also spent less time engaged in Large Motor play and showed less Positive Expressive behaviour (laughing, smiling, expressing pleasure) to peers. These results are consonant with previous research. Grossmann and Grossmann (in press) reported that the children classified 'A' (Avoidant) at 12 months were less relaxed " as judged by their facial and gestural expressions", more "erratic,

tense, and fidgety" and moved more "from one thing to the next", with their motor movements appearing more "uncoordinated and aimless" in preschool at 5 years. Main and Weston (1982) observed that avoidance ratings were negatively related to emotional expressiveness in general ('laughing and smiling about toys') at 12 months. The results concerning verbal hostility and avoidance for boys is particularly interesting, in that this can be seen as emergence of the angry behaviour which is conspicuously absent in the Strange Situation, theoretically the impetus for avoidance behaviour with the mother. This was not the case for girls, however.

When looking at peer behaviour, the significant relations were for girls and boys separately (Diagrams 5 & 6). For girls, avoidance was negatively related to Strong Aggression from peers. Incidences of Strong aggression in general were relatively rare on the playground, perhaps due in part to the absence of resources for which to compete. In interpreting the results here, it seems plausible that maintaining neutral involvement in interactions would not be conducive to strong aggression from peers.

For boys, avoidance was positively related to peers Disconfirm and negatively related to peers Initiate. This again presents evidence of a sad but predictable relation between aspects of the attachment relationship with the mother and later aspects of relationships with peers. Disconfirmation was characterized by ignoring the child's initiations. This suggests that, with initiations thwarted and lack of initiations from others, the experience with peers (paralleling earlier experiences with the mother) must reinforce the avoidant child's expectations of others as unresponsive and unavailable. These experiences can do little to foster the child's psychological well-being nor can they aid or encourage the child's developing 'social competence'. Rubin, LeMare & Lollis (in press) describe one theoretical pathway to social isolation which seems appropriate here, particularly looking at peer interactions of boys. " To summarize, one developmental pathway to social isolation may stem from the interactions between early temperamental, socialization and socio- ecological factors that promote the development of hostile primary relationships. The negative affect fostered by these early parent-child relationships may result in inappropriate, negative, and aggressive interchanges with peers. These interchanges, in turn, may result in peer rejection and the behavioural exclusion of the aggressive child from the peer group. Rejection and exclusion may then result in the observation of higher than normal frequencies of non-social, solitary activities in the focal child. The bottom line is that our first developmental scenario leaves us with a sociometrically

rejected and socially withdrawn child." (pp.9-10). For the more avoidant boys, evidence of verbal hostility coupled with peer disconfirmation and lack of peer initiative seems to point in this direction.

4. ATTACHMENT CLASSIFICATION AND BEHAVIOUR

4.1 Introduction

In the previous chapter, evidence suggested that the security and avoidance ratings reveal relations between two dimensions of the child's attachment relationship with the mother and subsequent behaviour with peers. The classification system, in discriminating strategies or patterns of behaviour, provides a different focus. It is, again, the child's underlying organization in relation to attachment which is said to be carried forward over time and across situations to new relationships (Bowlby 1973, 1980). From a learning theory perspective, this organization is not necessary to explain *continuity* in behaviour over time and situations. Both modelling and operant conditioning could account for this learned behaviour carried forward. Behaviour arises from observing others and is reinforced and therefore repeated. However, evidence for an underlying system of expectations and beliefs about others and about the self as a function of experience in attachment relationships is demonstrated not only through *continuity* of behaviour, but through behaviour which is *coherent*, given the child's experience. That continuity takes this form of 'coherence across transformations' (Sroufe, 1979, 1983) is a central postulate in attachment research.

At 4 1/2 years, a child whose behaviour with the mother on reunion is characterized by 'smooth, full, warm, and positive interactions, perhaps including close but casual physical contact', (Cassidy and Marvin, in prep.) is presumably expressing behaviour which reflects an internal organization based on a secure attachment history. The child has learned from experience that others will be available and responsive if needed, and therefore does not exhibit signs of conflict in relation to attachment needs (neither avoiding nor resisting the mother when the need to seek comfort arises after separation). Specific behaviours seen in this context may also be seen with peers. However, the underlying positive expectations and beliefs about others and concerning the self relate also to the developing self-concept, ('My mother cares for me whenever I need care, therefore I can trust that I will be taken care. I must be worth caring for, etc'... vs... 'My mother doesn't repond when I need her, therefore I cannot trust that anyone will. I must not be worth caring for, etc.') and so should relate more generally to confidence and competence in behaviour, particularly in interacting with others.

4.2 Methods

A three-group comparison based on the three attachment classification groups A, B, and C, was made using Kruskal-Wallis one way analysis of variance, two-tailed. Two-group comparisons were then made using Mann-Whitney U tests. Given that preliminary analysis revealed significant differences between girls and boys on some behavioural measures, it was necessary to make between-group comparisons of girls and boys separately. Consequently, some of the comparison groups are quite small. Although significant results using these smaller subsamples will be discussed, one must keep in mind limitations of small samples. Generalizability is reduced, as it would be foolhardy to suggest that a very small sample can adequately represent the attributes of many. On the other hand, small sample sizes decreases the power of the test for differences thereby increasing the likelihood of failing to detect real differences (Type II errors). The results here provide a means for exploratory interpretation of potential relations, yet must be considered with caution.

As stated previously, assessments concerning Activities, Social Participation, Relative Roles, Neighbors and Peer Interactions were made for each child for a total of 75 minutes (5 - 15 minute periods) when the child was five on the school playground during free play (See Methods - Chapter 2). Although the attachment classification reflects aspects of the relationship between the mother and child, for purposes of brevity, the children in each group will be referred to as 'A', 'B' and 'C' children.

4.3 Activities

4.3.1 Results

Results concerning Activities in the playground are presented in Table 4.1. Out of 7 Kruskal-Wallis comparisons for the whole sample (top third of Table 4.1), one was significant for duration of participation in an activity (Organized Games With Rules).

The median for duration (minutes per 75 minutes) of participation in Organized Games With Rules was significantly lower for 'B' children than for both 'A' and 'C' children. The median for 'B' girls was significantly lower than for 'A' girls.

Table 4.1 Activities: Median Duration (and median frequency for transitional and neutral), overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Large Muscle Play	(d)	17.7		15.5	> †	8.1	< *	
Organized Games With Rules	(d)	1.3	> **	0.0	< *	0.0		**
Role Playing	(d)	7.9		10.4		8.4		
Social Conversation	(d)	3.4		3.1		1.9		
Transitional	(f)	48.1		44.0		46.0		
	(d)	34.1		27.1		31.4		
Neutral	(f)	6.0		8.0		9.0		
	(d)	2.2		4.2		4.1		

GIRLS		A n = 3	A vs B	B n = 13	B vs C	C n = 6	C vs A	A vs B vs C
Large Muscle Play	(d)	17.7		15.5		14.8	< †	
Organized games With Rules	(d)	1.3	> **	0.0		0.6		*
Role Playing	(d)	6.2		6.6		9.0		
Social Conversation	(d)	3.3		3.8		2.5		
Transitional	(f)	38.0		44.0		48.0		
	(d)	34.1		27.1		25.8		
Neutral	(f)	3.0		11.0		10.0		
	(d)	1.1		6.3		4.6		

BOYS		A n = 2	A vs B	B n = 10	B vs C	C n = 5	C vs A	A vs B vs C
Large Muscle Play	(d)	14.8		16.8		7.7		
Organized Games With Rules	(d)	2.6		0.0		0.0		
Role Playing	(d)	9.8		10.8		4.9		
Social Conversation	(d)	3.9		2.1		1.3		
Transitional	(f)	51.0		46.0		46.0		
	(d)	34.4		27.1		31.5		
Neutral	(f)	12.5		7.0		9.0		
	(d)	6.3		3.2		2.9		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f),
Duration (d) = minutes per 75 minutes

The median duration of engaging in Large Muscle Play was significantly lower for 'C' children than for 'A' children and tended to be lower than for 'B' children also. Girls reflected this trend: 'C' girls tended to spend less time engaged in Large Muscle Play than did 'A' girls. There were no significant differences here for boys.

4.3.2 Discussion

On the whole, a large percentage of playground time was spent engaged in Large Muscle Play (running, chasing, rough and tumble, and other large muscle games, e.g., jump rope, acrobatics) or in Transition between activities. A smaller percentage of time was spent Role Playing. There were no differences in Transitional and Neutral activities for the whole sample. 'C' children engaged for significantly less time in Large Muscle Play than did 'A' and tended to spend less time than did 'B' children. An interesting picture emerges when examining differences between the groups on engaging in Organized Games With Rules. The median for duration was significantly lower for 'B' children than for both 'A' and 'C' children. Piaget (1962) suggested that games with rules represents a more sophisticated cognitive competence, involving recognition, acceptance, and conformity to constraints on rules, and is rarely seen in children before age 7. It has been shown (Hetherington, et al., 1979; Rubin & Krasnor, 1980) that the incidence of playing games with rules does increase with age. Piaget defined games with rules according to 2 criteria: at least two persons must be engaged in competition with each other, and behaviour must be regulated by a code by agreement. The code Games with Rules in this study met these criteria. The element of competition was minimal, however, and a strong element of pretend play was sometimes involved (e.g., 'Mr. Wolf', where a series a ritualistic questions ('what time is it Mr. Wolf?') was followed by a number, corresponding to the number of steps allowed toward the capture of the wolf's victim). These games usually involved a group of children with the younger one's (the focal children) following rules set by older children. Results of previous research suggest that anxiously attached children are less socially competent, less ego resilient, and less independent (Sroufe, 1983). Given these tendencies, participation in an organized game, particularly one with established rules, would appear to be a relatively 'safe' (unthreatening) activity. Stringent rules ensure that relatively few choices must be made and rejection by peers is perhaps unlikely once an organized game has commenced.

4.4 Social Participation

4.4.1 Results

As can be seen in Table 4.2, of 4 Kruskal-Wallis comparisons for the Whole Sample, there were no significant differences between the three groups in level of Social Participation. In all cases, median duration of Interactive Play was higher than for both Group Play and Playing On Own. For the Whole Sample, duration of participating in Group Play was significantly greater for 'A' children than for 'C' children.

Table 4.2 Social Participation: Median durations - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Playing On Own	(d)	3.5		4.6		4.4		
Group Play	(d)	10.1		5.5		4.5	< *	
Interactive Play	(d)	15.5		22.6		23.0		
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Playing On Own	(d)	3.9		4.0		4.2		
Group Play	(d)	10.1		3.4		0.1		
Interactive Play	(d)	24.5		28.6		30.1		
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Playing On Own	(d)	1.5		6.4		4.4		
Group Play	(d)	14.6		7.2		7.2		
Interactive Play	(d)	15.3		19.1		11.6		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Duration (d) = minutes per 75 minutes

4.4.2 Discussion

The results concerning Group Play are in accord with the emerging picture of 'A' children (particularly compared to 'C' children here) maintaining proximity with a lower level of involvement with peers (Sroufe, 1983), and it is suggested that this lower level participation may serve a function similar to the avoidance behavioural pattern seen with the mother in the Strange Situation. It has previously been suggested that this proximity maintenance with low involvement might serve to 'protect' children with insecure attachment relationships from perceived potential rejection (Bowlby 1973, 1980; Main, 1981).

4.5 Leader/Follower

4.5.1 Results

Table 4.3 shows results concerning Leader/Follower. Of 3 Kruskal-Wallis comparisons for the whole sample (top third of Table 4.3), there were no significant differences between the three groups on measures of Leader/Follower.

Median duration of taking a Follower Role was significantly higher for 'A' boys than for 'C' boys. Median duration of taking a Follower Role also tended to be higher for 'A' boys than for 'B' boys.

4.5.2 Discussion

Social structures seen on the playground may be based on being good at games, knowing how to organize activities and social skill (Hartup, 1983). They also may be based on threats, object struggles, and aggression (Omark, Strayer, & Freedman, 1980; Strayer & Strayer, 1976). Since leader/follower roles in this study were only examined within games and activities, the power dimension assessed had more to do with assertiveness and initiative than 'toughness' or outright aggression, a distinction perhaps between a competence dimension and 'brute force' (Hartup, 1983). Research concerning social structures and social status has focussed on the attributes of child leaders (Rosen, Levinger & Lippitt, 1961; Hollander & Julian, 1970) rather than on followers. For boys, results concerning Following behaviour seem to fit the emerging picture of 'A' children maintaining a distant, unassertive position when interacting with peers. (Sroufe & Fleeson, 1986), in comparison to 'C' and 'B' children.

Table 4.3 Leader/Follower: Median durations - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Leader	(d)	3.7		3.7		3.3		
Follower	(d)	8.3		4.6		4.1		
Mutual/Ambiguous	(d)	10.3		10.7		13.8		
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Leader	(d)	4.8		3.8		4.6		
Follower	(d)	6.6		4.6		3.9		
Mutual/Ambiguous	(d)	20.0		10.1		18.8		
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Leader	(d)	1.8		2.5		3.3		
Follower	(d)	18.1	> †	4.5		4.1	< *	
Mutual/Ambiguous	(d)	6.1		12.0		6.7		

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, two-tailed.
Duration (d) = minutes per 75 minutes

4.6 Neighbours/Alone

4.6.1 Results

As can be seen in Table 4.4, there were no significant differences for duration of being in the proximity of peers, or for duration of being alone, for the whole sample. 'A' girls tended to spend less time with boy peers than did 'B' girls and tended to spend less time alone than did 'C' girls. 'C' boys tended to be in the proximity of girl peers more frequently, although they tended to spend less time with girls than did both 'A' and 'C' boys.

Table 4.4 Neighbours and Alone: Median frequencies and durations - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Girls	(f)	25.0		27.0		33.0		
	(d)	57.0		49.2		34.7		
Boys	(f)	24.0		29.0		39.0		
	(d)	17.6		37.9		33.4		
Total Peers	(f)	69.0		73.0		70.0		
	(d)	118.2		97.1		93.5		
Alone	(f)	24.0		24.0		22.0		
	(d)	9.1		12.7		13.1		
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Girls	(f)	80.0		41.0		36.5		
	(d)	114.7		68.0		75.8		
Boys	(f)	9.0		22.0		15.5		
	(d)	3.5	< †	20.3		14.0		
Total Peers	(f)	89.0		65.0		60.5		
	(d)	118.2		97.1		96.1		
Alone	(f)	22.0		22.0		21.5		
	(d)	7.0		8.3		11.6	> †	
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Girls	(f)	11.0		10.5	< †	18.0		
	(d)	22.8		10.8		9.7		
Boys	(f)	45.5		65.5		77.0		
	(d)	80.8		84.8		66.3		
Total Peers	(f)	56.5		74.5		99.0		
	(d)	103.6		97.1		92.8		
Alone	(f)	26.0		25.5		33.0		
	(d)	13.0		13.1		14.6		

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, two-tailed.
Frequency per 75 minutes (f),
Duration (d) = minutes per 75 minutes

4.6.2 Discussion

Although there were no significant differences here, some interesting trends warrant discussion. Median frequency for 'C' boys was higher, but duration were lower, than for both 'A' and 'B' boys for proximity with girl and boy peers. Put more simply, 'C' boys approached and/or were approached by girl and boy peers more frequently, but spent less time with them than did 'A' and 'B' boys. This scenario appears to parallel the ambivalent proximity-seeking behaviour of 'C' children seen in the Strange Situation with the mother. Alternatively, it is feasible that peers were seeking proximity with 'C' boys more than with 'A' and 'B' boys. However, it will be seen when discussing individual measures of behaviour, that medians for Initiating Contact/Conversation are higher for 'C' boys than for both 'A' and 'B' boys, (although nonsignificantly), thereby perhaps reinforcing the premise that the 'C' boys were at least partly responsible for these proximity initiations. This trend was not seen in the 'C' girls, however.

Conversely, the median frequency of proximity with Total Peers was lower and duration higher for 'A' boys than for both 'B' and 'C' boys. Thus 'A' boys approached and/or were approached by peers less frequently, but spent more time (duration) in the proximity of peers than did both 'B' and 'C' boys. If insecure children have more difficulty establishing and maintaining relationships (Sroufe, 1983), then this 'strategy' of maintaining proximity with fewer peers is consistent with that notion. This 'strategy' may be more conducive to successful social interchange than one characterized by more unsettled, promiscuous involvement with many peers. Evidence (presented below) of 'C' children showing more negative behaviour with peers seems to support this premise.

4.7 Total Interactions With Peers

4.7.1 Results

As can be seen in Table 4.5, there were no significant group differences concerning total number of interactions with peers, neither for total focal child behaviours, nor for total peer behaviours in relation to the focal child.

Table 4.5 Total interactions: Median Frequency - overall and between group differences. Child as *subject* and as *object* for the whole sample, girls and boys.

WHOLE SAMPLE	A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Child as Subject	248.0		227.0		291.0		
Child as Object	253.0		223.0		265.0		
GIRLS	**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Child as Subject	343.0		240.0		254.0		
Child as Object	298.0		226.0		223.5		
BOYS	**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Child as Subject	202.5		213.5		291.0		
Child as Object	196.0		202.5		266.0		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent

4.7.2 Discussion

Results suggest that the sheer amount of interaction was not a differentiating factor for this sample, as the median number of interactions for each group were not significantly different. This is a particularly noteworthy finding since it might be assumed that children 'at risk' for difficulties in establishing and maintaining relationships might, as a consequence, show signs of becoming isolated (engaging in few interactions with peers) in a free play situation such as this. For the present study, this did not generally appear to be the case.

4.8 Specific Interactions

Results concerning relations between Attachment Classification and specific interactions are presented in Tables 4.6 to 4.18. The last two summarize significant results for the whole sample, girls and boys, respectively.

Child's behaviour: For the whole sample, there were 2 significant differences out of 28 Kruskal-Wallis comparisons of frequency of individual behaviours with peers and 2 out of 26 for frequency relative to total interactions (Table 4.17).

Peer behaviour: There were 3 significant differences out of 22 Kruskal- Wallis comparisons for frequency of individual peer behaviours and 2 out of 21 for frequency relative to total interactions for the whole sample (Table 4.17).

Although there were only a moderate number of significant differences for the whole sample, there were quite a few more for girls and boys separately. Results reveal meaningful patterns, especially when looking at trends within categories of behaviour.

4.8.1 General Communication

Results

Child's behaviour: Of the six measures of General Communication, medians for 'A' children were higher than for 'B' children on five measures and were equal on the sixth (top third of Table 4.6). The difference was significant for Speaks (relative frequency). For girls, Speaks (frequency and relative frequency) was significantly higher for 'A' girls than for 'B' girls. 'A' boys tended to Inquire (relative frequency) and Listen (relative frequency) more than did 'B' boys ($p < .1$).

'A' children were significantly higher than were 'C' children on Speaks (relative frequency) and tended to be higher on Disagrees (relative frequency). The median for 'B' boys was significantly higher than for 'C' boys for Agrees (relative frequency).

Peer behaviour: Similarly, for the whole sample (top third of Table 4.7), of the six measures of General Communication, 'A' children were higher than 'B' children in all cases, with a significant difference for Inquires (frequency and relative frequency).

Table 4.6 General Communication - Child as *subject*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Speaks	(f)	38.0	> †	23.0		23.0		
	(rf)	.160	> **	.107		.102	< *	*
Informs	(f)	34.0		32.0		46.0		
	(rf)	.159		.133		.161		
Inquires	(f)	10.0		6.0		10.0		
	(rf)	.040		.026		.035		
Agrees	(f)	3.0		3.0		2.0		
	(rf)	.013		.013		.006		
Disagrees	(f)	6.0		5.0		3.0		
	(rf)	.024		.020		.014	< †	
Listens	(f)	26.0		18.0		22.0		
	(rf)	.089		.077		.086		

GIRLS		A n = 3	A vs B	B n = 13	B vs C	C n = 6	C vs A	A vs B vs C
Speaks	(f)	57.0	> *	23.0		22.5		
	(rf)	.202	> **	.103		.103		*
Informs	(f)	73.0		33.0		37.5		
	(rf)	.205		.133		.152		
Inquires	(f)	11.0		6.0		8.0		
	(rf)	.037		.029		.039		
Agrees	(f)	6.0		2.0		2.5		
	(rf)	.017		.007		.011		
Disagrees	(f)	6.0		3.0		1.0		
	(rf)	.024		.015		.004		
Listens	(f)	26.0		16.0		18.0		
	(rf)	.076		.064		.079		

BOYS		A n = 2	A vs B	B n = 10	B vs C	C n = 5	C vs A	A vs B vs C
Speaks	(f)	28.5		24.5		23.0		
	(rf)	.137		.115		.088		
Informs	(f)	29.5		28.5		46.0		
	(rf)	.148		.134		.162		
Inquires	(f)	9.0		5.0		10.0		
	(rf)	.046	> †	.025		.030		
Agrees	(f)	2.5		4.0		1.0		
	(rf)	.012		.019	> *	.006		*
Disagrees	(f)	7.0		5.5		3.0		
	(rf)	.029		.025		.014		
Listens	(f)	21.0		19.0		30.0		
	(rf)	.101	> †	.081		.091		

A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf) frequency relative to total interactions
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Table 4.7 General Communication - Child as *object*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Speaks	(f)	23.0		17.0		23.0		
	(rf)	.109		.086		.093		
Informs	(f)	22.0		19.0		21.0		
	(rf)	.116		.090		.084		
Inquires	(f)	20.0	> *	10.0		19.0		*
	(rf)	.079	> *	.041	< †	.068		*
Agrees	(f)	2.0		1.0		2.0		
	(rf)	-		-		-		
Disagrees	(f)	4.0		2.0		2.0		
	(rf)	.012		.011		.007		
Listens	(f)	45.0		35.0		43.0		
	(rf)	.178		.158		.165		

GIRLS		A n = 3	A vs B	B n = 13	B vs C	C n = 6	C vs A	A vs B vs C
Speaks	(f)	26.0		17.0		15.5		
	(rf)	.109		.089		.100		
Informs	(f)	22.0		19.0		22.0		
	(rf)	.116		.077		.085		
Inquires	(f)	25.0	> **	10.0		14.5		*
	(rf)	.079	> †	.052		.092		†
Agrees	(f)	3.0		1.0		2.0		
	(rf)	-		-		-		
Disagrees	(f)	4.0		2.0		1.0		
	(rf)	.012		.012	> †	.006		
Listens	(f)	52.0		35.0		37.5		
	(rf)	.159		.168		.163		

BOYS		A n = 2	A vs B	B n = 10	B vs C	C n = 5	C vs A	A vs B vs C
Speaks	(f)	21.0		16.5		24.0		
	(rf)	.143		.081		.087		
Informs	(f)	19.0		22.5		17.0		
	(rf)	.078		.109		.064		
Inquires	(f)	11.5		9.5		19.0		
	(rf)	.063		.041		.065		
Agrees	(f)	1.0		1.5		4.0		
	(rf)	-		-		-		
Disagrees	(f)	3.0		2.5		2.0		
	(rf)	.012		.011		.014		
Listens	(f)	35.0		33.5		44.0		
	(rf)	.179		.156		.165		

A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf) frequency relative to total interactions
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Discussion

Behaviours in this category appear to represent relatively neutral interaction, generally lacking in strong positive or negative affect or initiative and, in effect, could be considered indicative of a relatively low level of emotional involvement. (For comparison, see Positive/Playful, Aggressive/Negative, Controlling and Initiating behavioural categories.) The results suggest that 'A' children tended to favor this lower level of emotional involvement. (Note: Given the nature of the code Speaks, it is possible that 'A' children are 'not heard' by the coder more often than 'B' and 'C' children. This perhaps also fits in with the above interpretation.) This 'behavioural strategy' of maintaining proximity with a relatively low level of involvement is consistent with the avoidance 'behavioural strategy' seen with the mother. As suggested previously, this strategy may serve to 'protect' the child from perceived potential rejection (Bowlby 1973, 1980; Main, 1981).

4.8.2 Positive and Playful Behaviour

Results

Child's behaviour: Results concerning Positive/Playful behaviour are shown in Table 4.8. Of the eight measures of Positive and Playful behaviours for the whole sample, medians for 'A' children were lower than for 'B' children on seven measures. None, however, were significant. 'A' girls made significantly fewer Play Noises (relative frequency) to peers than did 'B' girls. Medians for 'A' boys were significantly lower than for 'B' boys for Positive Expressive behaviours (frequency and relative frequency).

