The Relationship between Attachment to Parents, Peer Relations and Mentalising in Early Adolescents

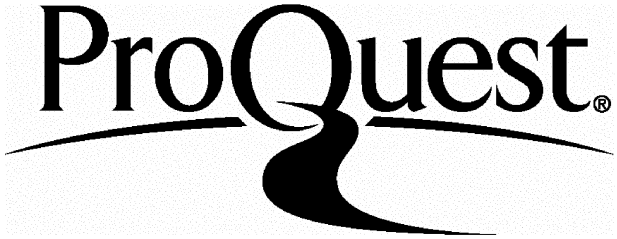
Harriet Humfress

Submitted in partial fulfilment of the requirements of the degree of

Doctorate in Clinical Psychology

University College London

June, 2000



ACKNOWLEDGEMENTS

I would like to thank Dr Tom O' Connor and Mary Target for their support, advice and encouragement throughout this study.

I would also like to acknowledge the contribution of my colleague, Jeremy Slaughter, with whom I collected the data, and who provided both practical and moral support throughout all of the phases of the project.

Thanks also to Yael Shmueli-Goetz, who trained us in the use of the MCAI, coded interviews to establish inter-rater reliability, and remained in good humour at all times.

I am also grateful to the staff and pupils at the school, who gave up their time and made this a rewarding and educational experience.

Finally, I would like to acknowledge the support of my family and friends. I would like to thank Mark Langdon and Owen Lydiard, in particular, who have made it possible for me to complete this project. I would especially like to thank my son, Ben, for his patience.

ABSTRACT

The relationship between attachment, peer relations and mentalising was explored in a study of 70 early adolescents. Two different measures of attachment were used, the Middle Childhood Attachment Interview and the Inventory of Parent and Peer Attachment. Peer relationships were also investigated from a number of different perspectives using a self-report measure of friendship quality, peer ratings of popularity and teacher ratings of social skills with peers.

This study found that security of attachment was related to some aspects of peer relations in adolescents but not others. As predicted, security of attachment was related to friendship quality. It is proposed that the adolescent's internal representation of the parent-child attachment relationship generalises to other close relationships. Security of attachment was not related to peer-rated popularity or teacher ratings of peer problems, but it was associated with teacher-rated prosocial behaviour. The quality of the parent-child attachment may therefore also influence some aspects of general social skills in this age group. Alternative explanations are discussed.

Mentalising ability was not found to be related to peer relationships. There was an association between attachment, mentalising and verbal ability but mentalising did not make an independent contribution to the association. The measurement of mentalising ability in older children is discussed with suggestions for future research.

TABLE OF CONTENTS

List of Tables

List of Graphs

INTRODUCTION

Overview

It has been proposed that parent-child attachment provides a foundation upon which further social relationships are built. In childhood, establishing peer relationships is a key psychosocial task. This study investigates the effect that parent-child attachment has on these non-attachment relationships with peers. There is now good evidence supporting a link between security of attachment and peer relationships in younger children, but there has been relatively little research with older children and adolescents. It has been suggested that children, and adolescents in particular, may turn to peers to compensate for poor attachment relationships with parents. The current study investigates attachment in a group of early adolescents and proposes, in contrast, that there will be continuity between the parent-child attachment relationship and relationships with peers. Different aspects of peer relationships are explored.

The second area of interest is the role of mentalising in this age group. It is proposed that the capacity to mentalise may act as a mediator between attachment and peer relations, and this is also explored in the current study.

Attachment

Attachment theory, originated by Bowlby (1969/1982, 1973, 1980) "is a way of conceptualising the propensity of human beings to make strong affective bonds to particular others" (Bowlby, 1979, p.127). The basic premise of this theory is that the quality of attachment relationships stems from interactions between infants and their caregivers, especially the degree to which they can rely on attachment figures as sources of security and support (Lieberman, Doyle, & Markiewicz, 1999). The quality of infants' attachments to their caregivers tends both to remain stable, and to serve as a powerful organiser of personality and subsequent interpersonal behaviour.

Although Bowlby (1973) viewed attachment as spanning the entire life cycle, "from cradle to grave", most of the early research has focused on attachment in infancy and early childhood. Beyond this age range, research has been hampered by a lack of knowledge about how attachments manifest themselves at different developmental stages, and the absence of valid assessment procedures (Ainsworth, 1990). This has meant that investigations into parent-child attachment in middle childhood and adolescence has lagged behind (Armsden & Greenberg, 1987; Kerns, Klepac, & Cole, 1996; Rudolph, Hammen, & Burge, 1995).

One of the most important conceptual advances has been extending the view of attachment from a behavioural system in infancy to a representational system in later years. This 'move to the level of representation' (c.f. Main, Kaplan, & Cassidy, 1985) has not just had theoretical implications. Methodologically, it has led

researchers to examine attachment representations in chilldren beyond infancy and into adulthood (Thompson, 1993).

Central to this view is Bowlby's (1980, 1988) concept of an "internal working model" of self and relationships. He proposed that from early experiences of sensitive or insensitive care, the child develops a representation of the parent, a closely intertwined representation of the self, and representations of relationships (Bowlby, 1969; Sroufe & Fleeson, 1986). Parents who are responsive to their infants' cues are able to provide the baby with a secure base from which to explore the environment. Thus, secure children are thought to develop a working model of themselves as loveable or worthy and of others as responsive to their needs. On the other hand, inconsistent or insensitive caregivers are likely to foster insecure attachment in their children (Ainsworth, Blehar, Waters, & Wall, 1978). Thus, insecure children are likely to develop a working model of themselves as unworthy or incompetent and of others as rejecting or unresponsive to their needs (Lieberman, Doyle & Markiewicz, 1999).

Attachment in older children

Adolescence is a period when many changes occur for an individual. What happens to the attachment system during this stage of development?

On the face of it, adolescent attachment behaviour appears to depart sharply from patterns of attachment behaviour seen at earlier ages. A key task of adolescence is to develop autonomy so as to no longer need to rely (as much) on parents' support

when making one's way through the world (Allen & Land, 1999). Indeed, early models of family functioning emphasised detachment as the developmental course of parent-child relationships in adolescence (Blos, 1967). However, Bowlby (1973), in a chapter entitled "The growth of self-reliance", claimed that the parent-child attachment was of continued importance during the period from preadolescence to early adulthood, stating that "an unthinking confidence in the unfailing accessibility and support of attachment figures is the bedrock on which stable and self-reliant personalities are built" (p. 322).

It is only recently that a majority of researchers have come to share Bowlby's view that close relations with parents foster the growth of adolescent self-reliance and individuation (Bretherton & Munholland, 1999). Newer models based on Bowlby's lifespan view, emphasise the importance of attachment or connectedness to parental figures during the adolescent years, despite decreases in shared activities and interactions with parents (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996; Steinberg, 1990). Research is increasingly showing that adolescent autonomy is most easily established not at the expense of attachment relationships with parents, but against a backdrop of secure relationships that are likely to endure well beyond adolescence (Allen, Hauser, Bell, & O'Connor, 1994; Allen, Hauser, Eickholt, Bell, & O'Connor, 1994; Fraley & Davis, 1997).

One important change in attachment in adolescence is the decreased *reliance* on parents as attachment figures. A critical distinction here is that this change appears primarily to reflect the adolescent's becoming less *dependent* on parents in a number of ways, rather than the relationship's becoming unimportant as a whole

(Buhrmester, 1992; Buhrmester & Furman, 1987; Larson, Richards, Moneta, Holmbeck & Duckett, 1996; Lieberman et al., 1999; Wilks, 1986). The development of the ability to function with greater social, cognitive, and emotional autonomy vis-à-vis parents is now recognised as a critical developmental task of adolescence (Collins, 1990; Hill & Holmbeck, 1996). However, such autonomy does not ideally develop in isolation, but in the context of a close, enduring *relationship* with parents (Allen et al., 1994; Collins, 1990).

Assessment of attachment

Mary Ainsworth developed a standardised observational technique known as the Strange Situation (Ainsworth et al., 1978; Ainsworth & Wittig, 1969) which has subsequently become the standard procedure for assessing attachment in infancy, and has proved both valid and reliable. It consists of a sequence of eight episodes in which the caregiver and a stranger come and go from the room, each episode lasting about three minutes. Categorical judgements of the quality of the infant-caregiver attachment are derived from careful ratings of children's behaviour upon reunion with their caregiver following each of two brief separations.

The reunion episodes in the Strange Situation provide a basis for inferring the nature of children's internalised views of their relationships to their caregivers. Specifically, the child's reunion behaviour reveals whether or not there is an expectation of being able to turn to the attachment figure for help in coping with the strange or distressing aspects of the situation (Steele & Steele, 1994). Four distinct

infant-caregiver attachment patterns, based on reunion behaviours in the Strange Situation, have been identified: secure, avoidant, ambivalent and disorganised.

The *securely attached* child demonstrates a confident expectation that the parent will be available, and uses attachment figures as a 'secure base'. This pattern is seen in 50-60 per cent of non-clinical samples.

Infants classified as *insecure-avoidant* indicate a view of the parent as unavailable/unhelpful. The child typically appears self-contained during the separation, tending not to cry and actively ignores or avoids the parent on reunion. Avoidant infants are expected to form relationships in which their attachment behaviours are decreased and muted. This pattern is typically observed in 25 per cent of non-clinical samples.

Infants classified as displaying an *insecure-ambivalent* response indicate an expectation that considerable anger and protest will be necessary before the attachment figure makes him or herself available and that even then it is not clear how helpful the caregiver will be. They typically show a marked preoccupation with the parent throughout the procedure, showing either active anger or passivity towards the parent on reunion. Ambivalent infants are hypothesised to form subsequent relationships in which their attachment behaviours are increased and heightened. This pattern is seen in less than 10 per cent of most samples.

The infant displaying a *disorganised* pattern suggests a view of the parent as frightening, making the infant uncertain of which behaviour will be appropriate in

the presence of the parent. Thus the disorganised child sometimes shows avoidance, other times resistance, and may exhibit a range of anomalous behaviours in the presence of the parent, such as trance-like freezing, rocking with face averted or lying prostrate. This pattern tends to be seen in only a small minority of normative samples.

More recently, the focus on internal working models as a window into attachment processes, has led to the development of a range of different procedures, including the Adult Attachment Interview (AAI, George, Kaplan, & Main, 1985). This has become a well-established measure for investigating adult attachment. The AAI measures the adult's "current state of mind with respect to attachment". It is a semi-structured interview designed to assess the subject's current view of early as well as present relationships and how these have changed and developed over time. Although the AAI draws heavily on recollection of early attachment experiences, it is the way in which the experiences are discussed in the interview that most informs both an individual's classification and his or her scores on continuous scales measuring "probable experiences" with early attachment figures and "current state of mind" (e.g. coherent, idealising, angry).

In the absence of other available measures, the AAI has been used with adolescents, and, for late adolescence, it seems to be a useful measure (Hamilton, 1995; Waters, Merrick, Albersheim, & Treboux, 1995). However, the applicability of the AAI to young adolescents has not been well established. Recently, a new measure of attachment has been developed, the Middle Childhood Attachment Interview (MCAI) (Target, Fonagy, Shmueli-Goetz, Datta, & Schneider, 1998). It takes the

form of a semi-structured interview, based on similar principles to the AAI but differs in a number of respects. It aims to elicit mental representations of attachment figures by directly asking children about their experiences with, and perceptions of, their primary caregivers. Central to the MCAI is the degree to which the child conceives of their caregivers as emotionally available, responsive and thereby able to use them as a secure base. It is similar to a clinical interview but flexible enough to help children with the demands placed on them, and it specifically includes questions concerning children's relationship with both mother and father (Shmueli-Goetz, 1998). The coding system yields the same categories of attachment as the Strange Situation – secure, avoidant, ambivalent and disorganised. It is this assessment tool which is used in the current study to investigate a group of early adolescents.

A second measure of attachment, designed specifically for use with adolescents, will also be used in this study. The Inventory of Parent and Peer Attachment (IPPA, Armsden & Greenberg, 1987), is a self-report measure and items draw upon the respondents current satisfaction with parents, rather than attempting to assess attachment styles through analysis of their discourse. It assesses attachment to 'parents' rather than to mother and father separately.

Attachment and peer relationships

Attachment theory proposes that the early parent-child attachment relationship forms the prototype for future relationships. Bowlby specified that the underlying mechanisms for this link are people's "internal working models", the mental representations that are forged in repeated daily transactions between infant and

caregiver, and that tend to become stable over time. The working model is presumed to serve both as a knowledge base, which contains specific and generalised information about the self, others and relationships, and as an organisational system, which guides the active processing of interpersonal information, and subsequent relationships (Crittenden, 1990; Main et al., 1985).

Both Bowlby (1969/82, 1979) and Ainsworth (1989; Ainsworth & Marvin, 1995) have stressed that attachment theory's predictions apply principally to *close* relationships. These predictions are most relevant to other attachment relationships (e.g. future romantic partners). However, Bowlby argued that early attachments would play a key role in all subsequent close relationships – both attachment and non-attachment relationships (Berlin & Cassidy, 1999).