There was a similar trend for 'B' children to be higher than 'C' children in six cases, with 'B' children scoring significantly higher than 'C' children on Imitates (frequency). 'B' girls were significantly higher on Hugs than were 'C' girls (frequency and relative frequency). The median for 'B' boys was significantly higher than for 'C' boys for both Conciliates and Imitates (frequency).

There was no overall trend comparing 'A' and 'C' children. There was a tendency for 'A' children to Imitate more than 'C' children (frequency). 'C' girls tended to be higher

Table 4.8 Positive/Playful - Child as *subject*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Positive Expressive	(f)	17.0		18.0		20.0		
	(rf)	.058		.081		.079		
Prosocial	(f)	4.0		6.0		5.0		
Hugs	(f)	1.0		2.0		.0		
	(rf)	.004		.006		.000		
Holds Hands	(f)	2.0		13.0		5.0		
Playful Aggression	(f)	4.0	< †	12.0		17.0		
	(rf)	.016		.050		.052		
Playful Teasing	(f)	2.0		5.0		4.0		
	(rf)	.009		.015		.019		
Play Noises	(f)	2.0	< †	4.0		2.0		
	(rf)	.006		.017		.016		
Imitates	(f)	6.0		5.0	> *	2.0	< †	*

GIRLS		A n = 3	A vs B	B n = 13	B vs C	C n = 6	C vs A	A vs B vs C
Positive Expressive	(f)	20.0		26.0		18.5		
	(rf)	.090		.090		.069		
Prosocial	(f)	7.0		6.0		6.0		
Hugs	(f)	1.0		3.0	> *	.0		†
	(rf)	.003		.009	> *	.000	< †	†
Holds Hands	(f)	48.0		27.0		13.5		
Playful Aggression	(f)	2.0		6.0		4.0		
	(rf)	.015	< †	.023		.012		
Playful Teasing	(f)	2.0		4.0		6.0		
	(rf)	.008		.014		.017	> †	
Play Noises	(f)	2.0		4.0		3.5		
	(rf)	.006	< *	.012		.021		
Imitates	(f)	6.0		4.0		3.5		

BOYS		A n = 2	A vs B	B n = 10	B vs C	C n = 5	C vs A	A vs B vs C
Positive Expressive	(f)	6.0	< *	14.0		22.0	> *	*
	(rf)	.029	< *	.052		.082	> *	†
Prosocial	(f)	3.5		5.5	> *	2.0		
Hugs	(f)	1.5		1.5		3.0		
	(rf)	.008		.006		.010		
Holds Hands	(f)	1.5		1.5		0.0		
Playful Aggression	(f)	6.0	< †	18.0		17.0		
	(rf)	.034		.104		.057		
Playful Teasing	(f)	6.0		5.0		3.0		
	(rf)	.027		.019		.019		
Play Noises	(f)	2.0		4.5		2.0		
	(rf)	.013		.020		.007		
Imitates	(f)	5.0		5.5	> *	1.0		†

A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf)= frequency relative to total interactions
Duration (d) = minutes per 75 minutes
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Table 4.9 Positive/Playful - Child as *object*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Positive Expressive	(f)	10.0		11.0	> †	7.0		
Prosocial	(f)	9.0		7.0		6.0		
Hugs	(f)	0.0		1.0		0.0		
	(rf)	.000		.004		.000		
Playful Aggression	(f)	5.0		10.0		10.0		
	(rf)	.018		.047		.058		
Playful Teasing	(f)	3.0		3.0		3.0		
	(rf)	.016		.011		.013		
Play Noises	(f)	1.0	< *	2.0	> **	1.0		**
	(rf)	.003		.009		.003		*
Imitates	(f)	1.0		3.0		2.0		
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Positive Expressive	(f)	12.0		13.0	> †	7.5		
Prosocial	(f)	12.0		7.0		8.0		
Hugs	(f)	0.0		1.0		0.0		
	(rf)	.000		.004		.000		
Playful Aggression	(f)	1.0	< †	7.0		3.0		
	(rf)	.003		.037		.009		
Playful Teasing	(f)	3.0		3.0		2.5		
	(rf)	.009		.011		.012		
Play Noises	(f)	1.0		2.0	> *	0.5		†
	(rf)	.003	< †	.007	> †	.002		†
Imitates	(f)	1.0		3.0		1.0		
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Positive Expressive	(f)	5.0		9.5		7.0		
Prosocial	(f)	7.0		7.5		5.0		
Hugs	(f)	0.0		0.5		1.0		
	(rf)	.000		.003		.007		
Playful Aggression	(f)	11.0		15.0		16.0		
	(rf)	.052		.066		.081		
Playful Teasing	(f)	3.5		2.5		7.0		
	(rf)	.019		.011		.025		
Play Noises	(f)	0.5		2.0		1.0		
	(rf)	.004		.010		.003		
Imitates	(f)	2.5		2.5		3.0		

A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf)= frequency relative to total interactions
Duration (d) = minutes per 75 minutes
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

on Playful Teasing than were 'A' girls. Medians for Positive Expressive behaviour (frequency and relative frequency) were significantly higher for 'C' boys than for 'A' boys.

Peer behaviour: For the whole sample (top third of Table 4.9), of the seven measures, medians for 'A' children were lower than for 'B' children for five measures, reaching significance for Play Noises (frequency). Medians for 'A' girls tended to be lower than for 'B' girls for Playful Aggression (frequency), and Play Noises (relative frequency). Medians for 'C' children also tended to be lower than for 'B' children in five of seven cases. 'C' children were significantly lower than were 'B' children on Play Noises (frequency). The median for 'C' girls tended to be lower than for 'B' girls for Positive Expressive behaviour (frequency) and for Play Noises (frequency and relative frequency).

Discussion

The results are consistent with previous studies concerned with relations between attachment security and positive peer interactions. Grossmann & Grossmann (in press) reported that more 'B' children showed a tendency toward 'friendliness' in social contacts with open facial expressions, while 'A' children were 'sober' and more frequently 'dissatisfied' and in a 'poor mood'. Waters, Wippman and Sroufe (1979) found evidence of a tendency for 'B' children to be more affectively positive toward peers. Secure children were also seen as being more socially oriented, capable of reciprocity, and more empathic (Sroufe, Schork, Motti, Lawroski, and LaFreniere, 1984). Park and Waters (personal communication) report that secure dyads had a significantly higher positive social orientation, including positive affective behaviour ('dyad plays together happily'), and prosocial behaviour ('partners share readily'). Behaviour directed toward the child also followed a predictable trend with 'B' children receiving more positive overtures and responses than did 'A' and 'C' children. Jacobson and Wille (1986), reported a similar result: 'B' children received 'more positive bids from peers' than did 'A' and 'C' children. Sroufe et al. (1984) reported that 'B' children were more frequently imitated.

4.8.3 Aggressive and Negative Behaviour

Results

Child's behaviour: As can be see in Table 4.10, the medians for 'C' children were higher than those for 'B' children for all of the Aggressive and Negative behaviour measures, but the only significant difference was for Noncomplies (relative frequency). Medians for both Disconfirms and Noncomplies were significantly higher for 'C' boys than for 'B' boys (frequency and relative frequency, respectively). The medians for 'C' children were also higher than those for 'A' children on all of these measures but none of the differences were significant.

Peer behaviour: The medians for receiving Aggressive and Negative behaviour from peers seemed to follow no overall trend (Table 4.11). 'B' boys were Disconfirmed by peers significantly less frequently than were 'C' boys, and tended to be Disconfirmed less than were 'A' boys.

Discussion

Lieberman (1977), in a similar study concerning correlates of attachment, found that 'B' children engaged in less negative behaviour than did 'A' and 'C' children. Grossmann, et.al.(in press), found that more insecure children showed a tendency toward frequent conflicts. The results presented here suggest that this may be the case for 'C' children, but do not apply to 'A' children in the sample. 'A' children tended to exhibit less negative and aggressive behaviour than both 'B' and 'C' children, with 'C' children tending to show the most. These results seem in line with the emerging picture of the 'A' child in interactions characterized by neutral and distant behaviour. As was suggested earlier when discussing the avoidance rating results, this aloofness is theoretically incongruous with both strong positive and negative behaviour. Disconfirmation by peers again differentiates the 'secure' children from the 'insecure', particularly for boys. This evidence of disconfirming by peers highlights the vicious circular pattern involved, where the child to some extent creates the environment he/she has experienced in the past. (Cottrell, 1969; Sroufe & Fleeson, 1988).

Table 4.10 Aggressive/Negative - Child as *subject*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		**A** n = 5	**A vs B**	**B** n = 23	**B vs C**	**C** n = 11	**C vs A**	**A vs B vs C**
Strong Aggression	(f)	0.0		1.0		2.0		
	(rf)	.000		.005		.006		
Weak Aggression	(f)	2.0		4.0		5.0		
	(rf)	.008		.016		.016		
Disconfirms	(f)	6.0		7.0		10.0		
	(rf)	.029		.030	< †	.043		
Noncomplies	(rf)	.214		.207	< *	.294		
Speaks with Hostility	(f)	0.0		1.0		2.0		
	(rf)	.000		.003		.007		
GIRLS		**A** n = 3	**A vs B**	**B** n = 13	**B vs C**	**C** n = 6	**C vs A**	**A vs B vs C**
Strong Aggression	(f)	0.0		0.0		0.5		
	(rf)	.000		.000		.003		
Weak Aggression	(f)	3.0		6.0		2.0		
	(rf)	.008		.017		.011		
Disconfirms	(f)	6.0		8.0		6.5		
	(rf)	.029		.030		.031		
Noncomplies	(rf)	.264		.207		.317		
Speaks with Hostility	(f)	0.0		1.0		3.5	> *	†
	(rf)	.000		.004		.017	> *	†
BOYS		**A** n = 2	**A vs B**	**B** n = 10	**B vs C**	**C** n = 5	**C vs A**	**A vs B vs C**
Strong Aggression	(f)	1.0		2.0		5.0		
	(rf)	.004		.009		.017		
Weak Aggression	(f)	1.5		3.0		8.0		
	(rf)	.008		.011		.027		
Disconfirms	(f)	7.5		6.5	< *	14.0		†
	(rf)	.035		.034	< †	.063		
Noncomplies	(rf)	.190		.202	< *	.281		
Speaks with Hostility	(f)	1.5		0.5		2.0		
	(rf)	.007		.002		.006		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf)= frequency relative to total interactions
Duration (d) = minutes per 75 minutes

Table 4.11 Aggressive/Negative - Child as *object*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		**A** n = 5	**A vs B**	**B** n = 23	**B vs C**	**C** n = 11	**C vs A**	**A vs B vs C**
Strong Aggression	(f)	0.0		1.0		2.0		
	(rf)	.000		.006		.007		
Weak Aggression	(f)	1.0		3.0		3.0		
	(rf)	.007		.013		.009		
Disconfirms	(f)	20.0		14.0		18.0		
	(rf)	.073		.080		.060		
Noncomplies	(rf)	-		-		-		
Speaks with Hostility	(f)	-		-		-		
	(rf)	-		-		-		

GIRLS		**A** n = 3	**A vs B**	**B** n = 13	**B vs C**	**C** n = 6	**C vs A**	**A vs B vs C**
Strong Aggression	(f)	0.0		1.0		0.0		
	(rf)	.000		.003		.000		
Weak Aggression	(f)	6.0		2.0		2.5		
	(rf)	.018		.012		.008		
Disconfirms	(f)	11.0		11.0		10.5		
	(rf)	.037		.045		.051		
Noncomplies	(rf)	-		-		-		
Speaks with Hostility	(f)	-		-		-		
	(rf)	-		-		-		

BOYS		**A** n = 2	**A vs B**	**B** n = 10	**B vs C**	**C** n = 5	**C vs A**	**A vs B vs C**
Strong Aggression	(f)	1.5		2.5		4.0		
	(rf)	.012		.013		.013		
Weak Aggression	(f)	1.0		4.0		4.0		
	(rf)	.006		.016		.013		
Disconfirms	(f)	21.0	> †	14.5	< *	18.0		*
	(rf)	.119		.081		.091		
Noncomplies	(rf)	-		-		-		
Speaks with Hostility	(f)	-		-		-		
	(rf)	-		-		-		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf)= frequency relative to total interactions
Duration (d) = minutes per 75 minutes

4.8.4 Controlling Behaviour

Results

Child's behaviour: Of the three measures of Controlling behaviour for the whole sample (top third of Table 4.12), medians for 'A' children were lower than for both 'B' and 'C' children in each case, but none reached significance. 'C' boys were significantly higher on Strong Control than were 'A' boys (relative frequency). There were no significant differences for Qualifiers of Control statements.

Peer behaviour: Of the three measures of Control behaviour for the child as object for the whole sample (Table 4.13), there was a trend for 'B' children to receive Strong Controls from peers more than did 'A' children, and a trend for 'B' children to be Led by peers more than were 'C' children. 'B' girls received significantly more Strong Controls from peers than 'A' girls (frequency and relative frequency). There was a tendency for 'B' girls to receive more Controls 'With No Reason' than did 'C' girls.

Discussion

Park and Waters (personal communication) reported that children in their study classified as 'B' (secure) were less controlling toward peers. This does not seemed to be the trend when comparing 'B' children with 'A' and 'C' children in this sample. However, the results here appear to be consistent with the attachment perspective. Again, frequency of controlling behaviour given to and received from peers may reflect the kind of play or interaction in which 'B' children are engaged. This two-sided give and take of control appears to be characteristic of much interactive play and might very well be conducive to developing social competence. Additionally, if secure children are more 'easy going' and socially competent, it perhaps follows that they would be more willing to tolerate controlling behaviour from peers. 'C' children, who typically show resistant behaviour toward the mother, may not.

Table 4.12 Controlling - Child as *subject*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Strong Control	(f)	4.0		11.0		6.0		
	(rf)	.016		.047		.028		
Leads	(f)	3.0		5.0		4.0		
	(rf)	.016		.018		.016		
Suggests	(f)	11.0		15.0		15.0		
	(rf)	.032		.053		.059		
Control Qualifiers								
With a Reason	(rf)	.071		.120		.138		
With Reason Implicit	(rf)	.321		.517		.556		
With No Reason	(rf)	.500		.310		.221		
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Strong Control	(f)	4.0		11.0		7.5		
	(rf)	.016		.048		.023		
Leads	(f)	3.0		6.0		6.0		
	(rf)	.016		.022		.020		
Suggests	(f)	11.0		16.0		16.0		
	(rf)	.032		.063		.064		
Control Qualifiers								
With a Reason	(rf)	.071		.108		.148		
With Reason Implicit	(rf)	.321		.517		.547		
With No Reason	(rf)	.500		.310		.210		
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Strong Control	(f)	3.5		6.0		6.0	> †	
	(rf)	.018		.036		.028	> *	
Leads	(f)	3.0		3.5		4.0		
	(rf)	.014		.017		.014		
Suggests	(f)	7.0		12.0		15.0		
	(rf)	.031		.046		.052		
Control Qualifiers								
With a Reason	(rf)	.113		.125		.059		
With Reason Implicit	(rf)	.637		.564		.556		
With No Reason	(rf)	.250		.204		.410		

A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf)= frequency relative to total interactions
Duration (d) = minutes per 75 minutes
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Table 4.13 Controlling - Child as *object*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		**A** n = 5	**A vs B**	**B** n = 23	**B vs C**	**C** n = 11	**C vs A**	**A vs B vs C**
Strong Control	(f)	3.0	< †	5.0		5.0		
	(rf)	.016		.028		.029		
Leads	(f)	3.0		3.0	> †	2.0		
	(rf)	.014		.012	> †	.007		
Control Qualifiers								
With a Reason	(rf)	.125		.091		.100		
With Reason Implicit	(rf)	.811		.636		.656		
GIRLS		**A** n = 3	**A vs B**	**B** n = 13	**B vs C**	**C** n = 6	**C vs A**	**A vs B vs C**
Strong Control	(f)	2.0	< *	7.0		4.0		
	(rf)	.009	< *	.029	.014		*	
Leads	(f)	3.0		4.0		1.5		
	(rf)	.010		.018		.005		
Control Qualifiers								
With a Reason	(rf)	.071		.098		.086		
With Reason Implicit	(rf)	.811		.600		.726		
BOYS		**A** n = 2	**A vs B**	**B** n = 10	**B vs C**	**C** n = 5	**C vs A**	**A vs B vs C**
Strong Control	(f)	6.5		4.5		11.0		
	(rf)	.031		.021		.040		
Leads	(f)	4.0		2.0		2.0		
	(rf)	.019		.009		.007		
Control Qualifiers								
With a Reason	(rf)	.113		.091		.125		
With Reason Implicit	(rf)	.744		.667		.526		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f), Relative frequency (rf)= frequency relative to total interactions
Duration (d) = minutes per 75 minutes

4.8.5 Initiating and Attention Seeking

Results

Child's behaviour: Of the four measures here for the whole sample (top third of Table 4.14), the most notable difference between the groups was on the item Seeks Attention. Medians for 'C' children were significantly higher than for 'B' children (frequency and relative frequency), and tended to be higher than for 'A' children (frequency and relative frequency). 'C' girls were significantly higher than 'A' girls (relative frequency), and 'C' boys were significantly higher than 'B' boys (frequency and relative frequency) on Seeks Attention. The median for Seeks Entry/Inclusion was significantly higher for 'A' boys than for 'B' boys.

Peer behaviour: There were no differences in Initiating behaviour between the groups (top third of Table 4.15). 'A' children were significantly lower on Speaks Boastfully than were both 'B' and 'C' children (frequency). 'A' girls tended to be lower on Speaks Boastfully than were both 'B' and 'C' girls. 'B' boys tended to Speak Boastfully more frequently than did both 'A' and 'C' boys.

Discussion

The results concerning Seeking Attention behaviour provide evidence that the characteristic dependent style of behaviour of 'C' children seen with their mothers was, to some extent, carried over to the style of behaviour seen with peers. This evidence suggests that 'C' children tended to be demanding and intrusive (e.g., watch me!!!!) and is interesting in light of evidence showing that peers also disconfirmed 'C' boys more than 'B' boys. There is, of course, no evidence for consideration of the direction of effects. The higher incidence of Seeking Inclusion for 'A' boys suggests that they may tend to be left out of peer play. It also suggests that 'A' boys prefer not to be left out and that they can, and are willing, to make the initiative.

Table 4.14 Initiating and Attention Seeking - Child as *subject*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		**A** n = 5	**A vs B**	**B** n = 23	**B vs C**	**C** n = 11	**C vs A**	**A vs B vs C**
Initiates	(f)	52.0		52.0		59.0		
	(rf)	.216		.220		.228		
Seeks Entry/Inclusion	(f)	8.0		2.0		1.0		
Seeks Attention	(f)	1.0		1.0	< *	3.0	> †	*
	(rf)	.006		.005	< **	.012	> †	*
Speaks Boastfully	(f)	2.0		4.0		4.0		
	(rf)	.016		.020		.016		
GIRLS		**A** n = 3	**A vs B**	**B** n = 13	**B vs C**	**C** n = 6	**C vs A**	**A vs B vs C**
Initiates	(f)	63.0		52.0		54.0		
	(rf)	.216		.213		.199		
Seeks Entry/Inclusion	(f)	1.0		2.0	> †	0.5		
Seeks Attention	(f)	1.0		2.0		3.0	> †	
	(rf)	.003		.006		.019	> *	†
Speaks Boastfully	(f)	2.0		3.0		3.5		
	(rf)	.016		.016		.014		
BOYS		**A** n = 2	**A vs B**	**B** n = 10	**B vs C**	**C** n = 5	**C vs A**	**A vs B vs C**
Initiates	(f)	44.0		53.0		59.0		
	(rf)	.219		.231		.266		
Seeks Entry/Inclusion	(f)	9.5	> *	1.0		4.0		*
Seeks Attention	(f)	5.5		1.0	< **	3.0		*
	(rf)	.023		.004	< **	.010		*
Speaks Boastfully	(f)	4.0		5.5		11.0		
	(rf)	.018		.023		.033		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions
Duration (d) = minutes per 75 minutes

Table 4.15 Initiating and Attention Seeking - Child as *object*: Median frequency and relative frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		**A** n = 5	**A vs B**	**B** n = 23	**B vs C**	**C** n = 11	**C vs A**	**A vs B vs C**
Initiates	(f)	37.0		38.0		38.0		
	(rf)	.180		.220		.184		
Seeks Entry/Inclusion	(f)	0.0		1.0		1.0		
	(rf)	.000		.006		.008		
Seeks Attention	(f)	-		-		-		
	(rf)	-		-		-		
Speaks Boastfully	(f)	0.0	< *	1.0		1.0	> *	*
GIRLS		**A** n = 3	**A vs B**	**B** n = 13	**B vs C**	**C** n = 6	**C vs A**	**A vs B vs C**
Initiates	(f)	37.0		36.0		35.5		
	(rf)	.180		.199		.178		
Seeks Entry/ Inclusion	(f)	0.0		2.0		1.5		
	(rf)	.000		.009		.010		
Seeks Attention	(f)	-		-		-		
	(rf)	-		-		-		
Speaks Boastfully	(f)	0.0	< †	1.0		1.0	> †	
BOYS		**A** n = 2	**A vs B**	**B** n = 10	**B vs C**	**C** n = 5	**C vs A**	**A vs B vs C**
Initiates	(f)	36.5		40.0		38.0		
	(rf)	.182		.200		.203		
Seeks Entry/Inclusion	(f)	4.0		0.5		1.0		
	(rf)	.016		.002		.007		
Seeks Attention	(f)	-		-		-		
	(rf)	-		-		-		
Speaks Boastfully	(f)	0.5	< †	2.5	> †	1.0		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, *D.....
A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f); Relative Frequency (rf) = frequency relative to total interactions
Duration (d) = minutes per 75 minutes
'-' = variable unreliable

4.8.6 Noninteractive Behaviours

Results

For the whole sample (top third of Table 4.16), medians for frequency of automanipulating tended to be higher for 'C' children than for 'B' children. Medians for Automanipulating were significantly higher for 'C' girls than for 'A' and 'B' girls. There were no significant differences in Watching or on Speaking/Muttering to Self.

Table 4.16 Noninteractive Behaviours: Median frequency - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Watches	(f)	18.0		25.0		27.0		
Speaks/Mutters to Self	(f)	8.0		6.0		3.0		
Automanipulates	(f)	3.0		2.0	< †	5.0		
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Watches	(f)	38.0		30.0		18.0		
Speaks/Mutters to Self	(f)	6.0		5.0		2.0		
Automanipulates	(f)	0.0		3.0	< *	12.0	> *	*
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Watches	(f)	15.5		16.5		28.0		
Speaks/Mutters to Self	(f)	14.5		7.5		12.0		
Automanipulates	(f)	9.0		2.0		3.0		

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f)

Discussion

Automanipulating, for this sample, characteristically involved oral behaviour - sucking the thumb, hand, arm, sleeve, etc., and generally seemed to occur during transitional or neutral activity when perhaps there was more cause for anxiety. For both girls and boys, the highest medians for Automanipulating were for children who were seen as insecurely attached ('C' girls and 'A' boys). Ainsworth et al. (1978) reported a very high degree of variability in oral behaviour in her sample of one year old infants, with no differences between the groups, during the Strange Situation with the mother. From a developmental perspective, this oral behaviour (which may serve to moderate the child's level of arousal), is quite common for one year old infants and not so common for five year old children.

Although there has been no evidence to suggest that automanipulating behaviour, *per se*, is characteristic of insecure children, or that these behaviours are indicative of insecure attachment, the 'C' insecure pattern of behaviour is characterized by dependent, immature behaviour with the mother. One might expect then to observe manifestations of this immaturity in other contexts. There was no attempt in this study to assess the impetus for the automanipulative behaviour. However, these behaviours may reflect heightened anxiety (felt anxiousness as opposed to felt security) on the part of the insecure children in the playground. Given this assumption, insecure children showed heightened anxiety manifested in avoidant and resistant behaviour in the Strange Situation and later manifested in oral behaviour on the playground with peers. This evidence of heterotypic continuity is consistent with the notion that generalizability from the actual mother-child attachment relationship to the individual child's functioning outside of this relationship occurs.

4.8.7 Summary and Discussion

Comparison between groups on molecular indices of behaviour revealed significant differences, both when looking at the whole sample and with girls and boys separately (see Tables 4.17 - 4.18 for a summary of results). Taken together, these significant, though relatively rare, findings present meaningful patterns. More importantly, the significant differences seem to point to more general trends or styles of behaviour which may be characteristic of, and may differentiate between, children with particular behavioural patterns in relation to attachment.