Developing competent relationships with peers has long been viewed as one of the most important psychosocial tasks in childhood (Cohn, Patterson, & Christopoulos, 1991). Does the parent-child attachment relationship have an effect on later relationships with peers?

Taking a different viewpoint to Bowlby, some researchers have suggested that peer relationships may serve unique developmental functions and form a separate system to the parent-child system (Hartup, 1980). For example, Harlow (Harlow & Harlow, 1965) distinguished a "peer affectional system", centred on play, from an "infant-mother affectional system", centred on nurturance. More recently, Furman & Wehner (1994) argued that distinctive basic needs were best met within peer relationships. They argued that an initial core need for "tenderness" was best met

within parent-child relationships, whereas needs such as "companionship" may be best met within the peer world. Similarly, Suomi (1999) suggests that relationships with peers (and siblings) are strikingly different from the initial attachment to the caregiver and that it is therefore unlikely that the parent-child attachment provides the prototype for all subsequent social relationships. However, he does agree that the initial parent-child attachment can have a profound *effect* on future relationships.

Of course, attachment theory is only one perspective on the influence of early relationship experiences on later bonds. Social learning theories, for example, emphasise children's acquisition of social skills via their learning from and modeling of their parents (e.g. Bandura, 1977). What distinguishes attachment theory from this and other theories is the specificity of its predictions about individual differences and its arguments that mental representations (internal working models) underlie the associations between early attachments and subsequent close relationships (Berlin & Cassidy, 1999).

The first major goal of this paper is to investigate the link between parent-child attachment and the quality of non-attachment relationships with peers.

What is the evidence for a link between attachment and peer relations?

Researchers have investigated the contribution of the infant-parent attachment to children's relationships with their peers but this has largely been focused on pre-school and young school-age children (see Cohn et al., 1991, for a review). Research has included both longitudinal and contemporaneous studies with data provided by

mothers, teachers, independent observers and peers. Although the findings are by no means uniform, they are consistent in showing a relation between secure child-mother attachment and more harmonious interactions with peers and higher acceptance by peers (Berlin & Cassidy, 1999).

Attachment and peer relations in pre-school children

Longitudinal studies using Ainsworth's Strange Situation have generally found positive connections between the quality of infant-parent attachment relations and the quality of children's social interactions with peers throughout the first five years of life (see Elicker, Englund, & Sroufe, 1992; Putallaz & Heflin, 1990 for reviews). Some longer-term follow-up studies reveal weak or unexpected associations. For example, between attachment security and peer interactions at age 4 (Howes, Matheson, & Hamilton, 1994), and between interactions with close friends at age 5 (Youngblade & Belsky, 1992). On the other hand, other studies have found a positive link.

Relations between attachment quality and children's interactions with peers first emerged in a series of studies conducted by Sroufe and his colleagues (see Elicker et al., 1992 and Kerns, 1996, for reviews). In a middle class sample, Waters, Wippman, & Sroufe (1979) found that securely attached infants were later rated by their pre-school teachers as more competent with peers than were children who had been insecurely attached to their mothers in infancy. In another study, 4-5 year olds were observed extensively over at least one term (LaFreniere & Sroufe, 1985). Teachers rated secure pre-schoolers as more socially competent than insecure

children whilst observers scored the secure children higher than ambivalent children on measures of social participation and social dominance as well as lower on negative affect than avoidant children. Secure children were also better liked by their classmates than insecure children.

Similar findings have been reported in a longitudinal study of infant attachment to mothers and fathers and peer social competence in West Germany (Grossmann & Grossman, 1991). Children who had been securely attached to their mothers in infancy were rated by observers as more socially skilled with peers in the pre-school classroom than were children who had earlier been classified as insecure. Security of attachment to fathers was less strongly associated with peer competence in pre-school than was attachment to mothers. However, children who had been securely attached with both parents were rated as being the most competent, those who had been rated as secure with one parent were rated as moderately competent and children who had been insecure with both parents were perceived as being the least competent. These results are consistent with other longitudinal data that show stronger prediction to later outcomes for infant-mother than for infant-father attachments (Main et al., 1985) and with studies that have shown the buffering effect of a secure attachment relationship with at least one parent (Goldberg & Easterbrooks, 1984).

Attachment and peer relations in school-aged children

Some longitudinal studies of infant-parent attachment have followed children beyond the pre-school years. In the Minnesota project, Sroufe and his colleagues observed

the children in their high-risk longitudinal sample in a summer camp setting when they were ten years of age. They found that children who had been securely attached to their mothers in infancy were rated by camp counsellors as more socially competent and more popular with peers than were children with insecure histories (Elicker et al., 1992). Although counsellor reports of whether the child had formed a friendship did not differentiate the secure and insecure groups, observational data and children's own reports showed that secure children were more likely to have established a reciprocal friendship than were insecure children.

Klaus and Karen Grossman also interviewed the ten-year-old children in their longitudinal sample and found that children with secure histories were more likely to report having one or more good friends whereas children with insecure histories reported having fewer friends and encountering more problems with peers such as being ridiculed or excluded from group activities (Grossmann & Grossman, 1991).

Taken together, findings from longitudinal studies generally support the hypothesis that the quality of the infant-mother attachment relationship is associated with peer social competence in middle childhood, but this may depend on which aspect of peer relations is examined.

The dearth of techniques for measuring attachment beyond infancy limited the examination of concurrent linkages between attachment and peer social competence. However, development of a measure for assessing security of attachment in young school-aged children (Main et al., 1985) in the 1980s made it possible to extend research to look at concurrent links.

In a primarily middle-class sample, Cohn (1990) examined the connection between child-mother attachment and peer social competence at age 6. She used peer sociometric rating techniques and found that boys who had formed insecure attachment relationships with their mothers were more likely to be rejected by peers, were less well-liked by peers, and were perceived by peers as more aggressive and disruptive than were their more secure counterparts. Boys in the insecure group were also seen by their teachers as displaying more behaviour problems and as being less socially competent than were boys in the secure group. These results were not attributable to characteristics of the child such as IQ, physical attractiveness, temperament or previous peer experience. While the results for girls were in the predicted direction, none of the attachment group differences were significant.

Similar results have been reported by Lewis & Feiring (1989) who found that nine-year-old boys who had been securely attached to their mothers in infancy reported having more male friends than did boys with insecure histories. No attachment group differences were found for girls. Taken together, these findings of Cohn (1990) and Lewis & Feiring (1989) suggest that connections between attachment quality and peer relations in middle childhood may be stronger for boys than for girls.

In a study of 10-12 year olds, Kerns et al. (1996) developed a self-report measure of security of attachment. They found that children who viewed their relationship with their mother as more secure were significantly more accepted by peers, had more

reciprocated friendships, and were less lonely than children who rated the relationship as less secure.

In summary, the available evidence suggests that infant-parent attachment is associated with the quality of peer relations through the middle childhood years.

Attachment and peer relations in older children

There has been relatively little research into the connection between attachment and peer relations in the period of late childhood and adolescence, although it is at this stage that peer relationships assume pivotal importance in terms of children's social activities and motivation (Sroufe, Egeland, & Carlson, 1999). The current study focuses on the connection between parent-child attachment and peer relationships in early adolescence.

What is the relationship between family and peers in late childhood and early adolescence? *Continuity* models, including attachment, argue that family patterns are re-enacted in peer relationships, whereas *compensatory* models hold that if family relationships are inadequate, adolescents can find with peers the experiences they need for psychosocial well-being (Berndt & Ladd, 1989). The little research that has been carried out in this area generally seems to support the continuity model (Gold & Yanov, 1985; Hertz-Lazarowitz, Rosenberg, & Guttman, 1989; Kahn, 1989; Steinberg & Brown, 1989).

In the Minnesota longitudinal project, children with secure attachment histories continued to exhibit greater peer competence throughout middle adolescence (see Weinfield, Sroufe, Egeland, & Carlson, 1999). Lieberman et al. (1999) examined the association between attachment security in late childhood (9-11 years) and early adolescence (12-14 years) with children's friendships (presence of a reciprocated friendship and friendship quality) and popularity. They found that although the presence of a reciprocated friendship and popularity were not related to attachment to mother or father, children's reports of positive friendship qualities and lack of conflict with their best friends were.

Zimmerman, Schuerer-Englisch, & Grossmann (1996) found that security was linked to overall friendship quality among a sample of 16-year-olds. Similarly, Allen, Moore, Kuperminc, & Bell (1998) found that in a sample of academically at-risk adolescents, social competence with peers was positively related to adolescent attachment security. Even after the current quality of the maternal relationship was accounted for in this study, security remained a significant predictor of peer social competence, suggesting that attachment organisation in adolescence functioned as more than just a marker of the quality of the ongoing maternal relationship. Similar research with samples of high-functioning late adolescents in college has also found consistent relationships of security to higher-quality peer relationships (Kobac & Sceery, 1988; Treboux, Crowell, Owens, & Pan, 1994).

These findings are consistent with the notion that qualities of the models of attachment held by adolescents with respect to primary attachment relationships may generalise to influence behaviours with peers, or that the emotional capacities

necessary to produce secure discourse in the AAI are also useful in peer relationships (Allen et al., 1998; Cassidy, Kirsh, Scolton, & Parke, 1996).

Measuring peer relations

The term peer relationship refers to several aspects of experiences with peers. Although researchers agree that achieving social competence is a desirable end result of child development, there is an ongoing debate surrounding the content of this competence (see Schaffer, 1996, for a review). Definitions include one or more of the following: peer popularity, the ability to engage effectively in social interaction, specific social skills such as friendship formation, and the attainment of relevant social skills (Bosacki & Astington, 1999). One important distinction that has been made is between popularity and friendship. Popularity is the experience of being liked or accepted more widely by the members of one's peer group whereas friendship is the experience of having a close, dyadic relationship (Bukowski & Hoza, 1989). These have often been used interchangeably as outcome measures.

Which aspects of peer relationships would be expected to be linked to parent-child attachment? Given that parent-child attachment is more likely to influence relationships involving affectional bonds than those without affectional bonds (Berlin & Cassidy, 1999), it is likely that there will be a closer link with friendships than with more distant peer relationships. The research reviewed above indicates some positive links to both aspects of peer relationships but findings are mixed and further research is needed. Another related question is whether parent-child attachment

influences the development of a child's more general social skills, and if so, which aspects of social skills?

In the current study, peer relationships are assessed in three different ways. First, a self-report measure is used, the peer scales of the IPPA, designed specifically for adolescents. This questionnaire accesses the adolescent's *representation* of his/her relationships with friends. Subjects rate questions such as, "My friends understand me", or "I tell my friends about my problems and troubles". If the internal working model of parent-child attachment does generalise to peer relationships, it is likely that there will be a connection between it and the adolescent's representation of friendship quality, in relationships that involve affectional bonds.

Secondly, the link with popularity with peers is investigated. Popularity is likely to reflect more general social skills and will involve competence in relationships without affectional bonds. Achieving peer acceptance has been shown to have important consequences. For example, children who are rejected by their peers have been shown to be more aggressive and disruptive (Coie, Dodge, & Coppotelli, 1982; Coie, Dodge, & Kupersmidt, 1990) and are more likely to become delinquent and/or to drop out of school as adolescents (Parker & Asher, 1987). Popular children on the other hand, are seen by peers and teachers as co-operative leaders in the peer group and are not likely to develop later adjustment problems (Coie et al., 1990).

Finally, a teacher rating of peer relations is used (the Strengths and Difficulties Questionnaire, Goodman, 1997), which assesses peer problems (e.g. "rather solitary, tends to play alone") and prosocial behaviour (e.g. "shares readily with other

children). This provides a teacher's perspective on some aspects of general social skills with peers.

The role of the father as an attachment figure

Although a child's attachment to their mother has been implicated in the development of children's social competence (e.g. Elicker et al., 1992; Kerns et al., 1996; LaFreniere & Sroufe, 1985), fewer studies have examined the influence of attachment to their father. Literature suggests that in the construction of the working model, one parent (the primary attachment figure) is more influential than the other (Main et al., 1985; van Ijzendoorn, 1995). Since mother tends to be the preferred attachment figure in Western cultures, one would expect that attachments to mother may be more strongly linked to the development of closeness and intimacy in social relations than attachments to father. Nonetheless, although some studies have found attachment to mother to be more predictive of children's peer relations (Main et al., 1985; Suess, Grossman, & Sroufe, 1992), other studies have found that fathers play a more important role (Kerns & Barth, 1995; Youngblade, Park, & Belsky, 1993). Also attachment to father and mother taken together have been shown to be more predictive of children's social competence than attachment to mother alone (Suess et al., 1992).