Table 4.17 Summary - Whole Sample - significant differences overall and between groups. Median frequencies, relative frequencies, and durations.

		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Large Muscle Play	(d)	17.7		15.5	> †	8.1	< *	
Organized Games With Rules	(f)	1.0	> **	0.0	< *	0.0		*
	(d)	1.3	> **	0.0	< *	0.0		**
Group Play	(d)	10.1		5.5		4.5	< *	
CHILD AS SUBJECT								
Speaks	(rf)	.160	> **	.107		.102	< *	*
Imitates	(f)	6.0		5.0	> *	2.0	< †	*
Noncomplies	(rf)	.214		.207	< *	.294		
Seeks Attention	(f)	1.0		1.0	< *	3.0	> †	*
	(rf)	.006		.005	< **	.012	> †	*
CHILD AS OBJECT								
Inquires	(f)	20.0	> *	10.0		19.0		*
	(rf)	.079	> *	.041	< †	.068		*
Play Noises	(f)	1.0	< *	2.0	> **	1.0		**
	(rf)	.003	< *	.009	> *	.003		*
Speaks Boastfully	(f)	0.0	< *	1.0		1.0	> *	*

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions
Duration (d) = minutes per 75 minutes

Table 4.18 Summary - Girls & Boys - significant differences overall and between groups. Median frequencies, relative frequencies, and durations.

GIRLS		A n = 3	A vs B	B n = 13	B vs C	C n = 6	C vs A	A vs B vs C
Organized Games With Rules	(f)	1.0	> *	0.0		0.5		*
	(d)	1.3	> **	0.0		0.6		*
Automanipulates	(f)	0.0		3.0	< *	12.0	> *	*
CHILD AS SUBJECT								
Speaks	(f)	57.0	> *	23.0		22.5		
	(rf)	.202	> **	.103		.103		*
Hugs	(f)	1.0		3.0	> *	.0		†
	(rf)	.003		.009	> *	.000	< †	†
Play Noises	(rf)	.006	< *	.012		.021		
Speaks with Hostility	(f)	0.0		1.0		3.5	> *	†
	(rf)	.000		.004		.017	> *	†
Seeks Attention	(rf)	.003		.006		.019	> *	†
CHILD AS OBJECT								
Inquires	(f)	25.0	> **	10.0		14.5		*
	(rf)	.079	> †	.052		.092		†
Play Noises	(f)	1.0		2.0	> *	0.5		†
Strong Control	(f)	2.0	< *	7.0		4.0		
	(rf)	.009	< *	.029		.014		*

BOYS		A n = 2	A vs B	B n = 10	B vs C	C n = 5	C vs A	A vs B vs C
Follower	(f)	17.5		8.0		7.0	< *	
	(d)	18.1	> †	4.5		4.1	< *	
CHILD AS SUBJECT								
Agrees	(rf)	.012		.019	> *	.006	*	
Positive Expressive	(f)	6.0	< *	14.0		22.0	> *	*
	(rf)	.029	< *	.052		.082	> *	†
Prosocial	(f)	3.5		5.5	> *	2.0		
Imitates	(f)	5.0		5.5	> *	1.0		†
Disconfirms	(f)	7.5		6.5	< *	14.0		†
Noncomplies	(rf)	.190		.202	< *	.281		
Strong Control	(rf)	.018		.036		.028	> *	
Seeks Entry/Inclusion	(f)	9.5	> *	1.0		4.0		*
Seeks Attention	(f)	5.5		1.0	< **	3.0		*
	(rf)	.023		.004	< **	.010		*
CHILD AS OBJECT								
Disconfirms	(f)	21.0	> †	14.5	< *	18.0		*

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions
Duration (d) = minutes per 75 minutes

Figure 4.1 and Table 4.19 (top third) show whole sample median relative frequencies of more molar indices of child's behaviour (summed molecular codes from each category of behaviour) for each group. The five molar behavioural clusters are: Positive (Positive Expressive, Prosocial, and Hugs); Playful (Playful Aggression, Playful Teasing, Play Noises, and Imitates); Negative (Strong Aggression, Weak Aggression, Disconfirms, and Speaks with Hostility); Controlling (Strong Control, Leads, and Suggests); and General Communication (Speaks, Informs, Inquires, Listens). There were two significant differences out of five Kruskal-Wallis comparisons for the child's behaviour (Negative and General Communication) and only one out of 5 tended toward significance (Positive) for peer behaviour. All groups showed a high percentage of General Communication.

However, medians for 'A' children were significantly higher than 'B' children ($p=.01$) and were higher than medians for 'C' children ($p<.10$). Conversely, medians for 'A' children were lowest (relative to 'B' and 'C' children) on the other 4 pools: Median Playful was significantly lower for 'A' children than for 'B' children, and Median Negative was significantly lower than for 'C' children. For 'B' children, General Communication median was lowest, Positive and Playful highest, and Negative and Controlling were in the middle. Medians for 'C' children were highest for both Negative and Controlling and Positive and Playful were in the middle. Thus we can see that a prototypical interaction pattern for 'A' children can be described in terms of higher general (Neutral) Communication, and a lower incidence of affiliative behaviours (Positive and Playful), Negative and Controlling.

In contrast, the prototype interaction pattern emerging for 'C' children can be characterized in terms of a relatively high incidence of affiliative (Positive and Prosocial), Negative and Controlling behaviour with a correspondingly lower incidence of General Communication. The pattern for 'B' children can be seen in terms of a high incidence of affiliative and Controlling behaviours and lower occurence of Negative and General Communication.

Although these patterns may reflect real differences (with only larger sample sizes needed to reveal stronger relations), lack of significant differences for some of the relations warrants caution. 'A' children, (children showing strong avoidance of the mother in reunion) are seen as having a history of an attachment relationship in which emotional needs were not met. One might look for behaviour which is consistent with

Figure 4.1 Whole sample median relative frequencies of child's behaviour.

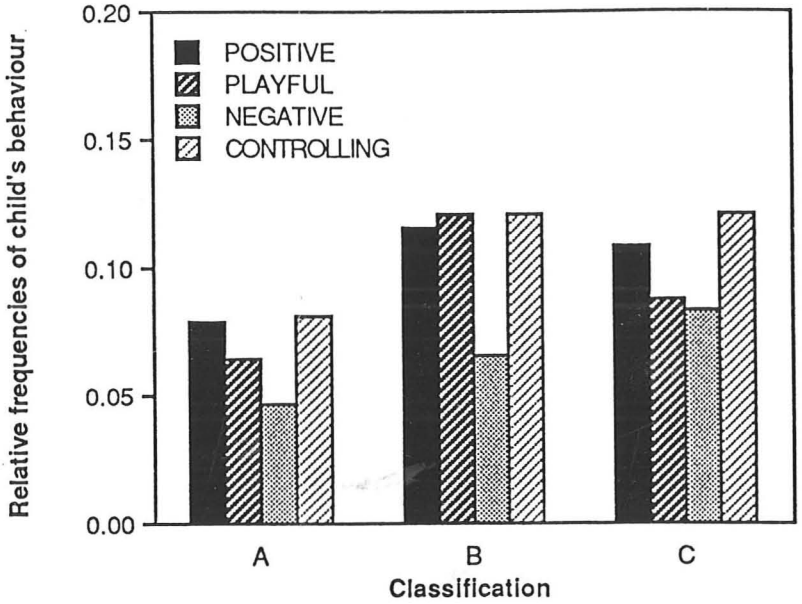


Table 4.19 Behavioural pools - Child as *subject*: Median relative frequency - overall and between group differences for the whole sample, girls, and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
POSITIVE	(rf)	.079 (L)		.116 (H)		.108 (M)		
PLAYFUL	(rf)	.065 (L)	< *	.121 (H)		.088 (M)		
NEGATIVE	(rf)	.047 (L)		.066 (M)	< †	.083 (H)	> *	*
CONTROLLING	(rf)	.081 (L)		.121 (M)		.131 (H)		
GENERAL COM.	(rf)	.449 (H)	> **	.367 (L)		.381 (M)	< †	**
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
POSITIVE	(rf)	.115 (M)		.118 (H)		.106 (L)		
PLAYFUL	(rf)	.047 (L)	< *	.073 (H)		.059 (M)		
NEGATIVE	(rf)	.047 (L)		.068 (M)		.074 (H)	> †	
CONTROLLING	(rf)	.085 (L)		.145 (H)		.132 (M)		
GENERAL COM.	(rf)	.542 (H)	> *	.339 (L)		.389 (M)		*
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
POSITIVE	(rf)	.055 (L)	< *	.098 (M)		.108 (H)	> *	*
PLAYFUL	(rf)	.101 (L)	< †	.181 (H)	> †	.109 (M)		†
NEGATIVE	(rf)	.055 (L)		.063 (M)	< *	.108 (H)		†
CONTROLLING	(rf)	.063 (L)		.097 (M)		.131 (H)		
GENERAL COM.	(rf)	.432 (H)	> †	.378 (M)		.361 (L)		

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Relative Frequency (rf) = frequency relative to total interactions
(L) low median (M) middle median (H) high median

the avoidant behavioural strategy in relation to others. Looking for coherence, however, physical avoidance of others would not be expected. Rather, as can be seen here, emotionally charged behaviour (Positive, Playful, Negative and Controlling) might be avoided in the proximity of others, resulting in apparent aloofness or distance from the interaction (Sroufe, 1983). Likewise, 'C' children (children showing ambivalent, resistant and angry behaviour with the mother on reunion) are seen as having a history of an attachment relationship in which emotional needs were met inconsistently or insensitively. One might expect these children to show similar patterns of insensitivity with peers. However, one would not expect that anger would generalize to other individuals (consistency) unless an underlying organization of expectations of, and beliefs about, others was assumed (coherence). 'B' children (children showing emotional openness and clear expression of attachment needs on reunion with the mother) are seen as having a history of an attachment relationship in which emotional needs are sensitively satisfied. One might then expect, as evidence suggests here, that these children would show similar emotional openness and sensitivity to others and a lower incidence of negative/aggressive behaviours (consistency and coherence). The evidence here is also consistent with Arend et al.'s (1983) finding that 'A' children tend to be overcontrolled, while 'C' children tend to be undercontrolled.

Coherence also is reflected in differences in peer behaviour toward the child as a function of attachment history. Figure 4.2 and Table 4.20 (top third) show the median relative frequencies of peer behaviour to the focal child. Positive peer behaviour was highest for 'B' children and lowest for 'C' children. This relation was highly significant. Peer General Communication was highest for 'A' children and lowest for 'B' children. This relation was also significant. The remaining differences were not significant. It is worth noting that, although 'B' children showed the least amount of Negative behaviour toward peers, peer Negative behaviour was highest toward 'B' children. One is somewhat limited in interpreting Peer behaviour in relation to attachment when peer attachment history is not known. Dyadic interaction necessarily is subject to the influence of both participants. It might be suggested that 'B' children are more 'easy going', more nurturant and more tolerant of children who exhibit negative behaviour. In so doing, the probability of being the recipient of negative behaviour is increased. Assessment of the attachment histories and individual differences of both interactants would be a fruitful line of inquiry. However, given limitations, one looks for individual

Figure 4.2 Whole sample median relative frequencies of peer behaviour.

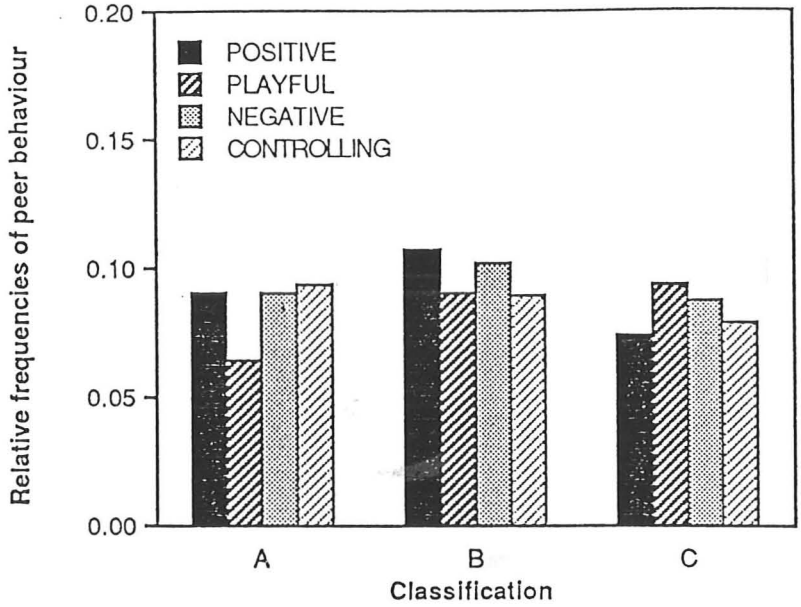


Table 4.20 Behavioural pools - Child as *object*: Median relative frequency - overall and between group differences for the whole sample, girls, and boys.

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
POSITIVE	(rf)	.091 (M)		.107 (H)	> **	.074 (L)		†
PLAYFUL	(rf)	.065 (L)		.091 (M)		.094 (H)		
NEGATIVE	(rf)	.091 (M)		.102 (H)		.087 (L)		
CONTROLLING	(rf)	.094 (H)		.090 (M)		.079 (L)		
GENERAL COM.	(rf)	.458 (H)	> *	.416 (L)		.434 (M)		
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
POSITIVE	(rf)	.091 (M)		.107 (H)		.078 (L)		
PLAYFUL	(rf)	.034 (L)		.075 (H)		.045 (M)		
NEGATIVE	(rf)	.064 (L)		.069 (M)		.079 (H)		
CONTROLLING	(rf)	.031 (L)		.114 (H)		.072 (M)		
GENERAL COM.	(rf)	.624 (H)	> *	.421 (L)		.455 (M)		†
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
POSITIVE	(rf)	.072 (M)		.089 (H)		.068 (L)		
PLAYFUL	(rf)	.084 (L)		.115 (H)		.109 (M)		
NEGATIVE	(rf)	.130 (H)		.114 (M)		.108 (L)		
CONTROLLING	(rf)	.100 (H)		.080 (M)		.079 (L)		
GENERAL COM.	(rf)	.434 (M-H)		.415 (L)		.434 (M-H)		

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Relative Frequency (rf) = frequency relative to total interactions
(L) low median (M) middle median (H) high median

differences in behaviour which incorporate and perhaps transcend the influences of other participants in interaction. Sroufe & Fleeson (1988) contend that children recreate relationships experienced in the past. If a child's choice of peers is influenced by previous experience in an attachment relationship, than peer preference and therefore peers' behaviour should (ideally) lend coherence to our understanding of links between attachment and subsequent relationships.

Note. Intercorrelations of significant molecular behaviour variables and molar behaviour variables are shown in Appendix C.

5. SEX DIFFERENCES: BEHAVIOUR

Although examination of sex differences was not the major focus of the study, analysis of this potentially important independent variable was undertaken to assess evidence for underlying assumptions concerning the cohesiveness of behaviour of girls and boys, particularly within attachment groups. Spearman correlation coefficients were employed. Tables 5.1 to 5.4 show whole sample and within attachment classification medians for behaviour variables. Of course, given that the 'B' group is responsible for a relatively substantial contribution to this pattern, it is not surprising that results for the 'B' group and the whole sample are similar.

5.1 Activities, Social Participation, Leader/Follower, and Neighbors/Alone

5.1.1 Results

Activities: Of the 6 activity measures, there were no significant differences between girls and boys.

Social Participation: Girls tended to engage more in Interactive play than did boys. 'A' boys tended to Play Games on Own more than did 'A' girls.

Leader/Follower: Girls tended to take a Mutual or Ambiguous 'role' in the context of a game more than did boys. 'A' boys tended to take a Follower 'role' within games more than did 'A' girls.

Neighbors/Alone: Girls were in the proximity of girls significantly more than were boys, and boys were in the proximity of boys significantly more than were girls. 'C' boys came into proximity with peers (girls+boys) significantly more than did 'C' girls. 'A' boys were Alone more frequently and for longer total duration than were 'A' girls.

5.1.2 Discussion

It is interesting to note that although 'A' girls Played games alone more than did 'A' boys, 'A' girls were Alone significantly less than were 'A' boys. It looks as if 'A' girls were more independent in the sense that they were able to generate their own games when alone, where 'A' boys may have been more at a loss for something to do. For a child to be coded as Alone but not Playing on Own, he/she would have to be either

Table 5.1 Sex differences: Activities, Social Participation, Relative Roles and Neighbours/Alone calculated as durations. (Neighbours - frequency and duration) - overall and within group differences between girls and boys.

		WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP		
		GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Activities													
Large Muscle Play	(d)	15.8		13.2	17.7		14.8	15.5		16.8	14.8		7.7
Organized games With Rules	(d)	0.0		0.0	1.3		2.6	0.0		0.0	0.6		0.0
Role Playing	(d)	7.5		10.4	6.2		9.8	6.6		10.8	9.0		4.9
Social Conversation	(d)	3.2		2.2	3.3		3.9	3.8		2.1	2.5		1.3
Transitional	(d)	26.9		31.4	34.1		34.4	27.1		27.1	25.8		31.5
Neutral	(d)	5.5		2.9	1.1		6.3	6.3		3.2	4.6		2.9
Social Participation													
Playing On Own	(d)	3.9		4.7	3.9	> †	1.5	4.0		6.4	4.2		4.4
Group Play	(d)	2.4		7.3	10.1		14.6	3.4		7.2	0.1		7.2
Interactive Play	(d)	28.9	> †	17.4	24.5		15.3	28.6		19.1	30.1		11.6
Relative Role													
Leader	(d)	4.3		3.3	4.8		1.8	3.8		2.5	4.6		3.3
Follower	(d)	4.4		5.3	6.6	< †	18.1	4.6		4.5	3.9		4.1
Mutual/ Ambiguous	(d)	16.1	> †	9.0	20.0		6.1	10.1		12.0	18.8		6.7
Neighbors/Alone													
Girl Peers	(f)	40.5	> **	11.0	80.0	> †	11.0	41.0	> **	10.5	36.5	> *	18.0
	(d)	70.8	> **	12.4	114.5	> †	22.8	68.0	> **	10.8	75.8	> **	9.7
Boys peers	(f)	18.0	< **	65.0	9.0	< †	45.5	22.0	< **	65.5	15.5	< **	77.0
	(d)	17.5	< **	79.4	3.5	< †	80.8	20.3	< **	84.8	14.0	< *	66.3
Total Peers	(f)	64.5		73.0	89.0		56.5	65.0		74.5	60.5	< *	99.0
	(d)	97.9		92.8	118.2		103.6	97.1		97.1	96.1		92.8
Alone	(f)	22.0		26.0	22.0	< †	26.0	22.0		25.5	21.5		33.0
	(d)	9.4		13.5	7.0	< †	13.0	8.3		13.1	11.6		14.6

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
A = Avoidant; B = Secure; C = Ambivalent
Frequency per 75 minutes (f); Duration (d) = minutes per 75 minutes

Transitional or Neutral. Since it is possible to be Transitional and Neutral with peers in proximity, it seems that 'A' boys, although not significantly longer in Transition or Neutral, were more isolated from peers during these times. In addition, when 'A' boys were involved in an activity with others they tended to take a Follower role more than did 'A' girls (and all other groups). Concerning 'C' children, it is also notable that 'C' boys came into proximity with peers significantly more often than did 'C' girls (and more often than all other groups), but were with peers for less total time (although not significantly). This pattern seen in 'C' boys is similar to the characteristic unsettled behaviour seen in reunion with the mother of 'C' children and may be indicative of an underlying generalized ambivalence toward others. The possibility that the pattern here reflects activity level (a more active child might move in and out of groups more often) or even social competence cannot be ruled out. There has been no evidence reported thus far that 'C' children are temperamentally more active than others, however, and moving in and out of groups seems less conducive to developing strong relationships.

5.2 Total Interactions and Specific Behaviours

5.2.1 Results

Total Interactions: There were no differences between girls and boys for total number of interactions for child as subject and child as object.

General Communication

Child as subject: There were no whole sample sex differences. 'A' girls tended to Speak more (relative frequency) than did 'A' boys. 'B' boys Agreed more (frequency $p<.10$, relative frequency $p<.01$) than did 'B' girls.

Child as object: There were no differences for the whole sample. Peers tended to Inquire (frequency) and Agree (frequency) more with 'A' girls than with 'A' boys. Peers tended to Inform (relative frequency) 'B' boys more than 'B' girls. Peers Disagreed significantly less (frequency and relative frequency) with 'C' girls than with 'C' boys (and less than with all other groups).

Table 5.2 Sex differences: Behavioural categories: Median frequency and relative frequency, overall and within attachment classification groups for child as *subject*.

		WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP		
		GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Total Interactions		255.5		227.0	343.0		202.5	240.0		213.5	254.0		291.0
General Comm.													
Speaks	(f)	26.5		23.0	57.0		28.5	23.0		24.5	22.5		23.0
	(rf)	.106		.109	.202	> †	.137	.103		.115	.103		.088
Informs	(f)	34.0		29.0	73.0		29.5	33.0		28.5	37.5		46.0
	(rf)	.141		.155	.205		.148	.133		.134	.152		.162
Inquires	(f)	7.0		7.0	11.0		9.0	6.0		5.0	8.0		10.0
	(rf)	.056		.030	.037		.046	.029		.025	.039		.030
Agrees	(f)	2.0		3.0	6.0		2.5	2.0	< †	4.0	2.5		1.0
	(rf)	.009		.014	.017		.012	.007	< **	.019	.011		.006
Disagrees	(f)	3.0		5.0	6.0		7.0	3.0		5.5	1.0		3.0
	(rf)	.016		.018	.024		.029	.015		.025	.004		.014
Listens	(f)	17.5		20.0	26.0		21.0	16.0		19.0	18.0		30.0
	(rf)	.088		.089	.076		.101	.064		.081	.079		.091
General Comm.	(rf)	.375		.380	.542	> †	.432	.339		.378	.389		.361
Positive													
Positive	(f)	21.0	> **	14.0	20.0	> †	6.0	26.0	> **	14.0	18.5		22.0
Expressive	(rf)	.087	> †	.054	.090	> †	.029	.090	> †	.052	.069		.082
Prosocial	(f)	7.0	> *	4.0	7.0		3.5	6.0		5.5	6.0	> †	2.0
Hugs	(f)	0.5		2.0	1.0		1.5	3.0		1.5	0.0	< *	3.0
	(rf)	.001		.006	.003		.008	.009		.006	.000	< *	.010
Holds Hands	(f)	23.0	> **	1.0	48.0		1.5	27.0	> *	1.5	13.5	> †	0.0
Positive	(rf)	.113		.100	.115	> †	.055	.118	> †	.098	.106		.108
Playful													
Playful	(f)	5.0	< **	17.0	2.0		6.0	6.0	< **	18.0	4.0		17.0
Aggression	(rf)	.018	< **	.058	.015		.034	.023	< **	.104	.012		.057
Playful	(f)	3.5		5.0	2.0		6.0	4.0		5.0	6.0		3.0
Teasing	(rf)	.013		.019	.008	< †	.027	.014		.019	.017		.019
Play	(f)	2.0		4.0	2.0		2.0	4.0		4.5	3.5		2.0
Noises	(rf)	.011		.017	.006		.013	.012		.020	.021		.007
Imitates	(f)	4.5		5.0	6.0		5.0	4.0		5.5	3.5		1.0
Playful	(rf)	.065	< **	.154	.047	< †	.101	.073	< **	.181	.059		.109
Aggressive and Negative													
Strong	(f)	0.0	< **	2.0	0.0		1.0	0.0	< †	2.0	0.5	< *	5.0
Aggression	(rf)	.000	< **	.009	.000		.004	.000	< *	.009	.003	< *	.017
Weak	(f)	3.5		3.0	3.0		1.5	6.0		3.0	2.0		8.0
Aggression	(rf)	.014		.013	.008		.008	.017		.011	.011		.027
Disconfirms	(f)	7.5		10.0	6.0		7.5	8.0		6.5	6.5		14.0
	(rf)	.030		.043	.029		.035	.030		.034	.031		.063
Noncomplies	(rf)	.265		.214	.264	> †	.190	.207		.202	.317	> †	.281
Speaks with	(f)	1.0		1.0	0.0	< *	1.5	1.0		0.5	3.5		2.0
Hostility	(rf)	.003		.006	.000	< *	.007	.004		.002	.017		.006
Negative	(rf)	.066		.066	.047		.055	.068		.063	.074		.108

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions

Table 5.3 Sex differences: Behavioural categories: Median frequency and relative frequency, overall and within attachment classification groups for child as *object*.

		WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP		
		GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Total Interactions		**236.0**		**223.0**	**298.0**		**196.0**	**226.0**		**202.5**	**223.5**		**266.0**
General Comm.													
Speaks	(f)	17.0		23.0	26.0		21.0	17.0		16.5	15.5		24.0
	(rf)	.094		.087	.109		.143	.089		.081	.100		.087
Informs	(f)	19.5		21.0	22.0		19.0	19.0		22.5	22.0		17.0
	(rf)	.082		.108	.116		.078	.077	< †	.109	.085		.064
Inquires	(f)	13.0		10.0	25.0	> †	11.5	10.0		9.5	14.5		19.0
	(rf)	.056		.051	.079		.063	.052		.041	.092		.065
Agrees	(f)	2.0		1.0	3.0	> †	1.0	1.0		1.5	2.0		4.0
Disagrees	(f)	2.0		2.0	4.0		3.0	2.0		2.5	1.0	< *	2.0
	(rf)	.008		.011	.012		.012	.012		.011	.006	< *	.014
Listens	(f)	36.5		37.0	52.0		35.0	35.0		33.5	37.5		44.0
	(rf)	.164		.158	.159		.179	.168		.156	.163		.165
General Comm.	(rf)	.430		.416	.624		.434	.421		.415	.455		.434
Positive													
Positive Expressive	(f)	12.0		9.0	12.0		5.0	13.0		9.5	7.5		7.0
Prosocial	(f)	8.0		6.0	12.0		7.0	7.0		7.5	8.0		5.0
Hugs	(f)	1.0		0.0	0.0		0.0	1.0		0.5	0.00		1.0
	(rf)	.004		.000	.000		.000	.004		.003	.000		.007
Positive	(rf)	.101		.068	.091		.072	.107		.089	.078		.068
Playful													
Playful Aggression	(f)	5.5	< **	16.0	1.0		11.0	7.0		15.0	3.0	< †	16.0
	(rf)	.018	< **	.067	.003	< †	.052	.037	< †	.066	.009	< †	.081
Playful Teasing	(f)	3.0		3.0	3.0		3.5	3.0		2.5	2.5		7.0
	(rf)	.011		.016	.009		.019	.011		.011	.012		.025
Play Noises	(f)	1.0		1.0	1.0		0.5	2.0		2.0	0.5		1.0
	(rf)	.004		.007	.003		.004	.007		.010	.002		.003
Imitates	(f)	2.5		3.0	1.0		2.5	3.0		2.5	1.0		3.0
Playful	(rf)	.063	< *	.109	.034		.084	.075		.115	.045	< †	.109
Aggressive and Negative													
Strong Aggression	(f)	0.0	< **	3.0	0.0		1.5	1.0	< **	2.5	0.0	< †	4.0
	(rf)	.000	< **	.012	.000		.012	.003	< **	.013	.000		.013
Weak Aggression	(f)	2.0		4.0	6.0		1.0	2.0		4.0	2.5		4.0
	(rf)	.012		.015	.018		.006	.045		.016	.008		.013
Disconfirms	(f)	11.0		17.0	11.0		21.0	11.0		14.5	10.5		18.0
	(rf)	.048	< *	.082	.037	< †	.119	.045		.081	.051	< †	.091
Negative	(rf)	.073	< **	.111	.064	< †	.130	.069		.114	.079	< *	.108

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions

Positive/Playful

Child as subject: Medians for girls were significantly higher than for boys on Positive Expressive (frequency), Prosocial (frequency), and Holding Hands (frequency). Boys Play Aggressed (frequency and relative frequency) significantly more than did girls. Similar patterns are seen within groups. In addition, 'C' boys Hugged peers (frequency and relative frequency) significantly more than did 'C' girls (and more than all other groups). 'A' boys tended to Tease Playfully (relative frequency) more than did 'A' girls.

Child as object: Boys received significantly more Playful Aggression from peers than did girls (frequency and relative frequency). The pattern was similar in each attachment group.

Aggressive and Negative

Child as subject: Boys showed significantly more Strong Aggression (frequency and relative frequency) than did girls, with a similar trend within each group. 'A' girls tended to Noncomply more than did 'A' boys, and 'C' girls tended to Noncomply more than did 'C' boys. 'A' girls Spoke with Hostility (frequency and relative frequency) significantly less than did 'A' boys (and less than all other groups).

Child as object: Peers also directed significantly more Strong Aggression toward boys than toward girls, with similar differences within groups, mirroring the above. Boys were Disconfirmed by peers (relative frequency) significantly more than were girls, with the biggest differences in the insecure groups ('A' and 'C').

Controlling

Child as subject: There were no differences between girls and boys in Controlling behaviour.

Child as object: 'A' girls tended to receive fewer Strong Controls from peers than did 'A' boys, while 'B' girls tended to receive more Strong Controls than did 'B' boys.

Table 5.4 Sex differences: Behavioural categories (continued): Median frequency and relative frequency, overall and within attachment classification groups for child as *subject*.

		WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP		
		GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Controlling													
Strong Control	(f)	11.0		6.0	4.0		3.5	11.0		6.0	7.5		6.0
	(rf)	.038		.025	.016		.018	.048		.036	.023		.028
Leads	(f)	4.0		3.0	3.0		3.0	6.0		3.5	6.0		4.0
	(rf)	.016		.010	.016		.014	.022		.017	.020		.014
Suggests	(f)	14.5		12.0	11.0		7.0	16.0		12.0	16.0		15.0
	(rf)	.061		.048	.032		.031	.063		.046	.064		.052
Controlling	(rf)	.135		.090	.085		.063	.145		.097	.132		.131
Control Qualifiers:													
W/ Reason	(rf)	.114		.125	.071		.113	.108		.125	.148		.059
W/ Reason Implicit	(rf)	.509		.556	.321		.637	.517		.564	.547		.556
W/ No Reason	(rf)	.267		.208	.500		.250	.310		.204	.210		.410
Initiating/Attention Seeking													
Initiates	(f)	57.0		52.0	63.0		44.0	52.0		53.0	54.0		59.0
	(rf)	.211		.242	.216		.219	.213		.231	.199		.266
Seeks Entry/ Inclusion	(f)	1.5		2.0	1.0		9.5	2.0		1.0	0.5		4.0
Seeks Attention	(f)	2.0		2.0	1.0		5.5	2.0		1.0	3.0		3.0
	(rf)	.008		.009	.003	< †	.023	.006		.004	.019		.010
Speaks Boastfully	(f)	3.0	< *	6.0	2.0		4.0	3.0		5.5	3.5	< †	11.0
	(rf)	.016	< *	.023	.016		.018	.016		.023	.014	< †	.033
Noninteractive													
Watches	(f)	28.5		16.0	38.0	> †	15.5	30.0		16.5	18.0		28.0
Speaks/Mutters To Self	(f)	5.5		12.0	6.0		14.5	5.0		7.5	2.0		12.0
Auto-manipulates	(f)	3.0		3.0	0.0	< †	9.0	3.0		2.0	12.0		3.0

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions

Table 5.5 Sex differences: Behavioural categories (continued): Median frequency and relative frequency, overall and within attachment classification groups for child as *object*.

		WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP	
		GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6	BOYS n=5
Controlling												
Strong Control	(f)	5.0		5.0	2.0		6.5	7.0	> †	4.5	4.0	11.0
	(rf)	.023		.028	.009	< †	.031	.029		.021	.014	.040
Leads	(f)	3.0		1.0	3.0		4.0	4.0		2.0	1.5	2.0
	(rf)	.012		.007	.010		.019	.018		.009	.005	.007
Controlling	(rf)	.091		.085	.031		.100	.114		.080	.072	.079
Control Qualifiers												
W/ Reason	(rf)	.099		.091	.071		.113	.098		.091	.086	.125
W/ Reason Implicit	(rf)	.646		.667	.811		.744	.600		.667	.726	.526
Initiating/Attention Seeking												
Initiates	(f)	36.5		38.0	37.0		36.5	36.0		40.0	35.5	38.0
	(rf)	.182		.198	.180		.182	.199		.200	.178	.203
Seeks Entry/ Inclusion	(f)	2.0		1.0	0.0		4.0	2.0		0.5	1.5	1.0
Speaks Boastfully	(f)	1.0	< *	2.0	0.0		0.5	1.0	< †	2.5	1.0	1.0

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions

Initiating/Attention Seeking

Child as subject: Boys Spoke Boastfully significantly more than did girls (frequency and relative frequency), with a similar pattern within groups. 'A' boys tended to Seek Attention (relative frequency) more than did 'A' girls (and more than all other groups).

Child as object: Peers Spoke Boastfully (frequency) significantly more to boys than to girls, mirroring behaviour directed to them.

Noninteractive

There were no differences between girls and boys for the whole sample. 'A' girls tended to Watch peers more than did 'A' boys and tended to Automanipulate less than did 'A' boys (and less than all other groups).

5.2.2 Discussion

The general pattern of results is consistent with previous research on differences in behaviour of girls and boys (see Huston, 1983 for a comprehensive review). Boys showed more aggression, both Strong and Play Agression, and Spoke Boastfully more than did girls. Girls showed more Positive Expressive and Prosocial behaviours and Held Hands more than did boys.

Results concerning relations between attachment classification and behaviours for girls and boys separately were considered in the last chapter. As the focus of this study was not on sex differences per se, extensive consideration of relations concerning overall sex differences will not be made. In many cases, the differences for the whole sample reflected similar trends within each group. Some did not. For instance, in the 'C' group, 'C' boys Hugged significantly more than did 'C' girls and also did *not* show the 'girls greater than boys' trend for Positive Expressive. Perhaps this is due to a tendancy toward over-expressiveness with peers in 'C' boys but not in 'C' girls. Likewise, both 'A' and 'C' girls tended to Noncomply more than did 'A' and 'C' boys (and more than both girls and boys in the 'B' group), but this sex difference was not evident within the 'B' group. One might interpret this result in terms of the kind of controls they may be receiving. Girls in the 'B' group tended to receive more Strong

Controls from peers than boys did in the 'B' group (Table 5.5). This was not the trend in either the 'A' or the 'C' group. In fact, girls in the 'A' group tended to receive significantly fewer Strong Controls than did boys in the 'A' group. Perhaps Strong Control results in a higher compliance rate than do other types of controls.

The differences within each group which did not reflect overall trends underline the importance of considering the influence of gender when examining relations between attachment relationships and measures of child functioning. We cannot ignore differences in behavioural propensities of girls and boys and, from a relationships perspective, we cannot simply assume that the mother-daughter attachment relationship will relate to behaviour in the same way that the mother-son attachment relationship will. Consideration of these factors, both theoretically and methodologically, will enrich and expand our understanding of the nature of relations between attachment and development.

6. ATTACHMENT AND PERCEPTIONS

6.1 Introduction

The aim of this chapter is to examine individual differences in attachment relationships as they relate to perceptions concerning the self and others. Historically, developmental theorists have emphasized the importance of social interaction with others in influencing the child's emerging sense of self. Baldwin (1897) saw the developing child as embedded in an 'interactional network', and suggested that the child's personality, particularly self-concept, continuously undergoes change as a result of feedback from significant others. This view was later expanded by Cooley (1902), in his theory of the 'looking-glass self', and later still by Mead (1934) through his conceptualizations of the 'generalized other' and the 'generalized self'. Sullivan (1953) emphasized the importance of the mother-infant relationship in the development of the self, suggesting that the infant, long before acquisition of language, makes 'reflected appraisals' of relations between him/herself and the mother. Attachment theorists (Bowlby, 1969/82, 1973, 1980; Main et al., 1985) stress the child's early experiences in attachment relationships as the primary influences on the developing sense of self. Bowlby (1973; 1979; 1980) proposed that the child's internal representation of self and self with others can also be seen as a mediating mechanism through which the influence of the early attachment relationship continues over time, across situations, and within subsequent relationships:

> Typically these [securely attached] children grow up to be secure and self-reliant, and to be trusting, cooperative, and helpful toward others. In the psychoanalytic literature such a person is said to have a strong ego; and he may be described as having "basic trust" (Erikson, 1950), "mature dependence" (Fairbairn, 1952) or as having "introjected a good object" (Klein, 1948). In terms of attachment theory, he is described as having built up a representational model of himself as being both able to help himself and as worthy of being helped should difficulties arise. (Bowlby, 1979, pp.136)

As discussed previously, the conceptual vagueness of the term 'representational model' has been criticized for it's use as an over- reaching explanatory model (Hinde & Stevenson-Hinde, 1988). This coupled with difficulties in both conceptualizing and

assessing self perceptions seems to have hindered the progress of research in this area. Terms used in research related to the self tend to be used vaguely, inconsistently and interchangeably (Cassidy, in press). Wylie (1974) suggests that these problems reflect fragmented theoretical conceptualization. The terms generally fall into two major groups: one which refers to a descriptive reference to the self without necessarily being evaluative (self-concept, self-image, self- understanding, etc.), and ones related to the value one places on oneself (self-affect, self-worth, self-feeling).

A more practical obstacle concerns the actual assessment of perceptions. For one, it seems that forced introspection, however cunningly contrived and attractively presented, will result in a measure of self perceptions confounded by those very perceptions (e.g., a child with very low self-esteem may report that he/she is great and can do everything 'really well' (see Cassidy, in press, for a comprehensive review of theoretical and methodological considerations). Given methodological and conceptual problems, the ultimate task is to discover links, not between attachment measures and self perceptions, but between attachment measures and self reports, with more precise theoretical consideration of 'real' expectations and beliefs (and their organization) as a potential mediating variable.

Despite the above difficulties, recent attempts have provided some evidence for relations between aspects of attachment relationships with mother and reported self perceptions (Cassidy 1988). Measures of self-perceptions focused on here were: cognitive and physical competence, peer and maternal acceptance (Harter & Pike, 1984, see 2.6.2); self-efficacy (Wheeler & Ladd, 1982, see 2.6.3); peer popularity/liking (a rating technique, see 2.6.4), and interpersonal problem-solving (Shure & Spivack, 1974, see 2.6.5). As with the behavioural measures, relations were assessed between perceptions and the three measures of the attachment relationship with the mother (security ratings, avoidance ratings and attachment classification). These measures do not necessarily reflect an evaluative judgement on one's value or self-worth. Harter & Pike (1984) make the point that the degree to which one reports having friends, for example, does not necessarily imply judgements about the adequacy of the *self*. The assessment may just as well reflect the child's evaluation of others as unfriendly or not nice. This, of course, does not detract from the attachment premise, that one's evaluations (expectations and beliefs) concerning the self and *others* relate to one's attachment relationship.

6.2 Competence and Acceptance

Harter's (Harter & Pike, 1984) Pictorial Scale of Perceived Competence and Social Acceptance for Young Children was used, in line with the research focus on the influences of attachment relationships, both on the self as compared to others (competence) and on the self in relation to others (peer and maternal acceptance). The Harter instrument is organized around specific domains of competence (cognitive and physical) and acceptance (peer and maternal), rather than on more general indices of self-concept assessed with other instruments (Coopersmith, 1967; Piers & Harris, 1969). Teacher's perceptions of the child's cognitive and physical competence and peer acceptance were also assessed with the teacher version of the Harter scale. These ratings were designed to provide an independent measure of the child's 'actual' competence and acceptance but are, of course, another measure influenced by perceptions (the teacher's).

6.2.1 Security Ratings and Competence/Acceptance

Child's Perceptions of Competence and Acceptance

As can be seen in Table 6.1, for the whole sample, perceived Cognitive Competence tended to be positively related to security (.27, $p<.10$). There were no significant correlations for the three summed scores.

Boys' secure ratings were significantly positively related to perceived Maternal Acceptance (.53, $p<.05$) and tended to be related to perceived Cognitive Competence in the same direction (.47, $p<.1$). All three summed scores were positively related to security ratings for boys: for the Acceptance score, .45, $p<.1$; for the Competence score, .45, $p<.1$; and for the Overall score, .53, $p<.05$.

Girls' security ratings tended to be negatively correlated with Peer Acceptance; -.38, $p<.1$. All other correlations for single and combined measures were non-significant.

Table 6.1 Security ratings and child's perceptions of Competence and Acceptance. Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
1. Cognitive Competence	.27 †	.10	.47 †
2. Physical Competence	.03	-.18	.38
3. Peer Acceptance	.00	-.38 †	.28
4. Maternal Acceptance	.04	(-.32	.53 *)
Competence (1+2)	.17	.04	.45 †
Social Acceptance (3+4)	.04	(-.32	.45) †
Overall (1+2+3+4)	.13	(-.22	.53) *

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
( ): ≥ 70 points difference

Teacher's Perceptions of Child's Competence/Acceptance

As shown in Table 6.2, there were no significant correlations between the security ratings and teachers' perceptions of cognitive and physical competence and peer acceptance.

Table 6.2 Security ratings and teacher's ratings of child's Competence and Acceptance. Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=35	GIRLS n=19	BOYS n=16
1. Cognitive Competence	.23	.10	.33
2. Physical Competence	-.13	-.12	-.20
3. Peer Acceptance	-.09	-.14	-.05
Competence (1+2)	.05	.00	.05

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Discussion

Theoretically, a secure attachment relationship with the mother predicts a positive representation of self, based on Bowlby's (1969/82) proposition that the representational model of the attachment figure is meshed with the representational model of the self. Operationally, one might expect, then, that the higher the security rating with the mother, the higher the child's reported perceived competence and acceptance. Further, it has been proposed that higher security relates to higher social competence and therefore higher peer acceptance.

Although no sex differences were found for any of the Harter child subscales for the whole sample (see Chapter 7), a very different picture emerges for girls and boys when looking at relations between security ratings and perceived competence and acceptance. Lack of significant correlations for the whole sample reflects these differences. Perceived Cognitive Competence was the only correlation that came close to reaching significance ($p<.1$) for the whole sample.

Cassidy (1988), in relating security ratings to the Harter measures with six-year-old children (only looking at girls and boys combined), found that both perceived Cognitive Competence and Peer Acceptance correlated significantly with security ratings, as did all three summary scores; social Acceptance, Competence and Overall. The boys in this sample showed similar and expected trends. The girls, on the other hand, did not.

In general, teachers perceived girls to have higher physical competence and higher peer acceptance than boys, but security ratings were not related to teacher perceptions. The only measure of actual ability available for comparison was that for verbal ability assessed with the Peabody Picture Vocabulary Test (see 2.8) when the child was 4 1/2. There were no significant correlations between this test and security ratings for the whole sample, girls and boys (.10, .32, -.17, respectively). These results are consistent with the notion that attachment security might relate to perceptions of self, somewhat independent of actual abilities, leading to discrepancies between perceived and actual competence and acceptance.

6.2.2 Avoidance Rating and Competence/Acceptance

Child's Perceived Competence and Acceptance

For the whole sample, there was a general negative trend for relations between avoidance ratings and the child's perceived competence and acceptance, significant for perceived Cognitive Competence and tending toward significance for Physical Competence (see Table 6.3). Summary scores for Competence were significantly negatively related to avoidance ratings. Significant trends were particularly clear for girls. However, the general negative pattern was reflected in relations concerning boys also.

Table 6.3 Avoidance ratings and child's perceptions of Competence and Acceptance. Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
1.Cognitive Competence	-.32 *	-.47 *	-.25
2.Physical Competence	-.27 †	-.37 †	-.13
3.Peer Acceptance	-.06	.07	-.24
4.Maternal Acceptance	-.06	-.02	-.16
Competence (1+2)	-.32 *	-.46 *	-.25
Acceptance (3+4)	-.09	-.02	-.23
Overall (1+2+3+4)	-.21	-.20	-.30

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
( ): ≥ 70 points difference

Teacher's Perceptions of Child's Competence and Acceptance

There was a significant negative correlation between avoidance ratings and teachers' ratings of Cognitive Competence for boys. This was the only significant correlation for teachers' perceptions (Table 6.4).

Table 6.4 Avoidance ratings and teacher's ratings of child's Competence and Acceptance. Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=35	GIRLS n=19	BOYS n=16
1. Cognitive Competence	-.09	.18	-.51 *
2. Physical Competence	.23	.02	.35
3. Peer Acceptance	.17	.32	.02
Competence (1+2)	.07	.19	-.14

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Discussion

Significant correlations and trends concerning the child's perceptions, in general, presented a meaningful pattern, in accord with the proposition that avoidance with the mother reflects negative aspects of the attachment relationship which should theoretically lead to a negative representation of self. One might expect, however, that the stronger relations would be those concerning the child's perceived Acceptance (particularly Maternal Acceptance) as these representations directly relate to representations of self with others. Perhaps these issues were more emotionally arousing and for that reason, more 'difficult' for the child to report (e.g. 'good at spelling' compared to 'Mum talks to you' and 'gets asked to play by others').

Teachers saw boys who were rated as more avoidant to be less cognitively competent. This result parallels the negative trend seen when looking at boys' perceptions of Cognitive Competence. Teacher's ratings of girls' Cognitive Competence did not parallel the significant negative correlation perceptions of the girls, however. In order to interpret these parallels and discrepancies in light of one measure of actual verbal ability, Peabody scores were correlated with avoidance ratings. Correlations were nonsignificant for the whole sample, girls and boys (-.13, -.28, -.03). It seems that, when looking at girls and boys separately, the child's perceptions of cognitive competence were more in parallel with one aspect of actual measured ability (verbal), than was the teacher's perceptions. It is possible, however, that parallels here might be partly a function of the parallels in test circumstances. Both the Peabody Test and self-perception assessments involved directly relating to an adult 'stranger'. Performance and reports of perceptions

in these circumstances may have been influenced by the child's ability/ease in relating to adults, while teachers' assessments may be more independent of this factor.

6.2.3 Attachment Classification and Competence/Acceptance

Child's Perceived Competence/Acceptance

As shown in Table 6.5, of the four Harter subscales for the whole sample, medians for 'A' children were lower than for both 'B' and 'C' children in all cases, with the difference reaching significance for perceived Cognitive Competence. Perceived Maternal Acceptance was significantly greater for 'C' children than for 'A' children. Looking at the summed scores, perceived Competence was lower for 'A' children than for both 'B' and 'C' children ($p<.1$, $p<.05$, respectively), Acceptance was significantly lower for 'A' children than for 'C' children, and Overall scores were lower for 'A' children than for both 'B' and 'C' children ($p<.1$, $p<.05$, respectively.)

'A' girls tended to have lower perceived Cognitive Competence than did 'B' and 'C' girls. 'C' girls were significantly higher on perceived Maternal Acceptance than did 'A' girls, and tended to be higher than 'B' girls also. There were no significant differences for the summed scores for girls.

Perceived Physical Competence was significantly lower for 'A' boys than for 'B' boys. Perceived Maternal Acceptance tended to be lower for 'A' boys than for both 'B' and 'C' boys. Looking at summed scores, 'A' boys tended to have lower perceived Competence than 'B' boys ($p<.1$), and significantly lower perceived Acceptance than 'C' boys. 'A' boys had lower Overall scores than did both 'B' and 'C' boys ($p<.1$, $p<.05$, respectively).

Table 6.5 Child's Perceptions of Competence and Acceptance (Harter) - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE	A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
1. Cognitive Competence	2.3	< *	3.0		2.8	> *	†
2. Physical Competence	2.5		3.3		3.3		
3. Peer Acceptance	2.5		3.0		3.3		
4. Maternal Acceptance	2.3		2.7		3.3	> **	*
Competence (1+2)	5.0	< *	6.3		6.7	> †	
Acceptance (3+4)	4.7		5.8		6.5	> *	†
Overall (1+2+3+4)	9.3	< †	12.2		13.3	> *	
GIRLS	**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
1. Cognitive Competence	2.3	< †	3.0		3.1	> †	
2. Physical Competence	2.8		3.0		3.4		
3. Peer Acceptance	3.0		2.7		3.3		
4. Maternal Acceptance	2.7		2.7	< †	3.3	> *	
Competence (1+2)	5.1		6.1		6.8		
Acceptance (3+4)	5.7		5.3		6.8		
Overall (1+2+3+4)	10.8		11.5		13.6		
BOYS	**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
1. Cognitive Competence	2.3		3.0		2.7		
2. Physical Competence	2.3	< *	3.5		3.2		
3. Peer Acceptance	2.4		3.2		3.2		
4. Maternal Acceptance	2.1	< †	2.8		3.0	> †	
Competence (1+2)	4.6	< †	6.5		5.8		
Acceptance (3+4)	4.5		5.9		6.2	> *	
Overall (1+2+3+4)	9.1	< †	12.5		10.8	> *	

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = $p \leq .10$, * = $p \leq .05$, ** = $p \leq .01$, two-tailed.

Teacher's Perceptions of Child's Competence/Acceptance

As shown in Table 6.6, for the whole sample, teachers tended to attribute higher cognitive competence to 'B' children than to 'C' children. For girls, teachers' ratings of Cognitive Competence tended to be lower for 'C' girls than for both 'A' and 'B' girls. Teachers' ratings of Peer Acceptance were significantly higher for 'A' girls than for both 'B' and 'C' girls. There were no significant differences for boys.

Table 6.6 Teacher perceptions of child's Competence and Acceptance - overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE	A n = 5	A vs B	B n = 20	B vs C	C n = 10	C vs A	A vs B vs C
1. Cognitive	2.3		2.7	> †	2.0		
2. Physical	3.0		2.5		2.6		
3. Peer	3.7		3.0		3.0		
Competence (1+2)	4.8		5.0		4.2	< †	
GIRLS	**A n = 3**	**A vs B**	**B n = 11**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
1. Cognitive	3.0		2.8	> †	1.9	< †	
2. Physical	3.3		2.8		2.7		
3. Peer	3.7	> *	3.2		2.9	< *	*
Competence (1+2)	6.3		5.3	< †	4.3	< *	*
BOYS	**A n = 2**	**A vs B**	**B n = 9**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
1. Cognitive	1.9		2.4		2.1		
2. Physical	2.5		2.2		2.5		
3. Peer	2.2		2.7		3.3		
Competence (1+2)	4.4		4.3		4.1		

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

6.2.4 Discussion

The general trend that emerges is that of medians for the 'A' group lowest, the 'C' group highest, and the 'B' group in the middle (Table 6.5). All of the significant relations concern the relatively more negative perceptions of 'A' children. The tendency for lower perceived Maternal Acceptance for 'A' boys is particularly noteworthy in this regard. Harter and Pike (1984) report a significant correlation between perceived Maternal Acceptance and a depression/cheerfulness measure in a normal sample (.48, p <.001). This finding and results here for 'A' children are in line with theoretical implications of an insecure attachment relationship.

A narrow view of theoretical relations between attachment history and self perceptions might lead one to expect both 'A' and 'C' children to report more negative self perceptions. In fact, reported perceived Maternal Acceptance tended to be greater for 'C' girls than for 'B' girls. A possible explanation for this result is that 'C' children tended to report idealized perceptions (a defensive strategy in psychoanalytic terms). 'C' children are classified partially on the basis of their immature, dependent behaviour toward the mother. It stands to reason that the more dependent one is toward another, the more distressful it may be to consider their unavailability, and perhaps the more likely to idealize the relationship. Bowlby has suggested that an individual may employ defensive processes to accommodate the existence of two incompatible internal working models of a relationship. Cassidy (in press) discusses the concept of defensiveness in terms of "information processing biases that serve to deactivate the attachment system and to create idealized images of self and attachment figure."(p. 27) It must be stressed however, that the Maternal Acceptance subscale does not refer to attachment related contexts ('Mum reads to me', Mum cooks the foods I like, etc.) There has been no evidence, nor any theoretical justification to suggest that the mothers of 'C' children don't do these things. Therefore, one must consider that 'C' children might very well be accurate in their reports on this measure of maternal acceptance. Following the Harter assessment, a semi-structured interview was conducted to make some determination of the importance the children put on their answers. A sample question: Do you think your mum does a lot of things with you? Why do you think that is? Most of the children said their mothers did do things with them, usually qualifying their answers with variations of 'because she loves me'. Although the answers were not systematically analyzed, given that the questions were oriented around previous answers and so were not consistent for

all children, a few exceptional answers given concerning negative perceptions of the mother (particularly by 'A' children) are worth noting:

Why do you think your mother doesn't do a lot of things with you?

- "I don't know. She shouts at me. She says, "I've got a lot of work to do, I'm tired"." ('A2' girl)

- "Because she moans and groans. Daddy does that too." ('A1' boy)

- "I don't know. I forgot my brain." ('A' boy)

- "She's always being silly." ('A2' girl)

- "Because she always gets cross with me. She doesn't have time 'cause she's busy and I keep interrupting." ('B4a' girl) *This child's parents were separating at the time.*

- "Sometimes, only on Saturdays, she does things with me." ('C1' boy)

- "Because she's too busy working." ('C' boy)

The 'B' child's response, although negative, seems to reflect the child's understanding of the mother's motivation. The 'A' children's responses seem disjointed, hostile and/or avoidant of the issue.

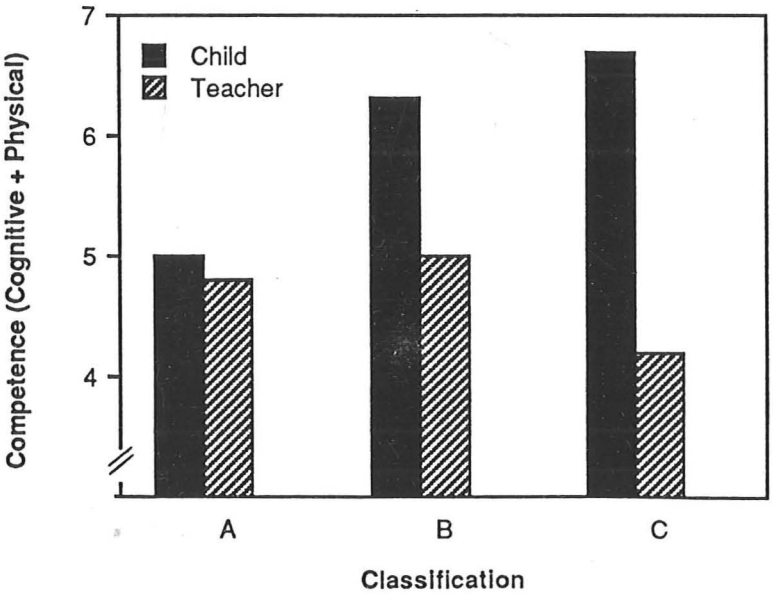
If negative aspects of the attachment relationship lead to negative self and self with mother perceptions, which then either lead to reports of negative perceptions or to defensiveness concerning the self and self with mother, one is lead to ask, why might 'C' children be defensive when 'A' children appear not to be? This issue brings to point the advantage of examining relations between children with different insecure behavioural patterns (characterized by avoidance or resistance with the mother). The behavioural

pattern observed reflects the way in which the child has organized the representation of the attachment relationship. These patterns of behaviour may well be related to 'reported' perceptions concerning the self and the attachment figure. Both may be seen as strategies for dealing with conflicts, arising from negative perceptions concerning the attachment figure and the self. Avoidance behaviour has been conceptualized as an emotional 'cut off' strategy (Main and Weston,1982), perhaps leading to less emotionally charged, and therefore more easily reported, negative acceptance perceptions. However, Cassidy (1988) found that, in the context of a 'self interview', 'A' children described themselves as perfect and avoided or denied the importance of attachment relationships, and 'C' children tended to make many negative and few positive statements about the self, while 'B' children were open and flexible, describing themselves in a positive way. Taking both sets of results into account, it seems that there is a potential for defensiveness in children seen with both insecure attachment patterns. Of course, discussing defensiveness as an interpretation for somewhat unpredictable results is highly speculative. Replication of findings is a first step toward a better understanding of the nature of these relations. Recent evidence (Shouldice, 1988) has suggested that 'C' children may have a tendency toward over-expression of emotion in the context of a Separation Anxiety Test. This tendency may play a part in the results found here (i.e., 'C' children might then be apt to give more extreme answers e.g., ''Mum talks to me *a whole lot*'', rather than ''Mum talks to me quite a lot'').

Discrepancies again are evident when looking at teachers ratings for girls and boys, but particularly in regard to the girls. Although 'A' girls tended to perceive themselves to be less cognitively competent compared with both 'B' and 'C' girls, the median teacher cognitive competence rating for 'A' girls was higher than medians for both 'B' and 'C' girls (although non-significant). Likewise, teacher perception of peer acceptance, although significantly higher for 'A' girls than for both 'B' and 'C' girls, was not reflected in the 'A' girls' perceptions. Harter & Pike (1984) report only weak agreement between child and teacher competence measures (.37, $p<.001$ for cognitive competence; .30, $p<.005$ for physical competence) for her normative sample. Agreement on peer acceptance was negligible (.06). Unfortunately, she presents no data on the nature of the discrepancies i.e., whether children tend to see themselves as more or less competent than do teachers. Bierer (1981) found that children who either underrated or overrated their

cognitive competence tended to avoid behavioural preference for challenge. Figure 6.1 shows medians for child and teacher summed competence (cognitive + physical). For 'A' children, child and teacher perceptions were not significantly discrepant (Wilcoxen, $p>.10$) but for both 'B' and 'C' children, self perceptions of competence were significantly higher than teacher ratings ($p=.01$, $p<.01$, respectively). Since the questions were geared to slightly more advanced children, it is not surprising that teachers tended to give relatively negative competence ratings for all the children. One may not expect to find correspondingly lower (negative) self perception reports from the children, given the general tendency for children to make positive self statements (Harter & Pike, 1984). The subjective nature of the empirical basis for some of the perceived competence questions (e.g., knows a lot at school) may also lead to expression of 'overrated' self perceptions. In fact, most of the children in this sample did so. One, then, is faced with a paradox. Were the 'A' children, who rated themselves relatively 'accurately' (by teachers' standards), actually reflecting a low self-image or were they merely making an objective assessment? Further, were 'B' and 'C' children, who highly overrated their abilities (by teachers' standards), both relating a 'healthy' inflation of their abilities?

Figure 6.1 Child and Teacher medians for summed Competence.



There were no significant differences overall or between groups on the Peabody Vocabulary Test, one measure of actual cognitive (verbal) ability. Needless to say, many more factors must be taken into account in order to analyze discrepancies between teacher and child perceptions and actual measures of abilities, beyond the scope of this study. However, one sees here that both self and teacher perceptions of competence and acceptance appear to be related to aspects of attachment security with the mother but the one measure of actual cognitive (verbal) ability was not.

There was additional space for comments at the end of the teacher questionnaire. Teachers added comments for some of the children. To get a flavor for teacher perceptions, I have listed all of these comments, with the child's classification.

• "She is rarely shy with people she knows. More cautious with strangers." *(in reference to a question concerning shyness)* ('A2' girl)

• *Child's* "concentration span is still very short. I think she has potential." ('A2' girl)

• *Child* "has settled in school in spite of problems at home." (parents separating) "She is lively and noisy. She enjoys responsibility and praise." ('B4a' girl)

• *Child* can be very kind and sympathetic with the other children. She can be noisy and disruptive in class. She has had difficulties with learning as well as hand control." ('B1' girl)

• *Child* "is sometimes quiet and shy and needed guidance on choosing activities when first started school. Once settled can get quite giggly." ('Bo' girl)

• *Child*"has settled into school easily. She enjoys and takes part in all activities readily." ('B1a' girl)

• "A delightful child. Keen to chat and take part in all activities. A quiet, sensible child who shows great promise." ('B3' boy)

• *Child* "was unable to control pencil, etc.. He is beginning to now write with some difficulty. His art/craft work shows the same lack of maturity. He is happy and content but still lacks concentration." ('B1b' boy)

• *Child* "learns more quickly than most children his age." ('Bo' boy)

• *Child* ''is often noisy and disruptive in class. He is a bright, pleasant child and is very confident in class.'' ('B4a' boy)

• *Child* ''is quite noisy and often disrupts the class with her mischievous behaviour.'' ('C2' girl)

• ''Works well. Wants her work to 'look nice'. Notices and comments on work by other children. Very strong willed.'' ('C1' girl)

• *Child* ''cries almost every morning on parting from his mother. This does not apply when his father or someone else brings him to school. This is the only time he cries.'' ('C1' boy)

• ''This child shows great enthusiasm and aptitude for learning but is too young to be spelling or adding by himself as part of his school work.'' ('C1' boy)

These comments are helpful in making two points. First, all children with problems are not insecure children, and all insecure children are not seen to have difficulties by their teachers. Second, some of the comments are strikingly predictable, given the child's pattern of behaviour with the mother on reunion. Teachers' perceptions, then, may make a valuable contribution to knowledge in this field.

6.3 Self-Efficacy

Self-efficacy is defined by Bandura (1977) as the belief that one can successfully perform behaviour required to produce desired outcomes. From a cognitive perspective, Bandura proposes that "from observing others, one forms a conception of how new behaviour patterns are performed, and on later occasions the symbolic construction serves as a guide for action"(p.192). This cognitive explanation parallels the attachment theory conception of internal working models, conceived as an adaptable, complex system of beliefs and expectations concerning others. These expectations and beliefs serve to guide behaviour in subsequent relationships. The Children's Self-Efficacy for Peer Interaction Scale (Ladd 1982), was designed to assess childrens' perceptions of their ability to enact prosocial verbal persuasive skills in specific conflict and nonconflict situations with peers. Applied to social situations, the concept of self-efficacy is distinct from the social acceptance (Harter) concept in that the emphasis is on social performance rather than on outcome (e.g., 'it is easy to tell a child it's my turn' compared to 'I have a lot of friends'.) Actual ability to influence others in socially acceptable ways may relate to peer acceptance (Ladd, 1981). Perceptions concerning one's ability may mediate the influence of past mastery experiences on subsequent performance. Bandura (1977) suggests that self-efficacy should be greatest for situations where there is little perceived difficulty or risk. From an attachment theory perspective, the insecure child, with a relatively rigid behavioural repertoire combined with negative beliefs and expectations concerning others, might very well perceive these situations to be more *difficult* and *risky*. In this section, relations between the attachment measures (security ratings, avoidance ratings, and attachment classification) and self-efficacy are examined.

6.3.1 Security Ratings and Self-Efficacy

There were no significant correlations for the whole sample (Table 6.7). For girls, Security ratings were significantly negatively related to self- efficacy in Conflict situations and tended to be for Total self-efficacy in social situations (p<.10). For boys the opposite was true: There was a significant positive correlation between security ratings and self-efficacy in Conflict situations, tended toward significance for self-efficacy in Nonconflict situations, and was significant for Total self-efficacy in social situations.

Table 6.7 Security ratings and Self-Efficacy: Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Conflict	.00	(-.46 *	.52 *)
Nonconflict	.13	-.16	.46 †
Total	.08	(-.36 †	.56 *)

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
( ): ≥ 70 points difference

6.3.2 Avoidance Ratings and Self-Efficacy

There were no significant correlations concerning Self Efficacy, (Table 6.8).

Table 6.8 Avoidance ratings and Self-Efficacy: Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Conflict	.00	.06	-.14
Nonconflict	-.19	-.13	-.30
Total	-.15	-.11	-.27

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

6.3.3 Attachment Classification and Self-Efficacy

There were no significant differences between the groups for the whole sample. 'B' girls had lower self-efficacy in Conflict situations than did 'A' and 'C' girls. 'C' girls had higher Total self-efficacy (both Conflict and Nonconflict situations) than did 'B' girls. 'B' boys had significantly higher Total self-efficacy, higher self-efficacy in Nonconflict situations and tended to have higher self-efficacy in Conflict situations than did 'C' boys.

Table 6.9 Self-Efficacy: Overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE	A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Conflict	32.0		27.0		29.0		
Nonconflict	26.0		31.0		26.0		
Total	58.0		59.0		58.0		
GIRLS	**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Conflict	32.0	> †	25.0	< **	32.0		*
Nonconflict	26.0		30.0		32.0		
Total	58.0		54.0	< †	62.5		
BOYS	**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Conflict	25.0		40.0	> †	28.0		
Nonconflict	26.0		33.0	> *	25.0		*
Total	51.0		70.5	> **	51.0		*

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

6.3.4 Discussion

Again, one sees a very different pattern of relations between attachment measures and reported perceived self-efficacy, depending on one's focus on girls or boys, explaining the lack of significant differences for the whole sample. For boys, the relations were in an expected direction with the more secure boys reporting higher self-efficacy. For girls, the opposite was the case, particularly for reported self-efficacy in conflict situations. A consideration of the nature of the instrument lends clarity to the results here. Given that the child was to rate each situation on a 4-point scale from 'Very Hard' to 'Very Easy', a score which fell in the 'Easy' to 'Very Easy' range might reflect a high sense of self-efficacy. However, for conflict situations, reports that the situations would be either 'Hard' or 'Easy', rather than 'Very Easy' might be considered more realistic self-efficacy perceptions. It doesn't ring true to report that 'Telling someone to stop shouting at you' is 'Very Easy'.

In fact, the top third of scores (ranging from 30 to 45) reflects a high percentage of 'Very Easy' responses concerning conflict situations. For girls, six of the seven scoring in this range were classified insecure (2 of the 3 'A''s, and 4 of the 6 'C''s). These considerations lead one to question whether these self-efficacy reports reflect accurately on self-efficacy beliefs.

Socialization pressures (Youniss, 1980; Huston, 1983) and past experience should also be considered when interpreting these results. If, for instance, girls were socialized to be submissive and compliant, not only might they have fewer experiences of being assertive and noncompliant, but it would more socially acceptable to report that dealing with conflict situations was 'Very Hard'. Similarly, if boys were socialized to be assertive and independent, not only would boys have more experience of 'getting one's own way' but would also be more comfortable saying that conflict situations were 'Very Easy'. This interpretation is consistent with Bandura's (1977) construct of self-efficacy, proposing that efficacy beliefs are influenced by mastery experiences, cognitive appraisal of performance, and situational factors. The effects of these socialization pressures and mastery experiences may be particularly salient when the child is beginning school, when perceptions concerning the 'Categorical Self' (Mead, 1934; Lewis, 1976), self as compared to and relating to others, are at issue. Perhaps with the experience of an insecure attachment relationship, the mastery experiences of 'getting others to do what

you want' is less than successful, leading to negative perceptions of efficacy. In addition, 'C' children often exhibit a poverty of exploration. Sroufe (1983) reasoned that, owing to a general lack of experience, these children might be expected to have low self-efficacy beliefs. This explanation is consistent with the results here concerning boys. Reports of self-efficacy may also be effected, however, with defensiveness or over-expressiveness (as discussed previously) overriding accurate assessment and social acceptability considerations. Perhaps this is the case for girls here.

6.4 Peer Popularity and Liking

Sociometric measures are often employed to assess 'popularity' (e.g., Asher, 1979), which generally entail peer nomination or ratings of liking. In this study, the focus was not on how many and how much others like the child. Rather, the extent to which the child perceives him/herself to be 'liked' and 'accepted' by others was deemed a more important consideration from the attachment perspective. An assessment of the child's 'liking' for peers was also made. It was reasoned that a child who has had an insecure attachment history, perhaps with experience of maternal rejection, would have negative expectations concerning others and his/her relation to them. This, it is suggested, would also have implications for the child's actual behaviour toward others, perhaps resulting in a recreation of those negative relationships previously experienced. Again, one must keep in mind the difficulties involved in assessing 'actual' perceptions, particularly if they are negative.

6.4.1 Security Ratings and Popularity/Liking

Popularity/Liking: There were no significant correlations between security ratings and perceived popularity and liking, Table 6.10.

Mutual Liking, Rejecting and Perceived Rejected: For girls, there was a significant negative correlation between security rating and having perceived mutual-liking relationships with girls. There were no significant correlations for reports of rejecting or perceived rejected relationships.

Table 6.10 Security ratings with perceived Popularity, Liking, Mutual and Discrepant peer relationships. Spearman correlations for the whole sample, girls and boys.

		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Popularity				
% Total (like me):	A Lot	-.05	-.20	.06
	A Little	.01	.22	-.12
	Don't	.18	.25	.17
% Girls (like me):	A Lot	-.06	-.33	.09
	A Little	.04	.19	-.09
	Don't	.10	.21	.17
% Boys (like me):	A Lot	-.11	-.08	.08
	A Little	.01	.10	-.03
	Don't	.12	.20	.11
Liking				
% Total (I like):	A Lot	-.05	-.03	-.01
	A Little	.01	-.11	-.17
	Don't	.19	.22	.09
% Girls (I like):	A Lot	-.14	-.28	-.20
	A Little	-.01	.02	.02
	Don't	.15	.29	.09
% Boys (I like):	A Lot	-.07	-.01	.01
	A Little	-.08	-.10	-.08
	Don't	.04	-.03	.09
Mutual				
% all peers in class:	A Lot	-.01	-.21	.08
	Don't	.18	.23	.11
% Girls in class:	A Lot	-.17	-.47 *	-.13
	Don't	.04	.16	.05
% Boys in class:	A Lot	-.01	-.07	.07
	Don't	.13	.18	.12
X Rejecting Peers	All	-.17	-.31	-.03
	Girls	-.02	.07	-.07
	Boys	-.17	-.28	-.07
X (perceived) Rejected by Peers	All	.01	.18	-.14
	By Girls	-.04	.05	-.12
	By Boys	-.04	.07	-.18

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

6.4.2 Avoidance Ratings and Popularity/Liking

Popularity/Liking: There were no significant correlations relating avoidance rating to perceived popularity and liking with peers, Table 6.11.

Mutual Liking, Rejecting and Perceived Rejected (peers): There were no significant correlations here.

6.4.3 Attachment Classification and Popularity/Liking

Popularity:

For the whole sample, Total perceived peers 'Like Me a Little' was significantly less for 'A' children than for both 'B' and 'C' children, with the same trends for girl and boy peers separately, top third of Table 6.12. Total peers 'Don't Like Me' was significantly less for 'C' children than for 'A' and 'B' children, with similar trends for perceptions concerning girl peers.

For girls, Total perceived peers 'Like Me a Little' was significantly less for 'A' girls than for 'B' girls. Total perceived peers 'Don't Like Me' was less for 'C' girls than for 'A' and 'B' girls ($p<.10$, $p<.05$, respectively).

There were no significant differences when looking at boys alone.

Liking:

For the whole sample (Table 6.13), 'A' children reported liking girl peers 'A Little' less than did 'B' and 'C' children ($p<.10$, $p<.05$, respectively). 'C' children reported that they 'Don't Like' peers significantly less than did 'A' children, primarily due to reports concerning girl peers ($p<.05$). 'B' children also tended to report that they 'Don't Like' girl peers more than did 'C' children. 'C' girls reported that they 'Don't Like' girl peers less than did both 'A' and 'B' girls ($p\leq.10$, $p\leq.05$, respectively). 'C' boys reported Liking peers 'A Little' significantly more than did 'A' boys.

Table 6.11 Avoidance ratings with perceived Popularity, Liking, Mutual and Discrepant peer relationships. Spearman correlations for the whole sample, girls and boys.

		WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Popularity				
% Total (like me):	A Lot	-.04	.00	-.06
	A Little	-.14	-.17	-.20
	Don't	.14	.07	.17
% Girls (like me):	A Lot	.02	.12	.01
	A Little	-.19	-.27	-.12
	Don't	.10	.09	.10
% Boys (like me):	A Lot	-.09	-.16	.00
	A Little	-.15	-.08	-.37
	Don't	.17	.13	.19
Liking				
% Total (I like):	A Lot	-.04	-.12	.21
	A Little	-.01	.11	-.30
	Don't	.05	-.03	.16
% Girls (I like):	A Lot	-.03	-.15	.17
	A Little	-.14	-.08	-.28
	Don't	.14	.09	.20
% Boys (I like):	A Lot	.01	-.15	.15
	A Little	-.01	.08	-.21
	Don't	.09	.09	.07
Mutual				
% all peers in class:	A Lot	.01	.03	.09
	Don't	.16	.12	.17
% Girls in class:	A Lot	.10	.11	.23
	Don't	.18	.20	.14
% Boys in class:	A Lot	-.07	-.14	.15
	Don't	.12	.04	.19
X Rejecting Peers	All	.00	.03	.01
	Girls	.13	.17	.14
	Boys	-.06	-.07	.07
X (perceived) Rejected by Peers	All	.04	-.07	.16
	By Girls	.07	.04	.20
	By Boys	.09	-.04	.21

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Table 6.12 Overall and between group medians for perceived Popularity for the whole sample, girls and boys. (calculated as a proportion of total peers, total girls and total boys, respectively).