Several studies have found differences when investigating peer acceptance. Patterson, Kupersmidt, & Griesler (1990) examined sociometric status differences in 9 and 10 year-old children's reports about qualities of their relationships with both mothers and fathers. They found that children in the rejected but not the neglected

group reported lower levels of companionship and affection in relationships with their fathers than did other children. Differentiating among subgroups of rejected children, Patterson et al. (1990) found that rejected children who were also aggressive reported receiving the least affection from their fathers. Although the results for mothers were in the same direction, no significant differences among status groups were found.

In a study of middle childhood, Henggeler, Edwards, Cohen, & Summerville (1991) examined the extent to which changes in children's peer acceptance during the school year could be predicted from earlier home observations of mother-child and father-child interactions. They found that children whose fathers had been receptive to their requests for assistance became more popular (i.e. well liked) with peers over the course of the school year than did children whose fathers had been less receptive. The results for mothers were in the same direction but were not significant.

It would seem important to investigate the role of infant-father attachment further. It may be that the infant-father attachment contributes less to other relationships than the infant-mother attachment. However, it may also be that the infant-father attachment simply exerts a different type of influence. The present study was designed to assess the differential associations of attachment to mother and to father with children's peer relations.

Does a capacity to mentalise mediate between attachment and peer relations?

Although research has begun to establish associations between parent-child attachment and children's peer relations, little is yet known about the mediating variables through which such effects might occur (Cohn et al., 1991).

Both theorists and researchers have begun to focus on representational models. One particular aspect that might be important is the child's ability to understand his or her own and others' mental states, such as thoughts, desires and feelings. It would seem reasonable to hypothesise that there could be a link between a child's ability to understand the thoughts and feeling of others and the quality of their social interactions. For example, a child with a well-developed ability to mentalise will be able to predict and make sense of another person's behaviour, and will be better able to understand feelings and their impact on other people.

This ability has been investigated in a number of different research domains and consequently there is a wide range of terms for this construct. For example, theory of mind (Baron-Cohen, Tager-Flusberg, & Cohen, 1993), perspective taking (e.g. Perner, 1991), mentalisation, empathy, social cognition and reflective function (e.g. Fonagy & Target, 1997). It is not yet clear whether these terms, or the findings from the various research methodologies are generalisable or equitable (Oandasan, 1999). I will use mentalising as a general term to refer to this ability.

One area of research has been into "theory of mind" development. Early theory of mind research centred on the normal acquisition of an understanding of mental states underlying and affecting behaviour. The false-belief task has emerged as the 'litmus' test of theory of mind acquisition (Wellman, 1988). It involves the child attributing a false belief to a character in the context of a story acted out with dolls or toys. The child must predict the character's behaviour resulting from the false belief. It has been shown that this ability emerges in the third or fourth year. Recently, the focus of research in this area has shifted away from pinpointing the precise age at which children can pass false belief tasks toward the question of whether *individual differences* in children's social experience impact upon the child's developing mentalising abilities (Meins, Fernyhough, Russell, & Clark-Carter, 1998).

There are a number of different theories to explain children's developing understanding of mind, which are summarised by Meins et al. (1998):

a) One view sees children's mental state awareness as an innately specified ability, with social interaction having little influence on development except as a trigger to biological maturation (Frith, Morton, & Leslie, 1991);

b) Alternatively, children's developing understanding of other minds is seen as a process of gradual revision of the child's 'theories' about how mind determines behaviour through observing other people's action (e.g. Gopnik, 1996);

c) Supporters of the various versions of simulation theory (e.g. Harris, 1991) argue that mentalising abilities are largely dependent upon children's past experiences

of other minds, such that children have encountered a wide enough range of situational possibilities are able to use these experiences as a basis for predicting behaviour;

d) A fourth view, mainly influenced by the work of Vygotsky (e.g. 1978), holds that individuals' engagement with other minds is the result of the internalisation of the perspectives of others in interpersonal contexts, and the foundation of 'dialogic' modes of thinking (Fernyhough, 1996);

e) A recent theoretical model concerned with the development of understanding of mind stems from attachment theory. This model, which has received little attention from researchers interested in understanding of mind, proposes that children's developing awareness of mind both influences and is influenced by the affective (as well as the verbal) quality of their close relationships.

It is this final model which is hypothesised to be the basis for mentalising in the current study. The theoretical basis for this model is discussed briefly, followed by empirical findings in this field.

How does attachment relate to the development of mentalising abilities?

Fonagy & Target (1997) discuss the relationship between attachment and the development of the capacity to envision mental states in self and others. They have labelled the predisposition to understand behaviour in mental state terms "reflective

function", and suggest that this ability is acquired in the context of the child's early social relationships.

In their view, the caregiver facilitates the creation of mentalising models through behaving towards the child in such a way that leads him to see that his own behaviour may be best understood by assuming that he has ideas and feelings which determine his actions, and the reactions of others to him. Ultimately, the child arrives at the conclusion that the caregiver's reaction to him may be understood as rational given the assumption of an internal state or belief or desire within himself. Caregivers differ in how sensitive they are to carrying this out. The child's development and perception of mental states in himself and others thus depends on his observation of the mental world of his caregiver. He is able to perceive mental states to the extent that his caregiver's behaviour implies such states.

Meins et al. (1998) hold a similar view. They believe that differences exist because mothers of securely attached children are more likely to treat their children as mental agents, or individuals with minds, from an early age showing sensitivity to their current levels of understanding, using mental state terms in their interaction with them, and so on. This propensity has been labelled 'mind-mindedness' (Meins, 1997). A similar point is made by Ainsworth, Bell, & Stayton (1971), who suggest that the mother of a securely attached child is 'capable of perceiving things from [the child's] point of view' and respects the child 'as a separate person: she also respects his activity-in-progress and thus avoids interrupting him' (p. 43). Through her greater ability to 'tune in' to her child's current mental activity, the mother of the securely attached child is able to present alternative perspectives on reality (for example, by

offering suggestions for a new act of pretence, or by talking about the mental states of family members) in such a way that they can be readily assimilated (Fernyhough, 1996). This in turn gives reason to suspect that securely attached children, through their increased opportunities for active engagement with their own and others' mental states, will develop a superior understanding of other people's mental orientations to the world, and the beliefs and desires which direct and motivate behaviour.

There is some support for this view from studies of early child development. First, security-based differences have already been found in the realm of symbolic play. Symbolic play requires an understanding of representations that differ from reality and is generally agreed to be a precursor of mentalising abilities (e.g. Harris, 1992; Hobson, 1993; Leslie, 1987). Lillard (1993) argued that symbolic play may offer a *zone of proximal development* (Vygotsky, 1978) for the abilities which underpin an understanding of other minds.

Similarly, parental talk about emotions (Denham, Zoller, & Couchoud, 1994) and the depth of parental discussion involving affect (Dunn, Brown, & Beardsall, 1991) were strongly associated with the children's acquisition of mentalising ability in observational studies.