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
% Girls (like me)	A Lot	.50		.47		.67		
	A Little	.00	< *	.21		.20	> *	†
	Don't	.40		.17	> †	.07	< **	*
% Boys (like me)	A Lot	.36		.43		.53		
	A Little	.07	< *	.20		.22	> *	†
	Don't	.64		.44		.25	< †	
% Total (like me)	A Lot	.50		.48		.42		
	A Little	.08	< **	.23		.30	> *	*
	Don't	.50		.33	> *	.17	< **	**

GIRLS		A n = 3	A vs B	B n = 13	B vs C	C n = 6	C vs A	A vs B vs C
% Girls (like me)	A Lot	.67		.67		.83		
	A Little	.00		.20		.18	> †	
	Don't	.33	> †	.13	> †	.00	< †	*
% Boys (like me)	A Lot	.36		.33		.48		
	A Little	.00	< †	.22		.18		
	Don't	.64		.50	> †	.26		
% Total (like me)	A Lot	.50		.48		.63		
	A Little	.00	< *	.22		.20		
	Don't	.50		.31	> *	.18	< †	

BOYS		A n = 2	A vs B	B n = 10	B vs C	C n = 5	C vs A	A vs B vs C
%Girls (like me)	A Lot	.37		.29		.38		
	A Little	.10		.28		.44		
	Don't	.54		.42		.19		
% Boys (like me)	A Lot	.48		.65		.53		
	A Little	.11		.19		.26		
	Don't	.41		.15		.13		
% Total (like me)	A Lot	.41		.48		.42		
	A Little	.09		.25		.33		
	Don't	.50		.34		.17		

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Table 6.13 Overall and between group medians for Liking peers for the whole sample, girls and boys. (calculated as a proportion of total peers, total girls and total boys, respectively).

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
% Girls (I like)	A Lot	.60		.56		.60		
	A Little	.00	< †	.18		.31	> *	*
	Don't	.40		.19	> †	.07	< *	†
% Boys (I like)	A Lot	.27		.39		.50		
	A Little	.27		.13		.13		
	Don't	.38		.25		.25		
% Total (I Like)	A Lot	.45		.50		.54		
	A Little	.15		.25		.25		
	Don't	.36		.29		.17	< *	
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
% Girls (I like)	A Lot	.67		.70		.75		
	A Little	.00		.17		.26		
	Don't	.33		.13	> *	.00	< †	*
% Boys (I like)	A Lot	.27		.33		.47		
	A Little	.27		.13		.14		
	Don't	.38		.33		.34		
% Total (I Like)	A Lot	.45		.52		.58		
	A Little	.15		.18		.23		
	Don't	.36		.28		.19		
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
% Girls (I like)	A Lot	.47		.28		.31		
	A Little	.09		.27		.31	> *	
	Don't	.45		.43		.30		
% Boys (I like)	A Lot	.34		.64		.54		
	A Little	.31		.25		.11		
	Don't	.36		.19		.13		
% Total (I Like)	A Lot	.37		.46		.52		
	A Little	.26		.28		.31		
	Don't	.40		.29		.17		

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Mutual Liking (Peers):

For the whole sample, 'A' children reported Total Mutual 'Don't Like' significantly more than did 'C' children, Table 6.14. This was highly significant for girls Mutual 'Don't Like'.

Similarly, 'A' girls reported girls Mutual 'Don't Like' significantly more than did 'C' girls.

'A' boys reported Total Mutual 'Don't Like' significantly more than did 'C' boys.

Rejecting and Perceived Rejected (peers):

For the whole sample (Table 6.15), 'B' children tended to be less Rejecting of boy peers than were both 'A' and 'C' children. 'B' children also tended to be less Rejecting of total peers than were 'A' children. 'A' children perceived themselves Rejected by total, girl and boy peers significantly more than did both 'B' and 'C' children.

'A' girls tended to perceive themselves as Rejected by total and boy peers more than did 'C' girls.

'A' boys perceived themselves to be Rejected by total and girl peers significantly more than did 'B' boys.

Table 6.14 Overall and between group medians for Mutual Liking for the whole sample, girls and boys (calculated as a proportion of total peers, total girls and total boys, respectively).

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
% Mutual Girls	A Lot	.40		.40		.53		
	Don't	.30		.10		.00	< **	†
% Mutual Boys	A Lot	.09		.33		.38		
	Don't	.27		.22		.19		
% Mutual Total Sample	A Lot	.32		.40		.38		
	Don't	.30		.17		.13	< *	
GIRLS		**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
% Mutual Girls	A Lot	.67		.57		.69		
	Don't	.30		.07		.00	< *	†
% Mutual Boys	A Lot	.09		.25		.39		
	Don't	.27		.33		.22		
% Mutual Total Sample	A Lot	.35		.43		.49		
	Don't	.30		.17		.14		
BOYS		**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
% Mutual Girls	A Lot	.29		.13		.13		
	Don't	.31		.29		.19	< †	
% Mutual Boys	A Lot	.27		.46		.38		
	Don't	.21		.11		.07		
% Mutual Total Sample	A Lot	.24		.33		.26		
	Don't	.27		.17		.13	< *	

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Table 6.15 Overall and between group medians for perceived Discrepant relationships for the whole sample, girls and boys (calculated as a proportion of total peers, total girls and total boys, respectively).

WHOLE SAMPLE		A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
X % Rejecting	Girls	.00		.00		.00		
	Boys	.18	> †	.00	< †	.05		
	All	.09	> †	.00		.04		
X % (Perceived) Rejected	By Girls	.13	> *	.00		.00	< *	†
	By Boys	.08	> *	.00		.00	< *	*
	By All	.10	> **	.00		.00	< *	**

GIRLS		A n = 3	A vs B	B n = 13	B vs C	C n = 6	C vs A	A vs B vs C
X % Rejecting	Girls	.00		.00		.00		
	Boys	.18		.00		.03		
	All	.09		.00		.02		
X % Rejected	By Girls	.00		.00		.00		
	By Boys	.13		.00		.00	< †	
	By All	.10		.00		.00	< †	

BOYS		A n = 2	A vs B	B n = 10	B vs C	C n = 5	C vs A	A vs B vs C
X % Rejecting	Girls	.04		.00		.06		
	Boys	.12		.00		.07		
	All	.08		.00		.05		
X % Rejected	By Girls	.19	> *	.00		.00		†
	By Boys	.08		.00		.00		
	By All	.11	> *	.02		.00		†

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

6.4.4 Discussion

On the whole, significant correlations between security and avoidance ratings and perceptions of popularity and liking were conspicuously absent. Although, for girls, security ratings were negatively related to Mutual Liking 'A Lot' with girl peers, this result may reflect the more secure girls tendency to report liking 'A Little' rather than liking 'A Lot'. Perhaps this is due merely to a tendency toward understatement for more secure girls, considered socially appropriate for the 'proper little girl', while for the more insecure girl, defensiveness may result in overstatement. There were no significant correlations between avoidance ratings and perceived popularity and liking.

Relations between attachment classification and perceptions were both stronger and presented a fairly predictable pattern. 'A' children tended to report either that peers 'Like Me A Lot' or 'Don't Like Me' rather than that peers 'Like Me A Little'. Medians for 'Girls Don't Like Me' were higher for 'A' girls than both 'B' and 'C' girls. The same trend was evident for 'A' boys in relation to boy peers. This pattern of perceptions concerning same-sex peers can also be seen for reports of liking peers. Both 'A' boys and 'A' girls reported 'Dislike' of same-sex peers more than did 'B' and 'C' children (although not significant). 'C' children tended to report that peers 'Like Me A Lot' and 'A Little', rather than that peers 'Don't Like Me'.

These distinct patterns of perceptions suggest that the way the child organizes, or deals with, perceptions concerning peer relationships may relate to the way he/she organizes, or deals with, the primary (insecure) attachment relationship. There appears to be an element of defensiveness in both strategies. For 'A' children, there seems to be no middle-ground. Either one is liked a lot or one is disliked (with a relatively high incidence of the latter), suggesting a defensive rigidity, or immaturity of perceptions concerning relationships. These negative perceptions concerning same-sex peers, given that boys tended to play with boys and girls tended to play with girls, are particularly illuminating. Medians indicate that 'A' girls felt that one-third of all girl peers didn't like them. 'A' boys felt that nearly half of their boy peers didn't like them. For 'C' children, everybody likes them, perhaps indicative of the tendency toward idealizing relationships and over-expressiveness of 'C' children (previously discussed).

Looking back at teacher perceptions of peer acceptance, it can be seen that 'C' girls were seen as less accepted by their peers than were 'A' girls. This evidence suggests that

'C' children may be, to some extent, denying negative relationships, consistent with the previous interpretation of evidence concerning competence and acceptance. The results concerning Liking of peers and Mutual Liking/Not Liking are similar to the perceived popularity results, again supporting the notion that perceptions concerning relationships are organized in different ways.

A predictable pattern emerges for rejecting of and perceived rejection from peers. 'A' children tended to 'reject' peers (said 'They Like Me' and 'I Don't Like Them') more than did 'B' children. 'A' children also perceived themselves to be 'rejected' by peers significantly more than both 'B' and 'C' children. These results in relation to 'A' children lend support to the notion that the child learns both roles in the primary attachment relationship, leading to a rejection of others as well as to perceptions of being rejected by others. It might be argued that 'A' children exhibit defensiveness concerning this area of inquiry. However, the design of this instrument was such that the child was not blatantly confronted with relationship discrepancies. (The first time through blue peer name cards the child was only asked about his/her liking for each peer. The second time through, pink cards were used and the child was only asked whether each peer liked him/her. In this way, the potential for comparison was minimized.) The relation between perceptions of popularity and actual peer preference is not known, as this interesting issue has not been addressed in the sociometric literature.

6.5 Interpersonal Problem-Solving

The ability to solve interpersonal problems is said to be a major component of social competence (Ainsworth & Bell, 1974; Krasnor & Rubin, 1981). Rutter (1987), in discussing the importance of this factor in terms of risk, vulnerability and protective mechanisms, states, "..it is clear that what is involved is not only a repertoire of responses but also an approach to social problems that recognizes a need to take action to deal with them, and which reflects a self-concept that includes a belief that this is possible."(Rutter 1987, p.7) This cognitive factor can be seen as a mechanism to help "account for both continuities and discontinuities in development and especially in the long-term effects of early life experiences (Rutter 1987, p.4).

The Preschool Interpersonal Problem-Solving Test (Shure & Spivack, 1974) was used in this study to assess the child's cognitive ability to solve interpersonal problems with peers.

6.5.1 Security Ratings and Interpersonal Problem-Solving

There was a significant positive correlation between security ratings and number of Nonforce solutions suggested, for girls (Table 6.16). This was the only significant correlation.

Table 6.16 Security ratings and median Interpersonal Problem-Solving solutions. Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Force Solutions	-.12	-.13	-.11
Nonforce Solutions	.01	(.44 *	-.32)
Total Relevant Solutions	-.07	.26	-.38
Extraneous Talk (irrelevant, repeated solutions)	.15	.13	.24
Force Ratio	-.13	-.31	-.01

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
( ): ≥ 70 points difference

6.5.2 Avoidance Ratings and Interpersonal Problem-Solving

As shown in Table 6.17, for the whole sample and for girls alone, there was a highly significant negative correlation between avoidance ratings and Extraneous solutions (irrelevant, repeated). For boys, avoidance ratings were significantly related to the number of Nonforce solutions generated. For girls, however, this relation was in the opposite direction.

Table 6.17 Avoidance ratings and median Interpersonal Problem-Solving solutions. Spearman correlations for the whole sample, girls and boys.

	WHOLE SAMPLE n=39	GIRLS n=22	BOYS n=17
Force Solutions	.00	.13	-.28
Nonforce Solutions	.01	(-.35	.48 *)
Total Relevant Solutions	.04	-.19	.37
Extraneous Talk (irrelevant, repeated solutions)	-.48 **	-.53 **	-.33
Force Ratio	-.03	.22	-.36

Spearman correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
( ): ≥ 70 points difference

6.5.3 Attachment Classification and Interpersonal Problem-Solving

For the whole sample, 'A' children reported significantly fewer Extraneous solutions than did 'B' children, and tended to report fewer than 'C' children (Table 6.18).

For girls, there was a tendency for 'A' girls to have a higher Force Solution Ratio than did 'B' girls. 'A' girls also tended to have lower scores for Extraneous solutions than did both 'B' and 'C' children.

'B' boys tended to have lower scores for Nonforce Solutions, Total Solutions and number of Categories than did both 'A' and 'C' boys.

6.5.4 Discussion

Two issues arise when considering the reflective social problem-solving assessment. First, do aspects of attachment relate in a predictable way to an ability to generate solutions to interpersonal problems? The evidence here suggests that, at least for this sample, there is no simple relation, as there were no significant correlations or differences between the groups for total problems solved.

Table 6.18 Interpersonal Problem-Solving: Overall and between group differences for the whole sample, girls and boys.

WHOLE SAMPLE	A n = 5	A vs B	B n = 23	B vs C	C n = 11	C vs A	A vs B vs C
Force Solution	2.0		1.0		2.0		
Nonforce Solution	4.0		3.0		4.0		
Total Solutions	6.0		4.0		6.0		
Force Ratio	.33		.29		.25		
Extraneous Talk	1.0	< *	4.0		4.0	> †	
GIRLS	**A n = 3**	**A vs B**	**B n = 13**	**B vs C**	**C n = 6**	**C vs A**	**A vs B vs C**
Force Solution	2.0		1.0		2.0		
Nonforce Solution	4.0		3.0		3.5		
Total Solutions	6.0		5.0		5.5		
Force Ratio	.33	> †	.25		.33		
Extraneous Talk	0.0	< †	3.0		3.5	> †	
BOYS	**A n = 2**	**A vs B**	**B n = 10**	**B vs C**	**C n = 5**	**C vs A**	**A vs B vs C**
Force Solution	2.0		1.5		1.0		
Nonforce Solution	7.0	> †	2.0	< †	6.0		†
Total Solutions	9.0	> †	3.0	< †	7.0		†
Force Ratio	.25		.33		.20		
Extraneous Talk	2.5		4.0		4.0		

A = Avoidant; B = Secure; C = Ambivalent

Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, two-tailed.

Second, do the type of solutions and the style of response in the interview relate to aspects of attachment history? Evidence here suggests that there are links. Security ratings for girls were significantly related to generating Nonforce Solutions. The more secure girls then generated styles of problem-solving which are considered more socially appropriate (e.g., take turns, share, 'say please', etc.).

It is difficult to relate these results to actual behaviour observed with peers, since many problem-solving solutions do not map directly onto behavioural codes. The code Prosocial consists of socially appropriate items (e.g., Sharing), but this is behaviour in

response to, or to benefit, a peer (not to acquire a desired item), and in fact was unrelated to security ratings for girls. Other Positive behaviours (Positive Expressive and Hugging) were positively correlated with security ratings, but not significantly. On the other hand, avoidance ratings were significantly positively related to ability to generate Nonforce Solutions, for boys. Looking at actual behaviour (Table 4.4), avoidance ratings for boys were significantly negatively related to Positive Expressive and unrelated to Prosocial. Perhaps more telling, avoidance ratings were significantly positively related to Speaks with Hostility and positively related to Strong Aggression (although not significantly). In effect, although the more avoidant boys were giving more socially appropriate solutions, they tended to exhibit more negative, inappropriate behaviour. Perhaps the old adage 'Easier said than done' applies here.

In regard to Extraneous Talk, the negative correlation with avoidance ratings seems to reflect more on the children's openness and lack of rigidity in the interview sessions than on actual ability to cognitively generate solutions. It was obvious that some children preferred to end the interview as soon as possible. These children tended to give direct relevant or 'I don't know' responses. Other children obviously enjoyed and 'took up' the 'game', often resulting in stories either going off on tangents or being repeated with elaboration. Below is a series of answers given by a girl rated high on avoidance (classified 'A') with the mother:

- Snatch it.
- Ask.
- I don't know.
- I don't know.
- I don't know.
- Pull her off.
- I don't know.

Contrast with a series of answers from a child (girl) rated very low in avoidance (classified 'B') with the mother:

- The other girl will say she can play with it. (irrelevant)
- She would say she would like to have it please. (relevant solution)
- She would wait until she finishes, and then ask to have a go with it and then they would take turns. (3 relevant solutions)
- She would wait until she goes home and then she would have it. (repeated)
- When the other girl is finished, she can have a go. (repeated)
- She'll get another one. (irrelevant)

Examining the relations between classification and solutions, Extraneous Talk is found least for 'A' children, and the Force Ratio tended to be greater for 'A' girls than for 'B' girls, as can also be seen in the above series of answers. 'A' girls actually showed very little force (aggression) with peers, keeping in mind that there were few resources for which to compete. The tendency for 'B' boys to generate fewer Nonforce and Total solutions is baffling. Looking back to the test situations, four out of five of the 'C' boys were particularly enthusiastic about the 'game' and friendly with me. This may account for their higher scores.

The relation between children's ability to generate solutions and competence in employing these skills when faced with social problems is not known. Spivack et al. (1976) reported a significant relation between performance on the PIPS Test and teachers' ratings of preschoolers' social adjustment (controlling for IQ and verbal fluency). In addition, social problem solving ability has been examined in relation to sociometric status. Asher et al. (1979) found that popular and unpopular kindergarteners generated different strategies, with unpopular children producing less effective and less 'relationship enhancing' strategies (e.g., more aggressive, more ambiguous, and more strategies relying on adult intervention). However, Sharp (1978) and Butler (1979) report no relations between sociometric measures and hypothetical-reflective test scores.

6.6 Associations among perception measures

The interview measures used in this study were each designed to assess different areas of the child's perceptions (concerning both different aspects of the self and perceptions concerning others in relation to him/her), and were not necessarily expected to tap an underlying general 'view' of the self. As shown in Table 6.19, the only significant interrelations among the different measures of perceptions were in relation to the Harter scales. Within the Scale of Perceived Competence and Social Acceptance, all correlations among the four subscales were significant (range .48 to .76).

Relations between Harter competence subscales and Self-Efficacy tended to be positive. Both the Conflict subscale and the total Self Efficacy scale correlated significantly with the Physical Competence subscale on the Harter, with a similar trend for Summed 'Competence'. Thus, children who had higher perceptions of competence tended to report greater self-efficacy beliefs. These results are consistent with evidence reported by Wheeler & Ladd (1982) of significant relations between their self-efficacy scale (particularly the nonconflict component, however) and the Piers-Harris (1969) self-concept components. There tended to be positive relations between Harter subscales and percent of peers Liking 'A Lot', and percent of peers the child Liked 'A Lot'. Conversely, percent of peers who 'Don't Like' the child, and percent of peers the child 'Doesn't Like' tended to be negatively correlated with the Harter scales. Certainly, the positive relation between Peer Acceptance and Peers Liking 'A Lot' is not surprising, given their close conceptual link. The negative perceptions concerning peers 'Don't Like Me' were the strongest interrelations found. Thus, children reporting higher perceived Competence and Acceptance tended to report that they were both liked by peers, and that they liked more peers, and reported a low incidence of not liking peers and peers not liking them. Whether these relations reflect a generalized reporting style (i.e., positive vs. negative) or actual relations between the different domains (e.g., perceived low competence and peers don't like them) cannot be determined.

Table 6.19 Associations among measures of perceptions.

Scales:	Self Efficacy Confl.	Self Efficacy Nonconf.	Self Efficacy Total	Popularity 'A Lot'	Popularity 'Don't'	Liking 'A Lot'	Liking 'Don't'	Problem-Solving Force	Problem-Solving Nonfor.	Problem-Solving Total
Harter subscales:										
Cognitive Competence	.13	.26	.21	.23	-.38 *	.16	-.23	-.19	-.17	-.24
Physical Competence	.26	.32 *	.35 *	.15	-.43 **	.14	-.32 *	-.05	-.17	-.17
Peer Acceptance	.18	.03	.08	.33 *	-.27 †	.27 †	-.26	-.02	-.18	-.14
Maternal Acceptance	.11	-.04	.04	.20	-.27 †	.18	-.25	.01	-.15	-.10
Summed 'Competence'	.22	.28 †	.28 †	.21	-.42 **	.16	-.28 †	-.14	-.20	-.24
Summed 'Acceptance'	.16	-.02	.06	.28 †	-.28	.24	-.26	.01	-.19	-.14
Summed 'Overall'	.21	.15	.19	.27 †	-.36 *	.20	-.27 †	-.08	-.22	-.22
Interpersonal Problem-Solving:										
Force	-.01	-.09	-.04	-.13	.10	-.12	.00	.	.	.
Nonforce	-.07	-.13	-.13	.00	-.07	.06	.00	.	.	.
Total	-.05	-.22	-.16	-.11	.04	-.03	.04	.	.	.
Popularity:										
% Peers 'Like Me A lot'	-.16	.19	-.02	.	.	.	.	.	.	.
% Peers 'Don't Like Me'	.11	-.12	.01	.	.	.	.	.	.	.
Liking:										
% Peers 'I Like A lot'	-.12	.21	.02	.	.	.	.	.	.	.
% Peers 'I Don't Like'	.25 †	.00	.16	.	.	.	.	.	.	.

Spearman correlations r(39): † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

7. SEX DIFFERENCES: PERCEPTIONS

Tables 7.1 to 7.3 show whole sample and within attachment classification medians for perception measures.

7.1 Child's Perceptions of Competence and Acceptance

7.1.1 Results

As shown in Table 7.1, there were no significant differences between girls and boys for the whole sample on competence and acceptance perceptions, but the median Maternal Acceptance score was higher for 'C' girls than for 'C' boys (and for all other groups). Summed Acceptance tended to be higher for 'C' girls than for 'C' boys (and again higher than all other groups).

7.1.2 Discussion

As was discussed previously, the tendency for 'C' children in general to report higher Maternal Acceptance than both 'A' and 'B' children may relate to the 'C' child's dependency on the mother leading to idealization of the relationship (see 6.1.3). Perhaps this is more the case for girls than for boys. The other consideration, concerning previous evidence for over-expressiveness in 'C' children may also relate more to 'C' girls than to 'C' boys. It must be emphasized again, however, that questions on the Maternal Acceptance subscale do not refer to attachment related contexts with the mother and therefore the child's reports may reflect an accurate assessment of the mother's involvement in the areas considered.

7.2 Teacher's Perceptions of the Child's Competence and Acceptance

7.2.1 Results

Concerning the whole sample, teachers rated girls significantly higher on Peer Acceptance than boys. This was also the case in the 'A' and 'B' groups but not for children in the 'C' group; the median for 'C' girls, although higher than for boys in the other two groups ('A' and 'B'), was lower than for 'C' boys (not significantly). Teachers tended to rate girls higher than boys on Physical Competence also, with no discrepancies within groups.

Table 7.1 Sex differences: Child and teacher perceptions: Median frequencies- overall and within attachment groups differences.

	WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP		
	GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Child's Perceptions of Competence/Acceptance												
1. Cognitive Competence	3.00		2.83	2.30		2.33	3.00		3.00	3.08		2.67
2. Physical Competence	3.09		3.33	2.83		2.25	3.00		3.50	3.42		3.17
3. Peer Acceptance	3.09		3.00	3.00		2.42	2.67		3.17	3.33		3.16
4. Maternal Acceptance	2.75		2.67	2.67		2.08	2.67		2.84	3.33	> *	3.00
Competence (1+2)	6.40		6.16	5.13		4.59	6.13		6.50	6.75		5.84
Social Acceptance (3+4)	6.09		5.83	5.67		4.50	5.34		5.92	6.75	> †	6.16
Overall (1+2+3+4)	12.00		11.33	10.80		9.08	11.51		12.50	13.58		10.84
Teacher's Perceptions of Child's Competence/ Acceptance	GIRLS n=19		BOYS n=16	GIRLS n=3		BOYS n=2	GIRLS n=11		BOYS n=9	GIRLS n=5		BOYS n=5
1. Cognitive Competence	2.6		2.3	3.0		1.9	2.8		2.4	1.9		2.1
2. Physical Competence	2.8	> †	2.4	3.3		2.5	2.8		2.3	2.7		2.5
3. Peer Acceptance	3.2	> *	2.7	3.7	> *	2.2	3.2	> *	2.7	2.9		3.3
Competence (1+2)	5.0		4.3	6.3	> †	4.4	5.3		4.3	4.3		4.1
Self-Efficacy	GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Conflict	26.5	< †	33.0	32.0		25.0	25.0	< **	40.0	32.0		28.0
Nonconflict	30.5		30.0	26.0		26.0	30.0		33.0	32.0	> *	25.0
Total	57.5		60.0	58.0		51.0	54.0	< **	70.5	62.0	> *	51.0
Interpersonal Problem-*Solving*	GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Force Solutions	2.0		2.0	2.0		2.0	1.0		1.5	2.0		1.0
Nonforce Solutions	3.5		3.0	4.0		7.0	3.0	> *	2.0	3.5		6.0
Total Relevant Solutions	5.0		5.0	6.0		9.0	5.0	> †	3.0	5.5		7.0
Force Ratio	.33		.20	.33		.25	.25		.33	.33		.20
Extraneous Talk	3.0		4.0	0.0		2.5	3.0		4.0	3.5		4.0

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

7.2.2 Discussion

Considering actual behaviour observed, where boys showed and received more Strong Aggression and showed less Positive Expressive and Prosocial behaviours toward peers than did girls, it is perhaps not surprising that teachers saw girls as more accepted by peers than boys. Why this was not also the case for 'C' boys is puzzling. Looking back at actual behaviour observed, 'C' boys had higher medians than 'A' and 'B' boys for exhibiting all Aggressive and Negative behaviours, and also received more Strong Aggression from peers than did 'A' and 'B' boys. These results may, in fact, reflect teacher bias toward 'C' boys. Sroufe (1981) reports that 7 children in his sample (6 'C's and 1 'A'), who's mothers were observed to behave seductively toward them, were observed to show infantile patterns of behaviour with their teachers. Two, in fact, were the 'outstanding pets of the female teachers', eliciting a great deal of attention and affection. Although concrete statistical evidence is lacking to support the possibility here, observation of these 'C' boys in interaction with their teachers leads me to suspect that at least two of the five 'C' boys in this sample showed similar patterns of behaviour toward their teachers and elicited similar patterns of behaviour from them. This may have lead teachers to overrate peer acceptance, due to their own attraction to these children. Speculation, of course, demands further research. There is evidence that teachers make different attributions to attractive and unattractive children. In a study by Styczynski and Langlois (1980), teachers rated attractive children in their classrooms higher on classroom adjustment, emotional adjustment and social behaviour than unattractive children. Hartup (1983) makes the point that 'cuteness' may elicit differential expectations in adults which, in turn, affects the adults behaviour toward the child and the child's self attitude and social actions.

7.3 Self-Efficacy

7.3.1 Results

Boys reported higher self-efficacy in Conflict situations than did girls. Although this was the case for the whole sample and within the 'B' group, 'A' and 'C' boys reported lower self-efficacy for Conflict situations than the girls in their respective groups (Table 7.1). This was due to both higher medians for the girls (in relation to 'B' girls) and to lower medians for the boys (in relation to 'B' boys). Additionally, while the Total median for 'B' boys was significantly higher than 'B' girls, Total median for 'C' boys

was significantly lower than 'C' girls.

7.3.2 Discussion

These results were discussed previously in section 6.3.3.

7.4 Interpersonal Problem-Solving

7.4.1 Results

There were no overall (whole sample) differences between girls and boys. Within the 'B' group, the median for number of Nonconflict situations generated was significantly higher for girls than for boys (Table 7.1). Total solutions generated tended to be higher for girls than for boys also in this group.

7.4.2 Discussion

The difference between girls and boys in the 'B' group can be examined in terms of the tendency for boys in this group to score low (compared to all other subgroups), rather than for girls to score high. The median for Extraneous Talk for 'B' boys is tied highest, so willingness to reply does not seem to offer an explanation. It would be contrary to attachment theory to suggest that boys with secure attachment relationships have less social problem-solving ability than girls, and particularly contrary to a notion that secure boys might have less ability in this area than insecure boys. As was described previously, some of the children picked up on this game with great enthusiasm and others didn't (some were clearly bored). This factor may have little to do with attachment experience.

7.5 Perceived Popularity/Liking and Mutual/Discrepant Relationships

7.5.1 Results

For the whole sample, girls liked girls 'A Lot' more than did boys, and thought girls liked them 'A Lot' more than boys did (Table 7.2). Girls also said they 'Didn't' like girls or liked them 'A Little' and girls 'Didn't' like them or liked them 'A Little' less than did boys. This trend was consistent, (but not always significant) within groups. These popularity and liking same-sex preferences were evident for boys also. There were no differences between girls and boys on total peer popularity or liking. Similarly, medians for 'Mutual Liking' and 'Not liking' showed same-sex preferences. For the whole

Table 7.2 Sex differences: Popularity and Liking - Median frequencies, overall and within attachment group differences.

	WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP		
	GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Popularity												
% Girls (like me)												
A Lot	.68	> **	.33	.67	> †	.37	.67	> **	.29	.83	> *	.38
A Little	.16	< *	.25	.00		.10	.20		.28	.18		.44
Don't	.12	< **	.33	.33		.54	.13	< **	.42	.00	< †	.19
% Boys (like me)												
A Lot	.35	< *	.63	.36		.48	.33	< *	.65	.48		.53
A Little	.14		.18	.00		.11	.22		.19	.18		.26
Don't	.45	> *	.15	.64		.41	.50	> *	.15	.26		.13
% Total (like me)												
A Lot	.50		.42	.50		.41	.48		.48	.63		.41
A Little	.15		.25	.00		.09	.22		.25	.20		.33
Don't	.28		.33	.50		.50	.31		.34	.18		.17
Liking												
% Girls (I like)												
A Lot	.69	> **	.31	.67		.47	.70	> **	.28	.75	> *	.31
A Little	.18	< *	.25	.00		.09	.17	< †	.27	.26		.31
Don't	.10	< **	.38	.33		.45	.13	< **	.43	.00	< *	.30
% Boys (I like)												
A Lot	.36	< *	.54	.27		.34	.33	< †	.64	.47		.54
A Little	.13		.23	.27		.31	.13		.25	.14		.11
Don't	.36	> *	.25	.38		.36	.33	> *	.19	.34		.13
% Total (I like)												
A Lot	.53		.46	.45		.37	.52		.46	.58		.52
A Little	.20		.31	.15		.26	.18		.28	.23		.31
Don't	.26		.30	.36		.40	.28		.29	.19		.17

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

Table 7.3 Sex differences: Perceived Mutual/Discrepant relationships - Median frequencies, overall and within attachment group differences.

	WHOLE SAMPLE			'A' GROUP			'B' GROUP			'C' GROUP		
	GIRLS n=22		BOYS n=17	GIRLS n=3		BOYS n=2	GIRLS n=13		BOYS n=10	GIRLS n=6		BOYS n=5
Mutual												
% Girls												
A Lot	.62	> **	.14	.67		.29	.57	> **	.13	.69	> *	.13
Don't	.03	< *	.20	.30		.31	.07	< †	.29	.00	< *	.19
% Boys												
A Lot	.29		.38	.09		.27	.25	< †	.46	.39		.38
Don't	.26	> *	.08	.27		.21	.33	> *	.11	.22		.07
% Total												
A Lot	.43	> *	.32	.35		.24	.43		.33	.49	> †	.26
Don't	.17		.17	.30		.27	.17		.17	.14		.13
Discrepant												
X % Rejecting												
Girls	.00		.00	.00		.04	.00		.00	.00	< *	.06
Boys	.00		.00	.18		.12	.00		.00	.03		.07
All	.02		.04	.09		.08	.00		.00	.02		.05
X % (perceived) Rejected												
By Girls	.00		.00	.00	< †	.19	.00		.00	.00		.00
By Boys	.00		.00	.13		.08	.00		.00	.00		.00
By All	.00		.00	.10		.11	.00		.02	.00		.00

A = Avoidant; B = Secure; C = Ambivalent
Kruskal-Wallis and Mann-Whitney U tests: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.

sample, the median for 'Total Mutual Likes' was significantly higher for girls than for boys. Differences were in the same direction within groups, with the difference in the 'C' group tending toward significance. C' boys were significantly more 'Rejecting' of girl peers than were 'C' girls -and more than all other groups- (saying 'I Don't like her' ..and later 'she likes me A Lot'). In contrast, 'A' boys tended to reported 'Rejected' relationships with girl peers more than did 'A' girls-and more than all other groups- (saying 'she Doesn't like me .. and later 'I like her A Lot').

7.5.2 Discussion

The whole sample sex difference results presented here are relatively straightforward and are consistent with previous research concerning peer relations (see Hartup 1983, for overview). Girls liked and thought they were liked by girls, and report they didn't like boys more. Boys liked and thought they were liked by boys, and reported they didn't like girls more. These reports parallel actual behaviour observed, where girls played more with girls and boys played more with boys. Girls' reports of more Mutual positive relationships seems to be related to boys' greater tendency to report liking and being liked 'A Little'. Liking 'A Little' was not included for the 'Mutual Liking' measure. Both results concerning discrepant measures relate to insecure boys and girl peers (it can be seen that the insecure girls' medians are similar to all other groups). 'C' boys were more 'Rejecting' than 'C' girls toward girl peers (and more than all other groups), and 'A' boys perceived themselves to be 'Rejected' more by girl peers than did 'A' girls (and more than all other groups). Perhaps an insecure *mother/son* attachment relationship has clearer links to relationships with *girl* peers. This, of course, leads to the question of whether a girl's attachment relationship with her *father* might have similar links to subsequent relationships with *boy* peers.

8. Overview and Discussion

8.1 Introduction

This study has investigated connections between attachment and behaviour with peers and perceptions of self, taking into account theoretical and methodological issues which have arisen in this and other studies with an attachment perspective. The complexity of these connections has been emphasized, both from a theoretical point of view, and in the research design and analyses of data. With consideration of factors potentially responsible for individual differences (attachment classification, avoidance and security ratings, sex) and through examination of outcome measures which might successfully reveal these differences (behavioural frequencies, relative frequencies, durations and domain specific as well as more general indices of perceptions), this complexity was, to some extent, respected. Nevertheless, accounting for a great deal of individual variation would necessitate consideration of many more factors, beyond the bounds of the study (e.g. the child/father relationship, family systems, school ecology). Despite these limitations, significant relations found in this study presented meaningful patterns. These relations are briefly summarized below.

8.2 Attachment and Behaviour with Peers

8.2.1 Results

There were no significant correlations or differences between the groups on the total number of interactions with peers, nor on time spent as leader, follower, or mutual within an activity (although 'A' boys tended to be in the role of follower significantly more than both 'B' and 'C' boys: $p<.10$, $p<.05$, respectively).

Relations between security ratings with mother and behaviour with peers revealed that high security was positively related to playing games alone on the playground and negatively related to general (relatively neutral) communication with peers (speaking and listening). The more secure boys asked to be included less and agreed with peers more. The more secure girls, on the other hand, agreed less with peers.

Peers made play noises and boasted more to the more secure children and asked questions of the secure children less. The more secure girls were the objects of more play noises and play aggression from peers, and were led more (paralleling a tendency,

although nonsignificant, to lead peers more). Peers responded with listening and disconfirmation less to the more secure boys.

Behaviour with peers was examined in relation to avoidance ratings with mother. High avoidance was positively related to listening as a response to peers but negatively related to time spent in neutral activity (doing nothing). High avoidance for girls was positively related to listening as a response to peers and negatively related to time spent alone, time spent neutral, and speaking boastfully to peers. High avoidance for boys was positively related to asking to be included, speaking to peers with hostility and automanipulating. The more avoidant boys engaged in large muscle play less and responded to peers with positive expressive behaviours less.

Peers showed less strong aggression to the more avoidant girls. The more avoidant boys were disconfirmed by peers more. Peers initiated contact and conversation less with the more avoidant boys.

Examination of relations between classification of attachment to mother and subsequent behaviour with peers also revealed significant differences for girls and boys separately and with girls and boys together. Since a meaningful pattern of relations emerged when considering behavioural similarities of girls and boys within attachment group, only significant group differences with girls and boys together will be summarized. To get a clear picture of patterns of behaviour indicative of children with particular classifications, significant results will be discussed in turn for each attachment group. Again, although the attachment classification reflects aspects of the relationship between the mother and child, for purposes of brevity, the children in each group will be referred to as 'A', 'B' and 'C' children.

Insecure/Avoidant Classification

Children classified as insecure avoidant ('A') engaged in general communication more with peers than did children classified as both secure ('B') and insecure/ambivalent ('C'), $p<.01$ and $p<.10$, respectively. Peers also engaged in general communication more with 'A' children than with 'B' children. 'A' children exhibited less playful behaviours with peers than did 'B' children. 'A' children spent more time engaged in organized games with rules than did 'B' children and spent more time in large muscle play and group play than did 'C' children. More specifically, 'A' children initiated and/or

responded to peers with (relatively neutral) speaking more than did both 'B' and 'C' children.

Peers asked more questions of, and made fewer play noises to 'A' children than to 'B' children. 'A' children were boasted to less than were both 'B' and 'C' children.

Secure Classification

Children classified as secure ('B') showed more playful behaviours and less general (neutral) communication toward peers than did children classified as insecure/avoidant ('A'), and showed fewer negative behaviours toward peers than did children classified as insecure/ambivalent ('C'). 'B' children played organized games less than did both 'A' and 'C' children. In interaction with peers, 'B' children made general speaking statements less than did 'A' children, imitated peers more than did 'C' children, and were less attention seeking and noncompliant than were 'C' children.

Peers showed more positive behaviours toward 'B' children than toward 'C' children and fewer general communication behaviours toward 'B' children than toward 'A' children. On a more molecular level, peers asked fewer questions and boasted more to 'B' children than to 'A' children and made more play noises to 'B' children than to both 'A' and 'C' children.

Insecure/Ambivalent Classification

Insecure/ambivalent children showed more negative behaviour than did 'A' and 'B' children ($p<.05$, $p<.10$, respectively), and tended to show less general communicative behaviours than did 'A' children. 'C' children engaged in less large muscle play than did both 'A' and 'B' children, more organized games with rules than did 'B' children, and less group play than did 'C' children. In terms of specific interactions, 'C' children made fewer general communications than did 'A' children and imitated peers less than both 'A' and 'B' children. In addition, 'C' children sought the attention of peers more than did both 'A' and 'B' children ($p<.10$, $p<.05$, respectively), and noncomplied more than did 'B' children.

Peers showed fewer positive behaviours toward 'C' children than toward 'B' children. On a more molecular level, peers asked questions of 'C' children more and

made play noises to 'C' children less than to 'B' children. Peers boasted to 'C' children more than to 'A' children.

8.2.2 Discussion

Previous attachment research on behaviour with peers has focussed on the attachment classification rather than on the security and avoidance ratings. Relating the ratings to behaviour appears to provide an interesting alternative for comparison and to some extent resulted in the emergence of an intuitively predictable pattern. In purely quantitative terms, employing the classification measure revealed more significant relations.

Given the above results, one issue that arises is how best to orient one's predictions, methodology and interpretations of results when assessing peer relations in reference to the early attachment relationship(s). It is common to regard particular behaviours in interaction with peers as either more or less indicative of social 'competence'. Positive and prosocial behaviours reinforce peer initiatives and therefore leads to further interaction. Negative behaviour, particularly aggression, is not socially acceptable and does not promote positive social interchange.

Studies linking peer social acceptance to behaviour have consistently found that popular children, compared to less popular children are friendly and socially adept at initiating and maintaining social interaction (Hartup, 1970;1983), show 'friendly approach', and 'associative behaviours' (Marshall & McCandless, 1957) and initiate positive social contacts (Hartup et al., 1967). Children who are less popular (rejected by peers) are not less sociable or less friendly, but show more antisocial, disruptive and inappropriate behaviours in interaction with peers (Hartup, 1970; Hartup, 1983). In addition, peer acceptance is related to lack of withdrawal as perceived by peers (Winder & Rau, 1962), 'knowing how to make friends' (Gottman et al., 1975), and willingness to give and receive friendly overtures and willingness to respond to dependent behaviour of others in a positive way (Campbell & Yarrow, 1961).

Much of peer interaction, however, is not easily assigned placement on a positive-negative or competence-incompetence continuum. This is not to say that these behaviours have no social relevance. To relate content and quality of interactions to the extent to which one is involved in, or distant from the interaction (both in terms of what the child experiences and what he/she does not experience) in peer interactions might

prove to be a viable focus. A unique opportunity to establish egalitarian and reciprocal relationships, as well as to experience conflict and negotiation occurs with the onset of peer play (Piaget 1926; 1932). Peer interaction should be examined in terms of its role in the socialization process, and not 'merely' in terms of reflecting repertoires acquired in other settings (Hartup, 1983). The degree or level of involvement in interaction may be seen as relevant to the promotion and development of social competence or incompetence, in terms of its role in providing mastery experiences in social conflict situations.

Frequencies of general (neutral) communication, playful and controlling behaviour (as defined in this study) appear to be indicative of the degree to which the children are involved in the interaction. For example, if a child's input in all interactions with peers characteristically involves nodding or just listening as a response, that child's experience of making contributions to the interaction is limited. Evidence that the insecure/avoidant ('A') children appeared to maintain a relatively neutral or distant orientation in interaction with others leads one to suggest that the child with an insecure/avoidant attachment relationship history may be 'at risk' for missing out on both 'positive' and 'negative' social peer experiences, particularly those experiences involving social conflict, that enable him/her to deal competently with and engage successfully in subsequent relationships.

The 'C' group on the other hand, showed the highest incidence of negative behaviour toward peers and received the least amount of positive behaviours from peers. In terms of level of involvement, the picture may be indicative of negative over-involvement or in terms of the Blocks' (1980) concepts, ego under-control. These results parallel Arend, Gove and Sroufe's (1979) evidence gained from the teachers of 5 and 6-year-old children: insecure-avoidant children were seen to be over- controlled, secure children were seen to be moderately controlled, and insecure-ambivalent children were seen to be under-controlled.

Rolf (1972) reports a greater incidence of maladjustment among antisocial 'externalizing' children than among withdrawn 'internalizing' children. Certainly antisocial 'externalizing' problems are more clearly visible and have more negative effect on others. Hartup (1983) suggests that lack of a secure attachment relationship may lead to lower self-esteem to alienation and less social effectiveness with peers which may

"increase the motivation to seek self-enhancement outside the core culture" (p.166) resulting in conduct disorders and delinquency. Precursors to behaviour disorders characterized by withdrawal (e.g., schizophrenia) have not systematically been identified. It is important to emphasize, however, that differences in behaviour recorded in the present study may reflect normal variation in styles of behaviour, and are not necessarily indicative of, and/or precursers to, social maladjustment and psychopathology.

A focus on level of involvement may orient research toward studying the ongoing dialectic between past experience and pathways leading to social competence and acceptance in subsequent relationships. A more refined conception of 'level of involvement' in terms of both content and quality of interaction is clearly needed. A more precise measure of the 'level of involvement' in interaction might take into account degree of: emotional expression (openness), behavioural complexity and flexibility, intimacy, sensitivity to cues, and mutuality.

Relations between attachment and behaviour with peers are complex. This is evident when one considers, for instance, that friendship may act as a mediating or third variable. If insecure children have trouble developing and maintaining peer relationships resulting in few or no close friends, then behavioural differences found may be a function of the level of friendship between the interactants. Studies have shown that positive exchange and mutuality characterizes interactions of 'friends' to a greater extent than the interactions of 'nonfriends' (Hartup, 1983). Masters and Furmann (1981) found that children gave and received more positive reinforcements and neutral behaviours in interaction with friends than with disliked or unselected children.

Similarly, a systematic relation between attachment and peer preference may either magnify or diminish behavioural differences. For example, if 'A' children prefer to play with 'A' children, then perhaps a low level of involvement in interaction may be quite pronounced. Alternatively, if 'A' children prefer to play with 'B' children (and vice versa) then the combination of behavioural styles may result in a (relatively) higher level of involvement on the part of the 'A' child and a (relatively) lower level of involvement on the part of the 'B' child.

Further, if peer interaction promotes positive social development then positive social experiences in interaction may benefit those who are not as socially proficient. For example, let's assume that insecure children lack social competence and confidence. If

the small minority of insecure children in a normal middle-class sample mainly interact in the school setting with secure children (the great majority), then positive peer experiences may lead to modification of expectations and beliefs about others and modelling of 'socially competent' behaviour. Sroufe and Fleeson (1988) however, suggest that individuals gravitate toward relationships that are familiar, which may not necessarily promote the welfare and social development of the participants. For example, they found that, when pairing 'A' children with 'C' children or 'A' children with 'A' children, victimization resulted. The victims repeatedly reinitiated contact that resulted in rejection or exploitation.

These considerations indicate a need to study the dyads more thoroughly, taking into account the contributions each participant brings to the interaction and their combinations. Methodological considerations greatly limit applicability, as discussed previously.

8.3 Perceptions

8.3.1 Results

From early experiences with primary caretakers, the child derives a set of expectations about their own relationship capacities and about other's responses to their social overtures and interactions. These cognitions or representations are postulated as mediating influences on subsequent behaviour (Main et al., 1985; Bretherton, 1985; Rutter, 1987). Evidence of coherent individual differences in perceptions is fundamental for linking early attachment experience to later behaviour. Coherence is demonstrated here only through inferring the child's organization in relation to attachment from behaviour in the Strange Situation and not through the actual behaviour seen. If avoidant or resistant behavioural patterns did not relate to expectations and beliefs about others and the self (based on experience) but were merely indices of 'temperamental' style, one would not predict that these styles would relate to individual differences in perceptions concerning others and the self. Significant differences were found between the groups on perceptions concerning perceived competence and acceptance, self-efficacy, perceived popularity and liking and interpersonal problem-solving. Since relations were sometimes strikingly different as a function of gender, results concerning girls and boys separately and together will be summarized below.

Perceived Competence and Acceptance

High security ratings were related generally to higher perceived Competence and Acceptance (and particularly Maternal Acceptance) but this relation only applied to the boys in this sample. Neither teacher ratings of competence and peer acceptance nor a measure of actual verbal ability were significantly related to security ratings, however.

High avoidance ratings were related to low perceived Competence (particularly to low perceived Cognitive Competence) for the whole sample. The girls separately showed stronger relations than did the boys. Teachers' ratings of Cognitive Competence paralleled this relation for boys but not for girls. Relations between the measure of actual verbal ability and avoidance ratings were consistent with results concerning perceived Cognitive competence for girls but not for boys.

'A' children generally gave lower perceived competence and acceptance reports than did 'B' and 'C' children. There were no differences between 'B' and 'C' children, except on perceived maternal acceptance for girls, where medians 'for C' girls tended to be higher. Teachers tended to rate 'B' children higher on Cognitive Competence than 'C' children, and tended to rate 'A' children higher on 'Competence' than 'C' children. All differences found with girls and boys separate were in relation to the girls. Teachers rated 'A' girls significantly higher than both 'B' and 'C' girls on Peer Acceptance. There were no differences between the groups on the measure of actual verbal ability.

Self-Efficacy

There were no whole sample significant correlations or differences between attachment groups on the measure of self-efficacy. Concerning security ratings and attachment groups, these null results can be attributed to discrepancy between relations for girls and boys.

High security was positively related to self-efficacy reports for boys and negatively related to girls reports. This was particularly the case for Conflict situations. Avoidance ratings were unrelated to self-efficacy reports.

In terms of attachment group differences, 'B' boys reported significantly higher self-efficacy than did 'C' boys (and higher than 'A' boys also - although not significantly). 'B' girls, however, tended to report lower self-efficacy in Conflict situations than did 'A'

and 'C' girls ($p<.10$, $p<.01$).

Popularity and Liking

High security ratings were negatively related to percent of mutual liking girl peers 'A Lot' for girls only. There were no significant correlations between avoidance ratings and popularity or liking.

Relations between attachment classification and perceptions were both stronger and presented a fairly predictable pattern. 'A' children tended to report either that peers 'Like Me A Lot' or 'Don't Like Me' rather than that peers 'Like Me A Little'. Medians for 'Girls Don't Like Me' were higher for 'A' girls than both 'B' and 'C' girls. The same trend was evident for 'A' boys in relation to boy peers. Reports indicate that 'A' girls felt that one-third of all girl peers didn't like them. 'A' boys felt that nearly half of their boy peers didn't like them. This pattern of perceptions concerning same-sex peers can also be seen for reports of liking peers. Both 'A' boys and 'A' girls reported 'Dislike' of same-sex peers more than did 'B' and 'C' children (although not significant). 'C' children tended to report that peers 'Like Me A Lot' and 'A Little', rather than that peers 'Don't Like Me'. This was particularly evident for girls and boys in relation to girl peers. 'A' children tended to 'reject' peers (said 'They Like Me' and 'I Don't Like Them') more than did 'B' children. 'A' children also perceived themselves to be 'rejected' by peers significantly more than both 'B' and 'C' children.

Interpersonal Problem-Solving

High security ratings for girls, and high avoidance ratings for boys, were related to ability and/or willingness to generate Nonforce solutions to social problem situations. Generation of Extraneous solutions was negatively related to avoidance ratings for the whole sample, primarily due to the girls. In terms of attachment group differences, 'A' children reported significantly fewer Extraneous solutions than did 'B' children.