Security-based differences have also been observed in at least two further areas which may be relevant to the development of mentalising abilities: (a) in infancy, mothers of securely attached children are more sensitive to their children's needs (Ainsworth et al., 1971) and consistent in their patterns of mothering (Isabella,

1993); and (b) mothers of securely attached children are more likely to invoke mental states in describing the behaviour of others (Fonagy, Steele, Steele, Higgitt, & Target, 1994). Although Fonagy et al.'s (1994) findings were derived from mothers' responses to the Adult Attachment Interview (George et al., 1985), it may be reasonable to assume that such differences in the use of mental state terms will carry over to mothers' interactions with their infants. This finding is supported by a study carried out by Meins et al. (1998) who found that mothers of secure infants were more likely to describe their children in terms of their mental states.

What is the evidence for a link between attachment and mentalising?

There has been, to date little empirical research investigating a link between security of attachment and children's understanding of other minds (Meins et al., 1998). Main (1991) reported some preliminary findings on the relationship between early security of attachment and children's subsequent metacognitive abilities. She found that 6-year-olds who had been securely attached in infancy were more likely to acknowledge that other people could not read their thoughts and realise that a particular situation could give rise to different emotional responses in different people. Fonagy, Redfern, & Charman (1997) reported a similar relationship between 3- to 6-year-olds' performance on the Separation Anxiety Test (Klagsbrun & Bowlby, 1976), and a task which required an understanding of the relation between belief and emotion.

Fonagy, Steele, Steele, & Holder (1997) carried out a prospective study of the relationship between security of attachment to mother (1 year) and father (18

months) and children's performance on three tests of theory of mind at 5 years. Eighty-two percent of those classified as secure at 12 months with mother passed the belief-desire reasoning task, whereas 46% of those who had been classified as insecure failed. Infant-father attachment (at 18 months) also predicted the child's performance, with 77% of infants classified as secure passing the test compared to 55% of children classified as insecure. There was some indication of an additive relationship, in that 87% of children with two secure relationships passed the belief-desire task, 63% of those with only one secure relationship and only 50% of those insecure with both did so. A similar but somewhat weaker pattern could be observed with the second-order false-belief task. Thirty-six percent of those secure with both parents passed compared with 23% who were secure with one and 9% who were insecure with both.

In a somewhat smaller but careful longitudinal study of mother-infant dyads, Meins et al. (1998) reported that 83% of children who were securely attached in infancy passed a false-belief task at age 4, in comparison with 33% of insecurely attached peers. At age 5, 85% of securely attached children and 50% who were insecurely attached passed a mentalising task requiring an understanding of information access. Although, probably because of its small sample, the study was not able to replicate Fonagy et al.'s (1997) results on the false belief and emotion task, the general trend of the findings support the proposal that security of attachment is linked to mentalising ability.

What is the evidence for a link between mentalising and peer relations?

Given the theoretical impetus behind research on social understanding in childhood, we would expect to find links between young children's abilities to understand the thoughts and feeling of others and the quality of their social interactions. Although using experimental procedures such as the classic false-belief paradigm to assess theory of mind in young children is one of the largest growth areas in social cognition in recent years, there is very little empirical research on the prognostic value of these developmental milestones in predicting young children's real-life social experiences (Slomkowski & Dunn, 1996).

In the small number of studies that have been done, young children (between 3-6 years) have been researched and some studies have shown positive links between the theory of mind ability of understanding false belief and various aspects of peer relations. Astington & Jenkins (1995) showed a positive link to skilled aspects of pretend play, namely, production of joint proposals for pretence (e.g. "Let's make cookies") and the explicit assignment of roles (e.g. "You be the mummy") in 3-5 year-olds. Similarly, another study found that 3-year-old children who performed well on a series of false-belief assessments also were proficient at determining the intentions of others as rated by their teachers (Lalonde & Chandler, 1995). Dockett (1997) found a link between false-belief understanding and peer ratings of likability or popularity.

Slomkowski & Dunn (1996) administered affective perspective-taking and false-belief tasks to 3-year-old children. Performance on both social understanding tasks

was significantly associated with connected communication between friends, with the theory of mind tasks showing stronger predictive power.

Watson, Nixon, Wilson, & Capage (1999) found a relationship between peer social skills and theory of mind in young children (aged 3 – 6 years). They found moderate correlations between performance on a traditional false-belief task and social skills, rated by teachers. False belief also accounted for a significant amount of additional variance in social skills after covarying age and two measures of language ability. There were differences according to the type of social skills being assessed. They used a standardised teacher questionnaire which rated social skills (e.g. "Compared to other children this child's age, this child has very good social skills") and popularity (e.g. "This child has lots of friends"). They found that false-belief understanding predicted significant amounts of additional variance in the social skills score but not the popularity score.

In addition, studies have shown a link between positive peer relations and emotion understanding (Donelan-McCall & Dunn, 1996; Werner & Cassidy, 1997). Denham, McKinley, Couchoud, & Holt (1990) found an association between pre-school children's performance on emotion understanding tasks and their peer sociometric status as well as teacher ratings of prosocial behaviour.

Taken together, these findings suggest that experimentally assessed theory of mind measures may have some predictive value for certain aspects of young children's actual social-emotional experiences.

In older children, mentalising has mainly been investigated in the field of social cognition using related concepts such as conceptual role-taking, empathic sensitivity and person perception. Some studies have shown these aspects of social understanding to be related to both teacher and peer ratings of positive social behaviour and peer acceptance (Giordano et al., 1998; Pellegrini, 1985). In contrast, other studies have failed to find a relation between various social-cognitive abilities and sociometric status (Matthews & Keating, 1995; Rubin, 1972), suggesting a need for further study.

Bosacki & Astington (1999) look specifically at mentalising using a theory of mind framework to assess social understanding in preadolescents (10-13 years). They presented ambiguous scenarios to subjects, and asked them a series of questions to assess their ability to understand the thoughts and emotions of others. They found that, independent of general vocabulary ability, mentalising ability was associated with some, but not all aspects of social competence. Social understanding related to children's ability to solve social problems, as measured by peer-ratings of the ability to behave effectively in hypothetical social situations. However, social understanding did not related to children's popularity as measured by peer likability ratings. These findings support previous work that suggests the links between social understanding and social behaviour are complex (Astington & Jenkins, 1995; Dockett, 1997; Dunn, 1995; Werner & Cassidy, 1997).

The task used to assess mentalising ability in the current study involved the attribution of mental states to characters in a series of vignettes (the "Strange Stories", Happé, 1994).