8.3.2 Discussion

When the results do not present a predictable pattern or they present a predictable pattern for girls and not boys (or vice versa), the task then is to discover why this might be the case, including examination of those factors which may affect children in different

contexts and factors which may affect girls and boys differently. This important and necessary endeavor has been attempted here only to a limited extent. A mandatory first step is to strengthen one's trust in those relations deemed important, and rule out spurious relations due to error and chance. Therefore, replication studies are clearly needed.

In general, relations between attachment measures and perceptions were not similar for girls and boys, and reinforces the decision to consider sex as a potentially strong independent variable. Results concerning ratings and self and other perceptions, at face value, appear not to represent coherence for girls. In the case of mutual liking, secure girls appear not to have more mutual liking relationships with girl peers than insecure girls. However, when examining results for attachment groups, it becomes apparent that this phenomena may be due to the more secure girls reporting liking and being liked 'A Little' more than do the more avoidant girls and due to the perhaps overly-rosy picture presented by the 'C' girls.

Reese (1961) found a curvilinear relation between self-concept and peer acceptance. Children who reported moderately high self-concepts were more accepted by peers than were children who reported either low or very high self-concepts. The connection may be that very high self-concepts are associated with behaviour that 'put off' other children. 'C' boys in this sample had a higher median for Speaking Boastfully than both 'A' and 'B' boys. (although not significantly) suggesting that some of the 'C' boys may have had this 'lofty' attitude. Speaking purely subjectively, this certainly appeared to be the case.

The insecure/avoidant children perceived themselves to be relatively unpopular. It is not known whether this is actually the case. However, one process by which unpopularity or neglect by peers might come about is through ineptness at reinforcing other's initiatives. Karen (1965) showed that reinforcing others in a group increased the sociometric evaluation of the giver. The experience of positive reinforcement to initiatives may be lacking for children who's attachment history includes rejection.

8.4 Discussion

An interesting parallel emerges when comparing results concerning behaviour with those concerning perceptions. Patterns of differences between groups can be described in terms of a continuum of interaction patterns characterized by: 'A' children maintaining

more distant or lower level involvement to; 'B' children showing higher level involvement but low aggression to; 'C' children showing higher level involvement with higher level aggression (quite similar to the Blocks' (1980) ego concepts ranging from over to under control). Differences between groups on perceptions concerning the competence and acceptance and peer popularity and liking also in general can be described on a continuum from 'A' negative perceptions of self and other to 'B' positive perceptions to 'C' over- positive perceptions. These parallel patterns of behaviour and perceptions appear to represent a common underlying organization which can be seen as coherent in terms of attachment history.

Thus, previous experience in attachment relationships may account for individual differences in behaviour and in expectations and beliefs concerning the self and others. Theoretically, behavioural styles and strategies, applied to attachment relationships, are generalized and elaborated through an organization of expectations and beliefs about the self and others to styles and strategies in interaction with others. The processes and mechanisms involved remain obscure. Elaborating and refining the concept of attachment involves addressing relevant issues, as well as acknowledging the complexities of studying relationships.

8.5 Limitations

Limitations of this study, common to many research endeavors, have been addressed as they arose. In general, they concern the following:

First, this study does not furnish information concerning specific processes or pathways of influence. In effect, it provides a description of associations between attachment relationships and behaviour and perceptions. The attachment assessment was made previous to the behaviour and perception assessments and, in that sense, attachment may 'predict' subsequent behaviour and perception differences. However, since attachment relationships are relatively stable in a normal middle-class sample, differences can be attributed to concurrent relations between attachment and behaviour and perceptions.

Second, a small sample size limits the power of the statistics and the generalizability of the phenomenon. When examining relations which are influenced by many variables, controlling for, or taking into account, these variables limits statistical power and

generalizability even further. Thus, interaction effects are either not addressed, or are masked by these limitations.

Third, attention has been given more to significant differences than to results where no relation emerged. Further, relations that were statistically significant were not large, in terms of the amount of variance accounted for. Finally, given a fairly large set of variables, the number of significant relations revealed (although meaningful) did not greatly exceeded the number expected by chance. Ultimately, the robustness of these findings can only be determined through replication.

8.6 Future Directions

Given a focus on attachment, the results (and the constraints) of this study highlight potentially fruitful lines of inquiry. Assessment of the child's inner representation of attachment may aid in clarifying links between home and school behaviour. Cassidy (1988) has made some initial headway along these lines, employing a number of different assessments, designed to more easily detect defensive attitudes of the self in relation to attachment. Consideration of both the father/child attachment relationship and the attachment relationships of peers participating in interaction would also aid in identifying these connections. Further, it may be productive to be more selective in choosing school measures of behaviour, by gearing behavioural measures to results found here and found in other recent studies (i.e., Sroufe, 1988; Grossmann & Grossmann, in press), perhaps additionally employing the Blocks' (1980) Q-sort measures. These considerations stress the importance of an overall analysis relating attachment to behaviour at school, and in so doing, again highlights the complexities of studying relationships. Larger sample sizes (and greater resources, time, and family cooperation) are essential for this endeavor. Far from warranting pessimism, it is the intriguing complexity of behaviour that drives enthusiastic scientists toward greater opportunities for discovery.

APPENDICES

A: PERCEIVED COMPETENCE AND SOCIAL ACCEPTANCE CHILD INTERVIEW

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children*

Individual Recording and Scoring Sheet, Form 1-2

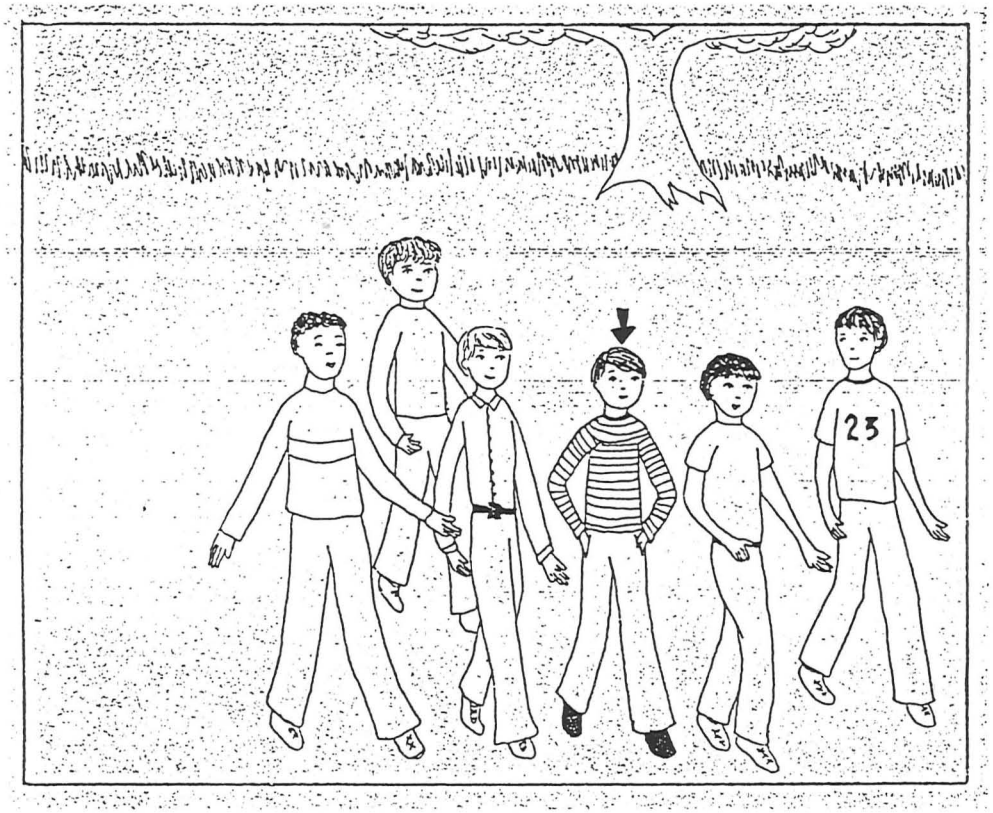
Child's Name _____ Age _____ Gender: M F

Class/Grade _____ Teacher _____ Testing Date _____

Item Order and Description	Cognitive Competence	Peer Acceptance	Physical Competence	Maternal Acceptance
1. Good at numbers	1 ___			
2. Friends to play with		2 ___		
3. Good at swinging			3 ___	
4. Eats at friends				4 ___
5. Knows alot in school	5 ___			
6. Others share		6 ___		
7. Good at climbing			7 ___	
8. Mom takes you places				8 ___
9. Can read alone	9 ___			
10. Friends to play games with		10 ___		
11. Good at bouncing ball			11 ___	
12. Mom cooks favorite foods				12 ___
13. Good at writing words	13 ___			
14. Has friends on playground		14 ___		
15. Good at skipping			15 ___	
16. Mom reads to you				16 ___
17. Good at spelling	17 ___			
18. Gets asked to play by others		18 ___		
19. Good at running			19 ___	
20. Stays overnight at friends				20 ___
21. Good at adding	21 ___			
22. Others sit next to you		22 ___		
23. Good at jumping rope			23 ___	
24. Mom talks to you				24 ___
Column (Subscale) Total:	☐	☐	☐	☐
Column (Subscale) Mean: (Total Divided by 6)	_____	_____	_____	_____

Comments:

*Susan Harter and Robin Pike, University of Denver, 1983

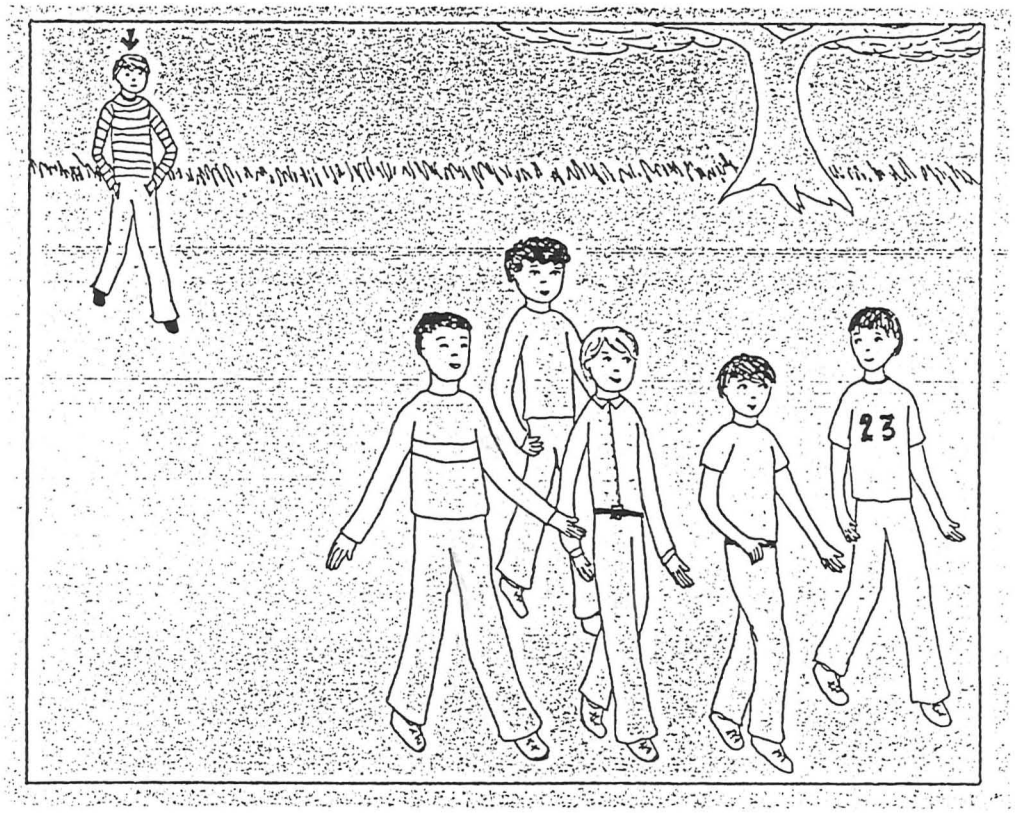


This boy usually gets asked to play with the other kids.
Do you:

Always get asked to play — 4

OR

Usually — 3



This boy gets lonely sometimes because the other kids don't ask him to play.

Do you:

Sometimes — 2

OR

Hardly ever get asked to play — 1

Teacher's Rating Scale of Child's Actual Competence and Social Acceptance*

Form 1-2

Child's Name _____ Class/Grade _____ Rater: _____

Instructions: Place the appropriate number indicating how true the statement is for this child in the designated space to the right of each item:

Not Very True = 1,	Sort of True = 2,	Pretty True = 3,	Really True = 4

Item Order and Description	Cognitive Competence	Peer Acceptance	Physical Competence
1. Good at numbers	1 ___		
2. Friends to play with		2 ___	
3. Good at swinging			3 ___
4. Knows alot in school	4 ___		
5. Others share with this child		5 ___	
6. Good at climbing			6 ___
7. Can read alone	7 ___		
8. Has friends to play games with		8 ___	
9. Good at bouncing a ball			9 ___
10. Good at writing words	10 ___		
11. Has friends on playground		11 ___	
12. Good at skipping			12 ___
13. Good at spelling	13 ___		
14. Gets asked to play by others		14 ___	
15. Good at running			15 ___
16. Good at adding	16 ___		
17. Others want to sit next to this child		17 ___	
18. Good at jumping rope			18 ___
Column (Subscale) Total:	☐	☐	☐
Column (Subscale) Mean: (Total Divided by 6)	_____	_____	_____

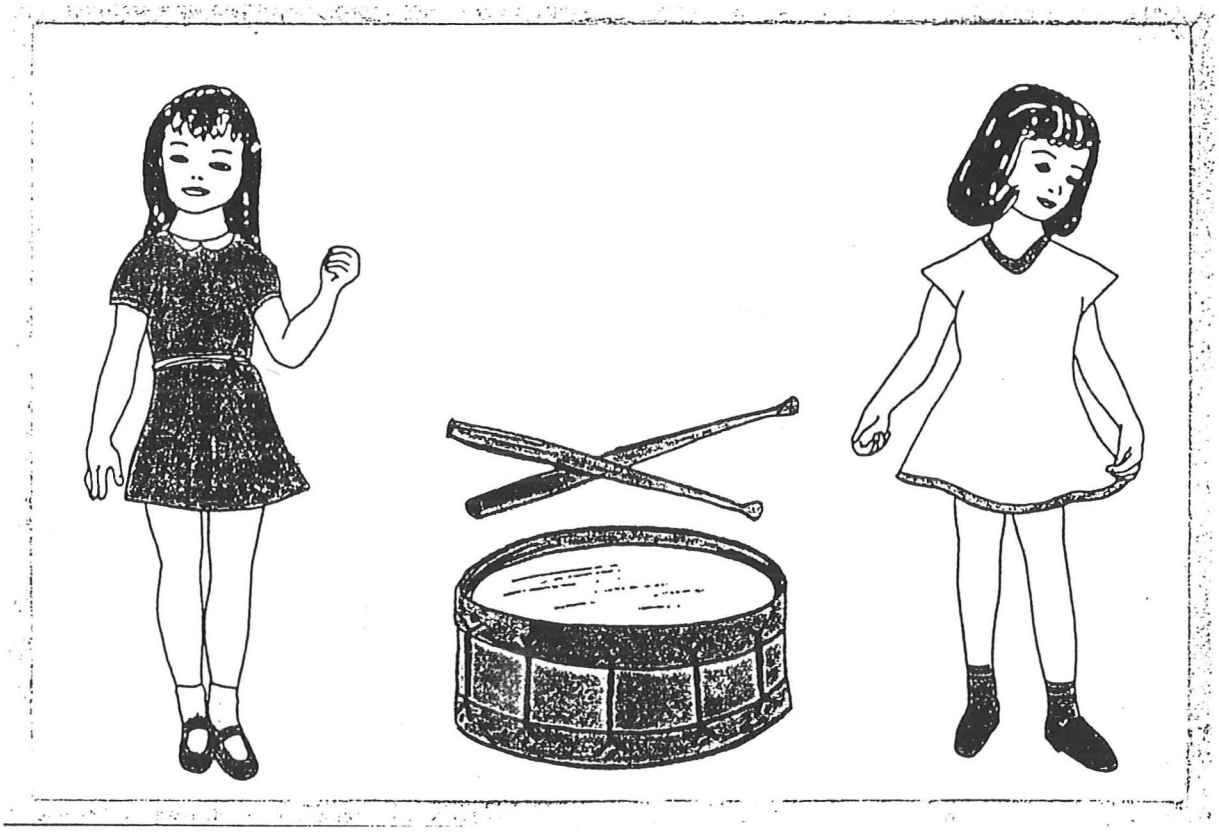
Comments:

*Parallels the Pictorial Scale of Perceived Competence and Acceptance for Young Children, Susan Harter and Robin Pike, University of Denver, 1981.

Here is Anne and here is Sara.

Anne is playing with this drum, and she has been playing with it for a long time. Now Sara wants to play with the drum, but Anne keeps on playing with it.

What can Sara do so that she can have a chance to play with the drum?



Claire's responses:

Claire: *She can get another drum to play with.* (related goal)
probe: She doesn't want another drum, she wants to play with this drum.
Claire: *She could bang the drum.* (irrelevant)
probe: That's how she can play with it. What can she do to get a chance to play with it?
Claire: *She could snatch it away from her.* (relevant force)

Lisa's responses:

Lisa: *She doesn't want to play with the drum.* (irrelevant)
probe: Let's pretend that she does want to play with the drum.
Lisa: *She could play with something else.* (substitute goal)
probe: She wants to play with this drum.
Lisa: *They could share the drum and be friends.* (relevant non-force)

PIPS Preliminary Score Sheet

PEER PROBLEM: I

	Relevant Non-Force Solution Categories												Relevant Force Solution Categories				No-Solutions						
Name	Ask	Say 'Please'	Loan	Fair-Share-Turns	Trade-Bribe	Authority Intervention	Trick	Finagle	Manipulate Affect	Get Mad	Wait	Plan For Future	Force-Grab	Physical Attack (Person)	Damage to Property	Command	Related Goal	Subsitute Goal	Irrelevant	Enumerations	Repetitions (Relevant) a	Non-Relevant Repeat b	
CLAIRE													/				/		/				
LISA				/														/	/				

Whole Sample (N=39) - Intercorrelations of significant molecular behaviour variables.

					X AS SUBJECT				X AS OBJECT	
	L.Musc. Play (d)	Organ. Games (f)	Organ. Games (d)	Group Play (d)	Spk. (rf)	Imit. (f)	Noncom. (rf)	Seeks Atten. (rf)	Inq. (rf)	Play Noise (rf)
Organ. Games (f)	.12									
Organ. Games (d)	.13	1.0**								
Group Play (d)	.18	.14	.16							
CHILD AS SUBJECT										
Spk (rf)	-.10	.15	.17	.22						
Imit. (f)	.19	-.09	-.09	.19	.12					
Noncom. (rf)	.11	.26	.25	-.29†	-.05	.05				
Seeks Atten. (rf)	.01	.11	.11	-.47**	-.22	-.03	.02			
CHILD AS OBJECT										
Inqui. (rf)	.33*	.27†	.27†	-.26	.43**	.15	-.02	.31*		
Play Noise (rf)	.17	-.31†	-.32*	-.01	-.34*	-.17	-.01	-.33*	-.61**	
Spks Boast. (f)	-.21	.12	.10	-.12	-.24	.13	-.08	.14	.09	-.10

Spearman Correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions
Duration (d) = minutes per 75 minutes

Girls (N=22) - Intercorrelations of significant molecular behaviour variables.

			X AS SUBJECT						X AS OBJECT	
	Organ. Games (f)	Organ. Games (d)	Autom. (f)	Spk. (rf)	Hugs (rf)	Play Noise (rf)	Spks With Host. (rf)	Seeks Atten. (rf)	Inq. (rf)	Play Noise (f)
Organ. Games (d)	1.0**									
Autom. (f)	.25	.25								
CHILD AS SUBJECT										
Spk. (rf)	.13	.15	.01							
Hugs (rf)	-.14	-.15	-.54**	-.06						
Play Noise (rf)	.02	.00	-.03	-.30	.18					
Spk With Host. (rf)	-.09	-.09	.48*	-.29	-.38†	.31				
Seeks Atten. (rf)	-.02	-.05	.15	-.31	-.29	.35	.57**			
CHILD AS OBJECT										
Inqui. (rf)	.29	.31	.37†	.57**	-.22	-.40†	.07	.22		
Play Noise (f)	-.13	-.15	-.15	-.41†	.17	.56**	-.09	-.11	-.67**	
Strong Cont. (rf)	-.23	-.24	-.25	-.10	.54**	-.01	-.40†	-.09	-.11	.06

Spearman Correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions
Duration (d) = minutes per 75 minutes

Boys (N=17) - Intercorrelations of significant molecular behaviour variables.

		X AS SUBJECT								
	Follow (d)	Agree (rf)	Posit. Exp. (rf)	Prosoc. (f)	Imit. (f)	Discon. (f)	Noncom. (rf)	Strong Cont. (rf)	Seeks Entry (f)	Seeks Atten. (rf)
CHILD AS SUBJECT										
Agrees (rf)	-.22									
Posit. Exp. (rf)	-.11	-.14								
Prosoc. (f)	-.06	.39	-.03							
Imit. (f)	.50*	.14	-.21	.09						
Discon. (f)	-.68**	-.02	.04	-.38	-.63**					
Noncom. (rf)	-.11	-.33	.16	-.07	.06	.03				
Strong. Cont. (rf)	-.41†	.06	-.09	.23	-.59**	.18	.00			
Seeks Entry (f)	.24	-.28	-.45†	-.31	-.13	.19	-.17	-.03		
Seeks Atten. (rf)	-.10	-.20	-.10	-.55*	-.31	.59**	-.14	-.10	.38	
CHILD AS OBJECT										
Discon. (f)	.07	-.34	-.48*	-.16	-.14	.18	-.33	.01	.53*	.43†

Spearman Correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Frequency (f); Relative Frequency (rf) = frequency relative to total interactions
Duration (d) = minutes per 75 minutes

Intercorrelations of molar behaviour variables.

	Pos. (S)	Pos. (O)	Play. (S)	Play. (O)	Neg. (S)	Neg. (O)	Cont. (S)	Cont. (O)	Gen.C. (S)
Whole Sample									
Pos.(O)	.05								
Play.(S)	.11	-.10							
Play.(O)	.20	-.14	.55**						
Neg.(S)	-.16	-.49**	.01	.30†					
Neg.(O)	-.08	-.13	.51**	.31†	.22				
Cont.(S)	.04	.07	-.10	.06	.14	-.14			
Cont.(O)	.04	.09	-.07	-.05	-.12	-.21	.21		
Gen.C.(S)	-.31†	-.10	-.42**	-.60**	-.42**	-.35*	-.38*	-.06	
Gen.C.(O)	-.22	-.09	-.33*	-.65**	-.27†	-.36*	-.26	-.29	.77**
Girls									
Pos.(O)	.08								
Play.(S)	.32	-.19							
Play.(O)	.61**	-.14	.51**						
Neg.(S)	-.17	-.51**	.03	.26					
Neg.(O)	.04	-.09	.50*	.18	.16				
Cont.(S)	.18	.19	.12	.27	.24	.10			
Cont.(O)	.06	.19	.08	.06	-.10	-.33	.37†		
Gen.C.(S)	-.42*	-.03	-.65**	-.68**	-.40†	-.39†	-.64**	-.24	
Gen.C.(O)	-.42*	-.18	-.38†	-.67**	-.28	-.24	-.66**	-.41†	.83**
Boys									
Pos.(O)	.08								
Play.(S)	.41†	.25							
Play.(O)	.18	-.09	.03						
Neg.(S)	-.05	-.45†	-.40	.16					
Neg.(O)	.04	.03	.11	.27	.16				
Cont.(S)	-.28	-.16	-.13	-.05	.05	-.48*			
Cont.(O)	-.16	-.35	-.02	-.46†	-.13	.17	-.10		
Gen.C.(S)	-.19	-.17	-.23	-.48*	-.39	-.45†	.16	.36	
Gen.C.(O)	-.12	.17	-.05	-.51*	-.25	-.64**	.28	.04	.69**

Spearman Correlations: † = p≤.10, * = p≤.05, ** = p≤.01, two-tailed.
Relative Frequency (rf) = frequency relative to total interactions

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