Goals of the present study

The present study seeks to replicate and extend research in this area by looking at the relationship between security of attachment, mentalising and peer relations in early adolescence. Concurrent attachment is assessed using a newly developed measure (MCAI).

The following questions will be addressed in the current study:

1. Is there a relationship between security of attachment and peer relations in early adolescence? The relationship between attachment and friendship quality, peer-rated popularity and teacher-rated peer problems and prosocial behaviour will be examined.

   It is predicted that adolescents who are securely attached will report a higher quality of friendships than those who are insecurely attached. No specific predictions are made about associations with the other measures.

2. How is mentalising ability related to security of attachment and peer relations? It is expected that more securely attached adolescents will have higher levels of mentalising ability and that this will mediate between security of attachment and peer relations. More specifically, it is also predicted that mentalising ability will be related to the Overall Coherence scale of the MCAI.

3. Are there effects of gender, age, ethnicity or verbal ability in these three domains? Security of attachment is expected to be independent of gender, age or verbal ability. However, their relationship to mentalising ability and peer relations is to be explored;

4. The convergent validity of the MCAI is examined by looking at its association with a self-report measure of attachment for adolescents.

5. The correspondence between the measures of peer relations assessed by different methods (self-report, peer-rated and teacher-rated) will be explored.

6. The differences in attachment to mother and father will be explored with regard to differences in peer relations and mentalising;

METHOD

Participants

The sample consisted of 70 children from a large comprehensive secondary school in South London. The school is situated in an inner-city area with a relatively high proportion of high-risk students. The demographic information from the school indicated that, for example, the school was well below average in the proportion of students who gain qualifications and average or below average in rate of school attendance. In addition, the school includes an elevated rate of students who enter the school with an identified educational need and a relatively high percentage of children who receive government subsidised school lunches.

Three classes from year 8 were randomly selected. This age group of early adolescents (12-13 years) was selected because the children have been at secondary school at least a year and will have established relationships with peers. Of the 89 available students in the two classes, 9 declined to participate, 6 were persistently absent from school, and in one case it was felt to be inappropriate as both parents had recently died. Of the 73 students who were interviewed, one student did not wish to complete the interview, the sound quality of the video recording was poor in one case, and in one further case, the child was not available for the collection of questionnaire data leaving a total sample of 70. The mean age of the sample was 13:1 years (SD = 0.3). Further demographic details are given in Section I of the results.

Measures

The Middle Childhood Attachment Interview (MCAI) (Appendix 4)

Previous studies have used the Adult Attachment Interview (AAI) to interview adolescents, but its applicability in early adolescence has not been established. A previous history of research in this school has established that the students are educationally disadvantaged, and it was felt that the AAI would not be appropriate for this age group, given its length and complexity.

The Middle Childhood Attachment Interview (Revised Edition VI) (Target et al., 1998) is a 19 question, semi-structured interview aimed at accessing children's mental representations of attachment figures and significant others. At the beginning of the interview, the attachment figures representing "mother" and "father" are established. Depending on the family structure, this could be parents, step-parents, grandparents or other caregivers. The interview asks questions about the child's experiences with and perceptions of their caregivers and is particularly interested in capturing the affective nature of the relationship described. The structure of the interview aims to access narratives regarding specific relationship episodes with attachment figures and as such, specific examples are requested for each response. Attachment behaviour is activated in times of danger, stress and novelty. Questions about the child's experiences of situations in which the attachment system is presumed to be activated (upset, illness, injury, separation) are asked. Prompts are offered to allow for clarity concerning the nature and quality of the child's attachment representations and guidelines for their use by interviewers is included in the interview protocol.

We did not include three questions concerning physical and sexual abuse, due to ethical considerations. These questions were deemed inappropriate to ask in a non-clinical setting.

The interview is videotaped and then transcribed and coded from the video. The MCAI is coded using 8 different scales, which are outlined in the Child Attachment Interview Coding and Classification Manual, Version III (Shmueli-Goetz, Target, Datta, & Fonagy, 2000):

- Emotional Openness
- Balance of Positive/Negative References to Attachment Figures
- Use of Examples
- Preoccupied Anger
- Idealisation of Attachment Figures
- Dismissal of Attachment
- Resolution of Conflicts
- Overall Coherence

Each of these is rated on a 9-point scale. Three of the scales are rated separately for mother and father: Preoccupied Anger, Idealisation of Attachment Figures and Dismissal of Attachment. The other scales are rated jointly with respect to mother and father.

Overall Coherence differs from the other scales, in that it integrates information from the other scales to some extent. Preoccupied Anger, Idealisation, Dismissal and Use of Examples constitute feeder scales that are used to gauge the initial level of Overall

Coherence which is subsequently fine-tuned. One of the components that is considered in assigning a rating is the level of "reflectiveness" shown – the ability to appreciate and consider intentionality in oneself and others (Shmueli-Goetz et al., 2000 January). For this reason, it was predicted that mentalising ability would be related to this scale.

Based on the scores from these scales and on descriptors of the main classification categories given in the manual, the child is assigned a classification of Secure/Free, Avoidant/Restricted, Ambivalent/Entangled or Disorganised with respect to mother and father.

To obtain a Secure classification, the child must be above a given cut-off point on the "positive scales" (Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution Conflict, Overall Coherence) and below a given cut-off on the "negative scales" (Preoccupied Anger, Idealisation, Dismissal). To be assigned to the Avoidant or Ambivalent categories, the child must score below the cut-off point on the "positive scales" and above the cut-off point on one or more of the "negative scales". The derivation of the Disorganised category differs in that it is assigned to a child who displays any of the indices of disorganisation/disorientation described in the manual, including very bizarre or contradictory statements or behaviour.

However, the attachment category must also fit the descriptors of the main classification categories given in the manual. In other words, the judgement of

whether a child is secure or not is influenced not only by the process of evaluating scale scores but also by the overall interview quality.

Reliability estimates of the MCAI sub-scales are high. Using Cronbach's alphas, the authors report internal consistency for mother as .92 and for father as .91. Using a sample of 8-12 years olds, two month test-retest reliability, has been shown to be good, .98 for attachment classification of mother and .63 for father (Pilley, 1999).

As a measure of concurrent validity, modest correlations were found with the Separation Anxiety Test (SAT; Wright, Binney, & Smith, 1985). However, it is difficult to determine the validity of the MCAI in the absence of a well-established measure of attachment in middle childhood.

In the current study the "parent" scales of the IPPA are used as a means of assessing convergent validity.

Inter-rater reliability

The author and a second interviewer (a clinical psychologist in training) were trained in the interviewing and coding procedure of the MCAI prior to the start of the study by one of the authors of the MCAI (YSG). Interviews were conducted by the author and the second interviewer (in approximately equal numbers). To establish inter-rater reliability for the coding of the interviews, 19 (27%) were coded by the two interviewers and YSG. Inter-rater reliability was determined in two ways. First, inter-rater agreement for placement in the four attachment classification categories – Secure, Avoidant, Ambivalent and Disorganised – was established. Second, ratings

on the scale of Overall Coherence were compared for agreement between the three raters.

Attachment classifications with respect to mother and father respectively were converted into security scores whereby Secure = 1, Avoidant = 2, Ambivalent = 3 and Disorganised = 4. Inter-rater reliability was established by computing the percentage of exact agreement in addition to Cohen's kappa. For the 19 interviews rated, exact agreement was 84% with respect to mother and 78% with respect to father.

Using Cohen's kappa to calculate inter-rater reliability, acceptable agreement was obtained for attachment classifications with respect to mother, kappa = .74, and father, kappa = .74 (Barker, Pistrang, & Elliott, 1994, suggest that .60 is marginal, .70 is acceptable and .80 is good).

For the scale of Overall Coherence, an intra-class correlation coefficient was calculated to establish the reliability of the three raters. The intraclass correlation was 0.68, which is not as high as the attachment classifications, but is on the boundary of the level considered acceptable.

Coding discrepancies on individual scales and attachment classifications were resolved by discussion, and a consensus was reached.

Verbal ability

Verbal ability was assessed to examine whether performance on the MCAI or mentalising task was influenced by differences in verbally mediated intelligence. Security of attachment was not expected to be influenced, but studies have shown that mentalising measures are often language dependent (Happé, 1995; Matthews & Keating, 1995). The vocabulary subtest from the Wechsler Intelligence Scale for Children – III, UK (Wechsler, 1992) was used as a measure of verbal ability. The WISC III, UK consists of a number of verbal and non-verbal tests, standardised for age. The vocabulary subtest is the most reliable subtest of the WISC, and provides an index of verbal ability.

Inventory of Parent and Peer Attachment (IPPA) (Appendix 5)

The Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) is a self-report measure which assesses adolescent's security, or perceived quality of their current relationships with parents and close friends. The questionnaire is designed to tap "the 'internal working model' of attachment by assessing (1) the positive, affective/cognitive experience of trust in the accessibility and responsiveness of attachment figures, and (2) the negative affective/cognitive experiences of anger and/or hopelessness resulting from unresponsive or inconsistently responsive attachment figures" (p. 431).

Accordingly, the IPPA assesses three broad constructs as they apply to parents and peers: degree of mutual trust (e.g. "My parents respect my feelings"), quality of communication (e.g. "I like to get my parents point of view on things I'm concerned about"), and degree of anger and alienation (e.g. "My parents expect too much from

me"). The dimensions are highly correlated within each relationship type and are therefore commonly aggregated to yield a composite index of security with respect to parents or peers.

Reliability estimates of the IPPA sub-scales are high. The authors tested a sample of 16-20 year old college students. For the parent sub-scales, the authors reported Cronbach's alphas were .91, .91 and .86, respectively, and the three-week test-retest reliability of the composite score to be .93. For the peer sub-scales, they reported Cronbach's alpha to be .91, .87, and .72 respectively, and the test-retest of the composite score to be .86.

Construct validity of the IPPA has been demonstrated by its modest correlations with the Family Environment Scale (FES; Moos & Moos, 1986) and the FACES (Olson & Portner, 1982) suggesting shared as well as significant separate variance between the IPPA and these other family measures (Armsden & Greenberg, 1987).

Peer popularity

A common approach for examining social acceptance by peers has been peer nomination sociometrics. Children are asked to nominate a designated number of most and least liked peers, providing a measure of how much positive (or negative) regard a child receives from peers.

From these nominations, individuals are assigned to two sociometric categories: *social preference* (the balance between acceptance and rejection) and *social impact* (the index of how frequently one is either accepted or rejected by peers, or visibility). This system is used to assign children to groups known as:

- Popular (highly visible and well liked)
- Rejected (highly visible and poorly liked)
- Controversial (highly visible and both liked and disliked)
- Neglected (low visibility and neither liked nor disliked)
- Average (at or about the mean on both visibility and likableness)

This two dimensional system has become widely accepted as an appropriate technique for identifying children who differ in terms of their position within a peer network (Bukowski & Hoza, 1989).

Coie and his colleagues, in particular, have drawn the important distinction between those less well accepted children who are neglected (i.e. who receive neither positive nor negative nominations) by peers and those who are actively rejected (i.e. who receive many negative nominations and few positive nominations) by peers (Coie et al., 1982). While children in both the rejected and neglected groups receive few

positive nominations from peers, rejected children are more disruptive, aggressive and overtly hostile than are neglected children (Coie et al., 1990). Available evidence also suggests that peer rejection is more stable during childhood than is peer neglect and is generally viewed as a more serious risk factor for the development of psychopathology (Coie & Dodge, 1983; Parker & Asher, 1987).

Derivation of social status scores. The total numbers of nominations received by each child from his classmates on the two sociometric items (Liked Most and Liked Least) were calculated and then transformed into standardised scores within each class. The standard scores for the Liked Most (LM) and Liked Least (LL) items were used to generate *social preference* (Z_{LM} - Z_{LL}) and *social impact* (Z_{LM} + Z_{LL}) scores.

Th social preference and social impact variables defined four types of extreme social status (Coie et al., 1982):

a) the Popular group consisted of all of those children who received a social preference score greater than 1.0, a Liked Most standardised score of greater than 0, and a Liked Least standardised score of less than 0.

b) The Rejected group consisted of all of those children who received a social preference score of less than –1.0, a Liked Least standardised score of greater than 0, and a Liked Most standardised score of less that 0.

c) The Neglected group consisted of all children who received a social impact score of less than –1.0 and Liked Most and Liked Least standardised scores of less than 0. Rejected children received many nominations as being liked least, whereas the neglected children did not.

d) The Controversial group consisted of those children who received a social impact score of greater than 1.0 and who received Liked Most and Liked Least standardised scores that were each greater than 0. Thus, members of the Controversial group were all above their class level mean for both positive and negative sociometric nominations.

e) The remaining children were assigned to the Average Group[1]

The 12 week test-retest reliability of standardised liked least and liked most scores was assessed by Coie et al. (1982) with a sample of 8-14 year olds. The Pearson product-moment correlations were .65 for both most liked and least liked scores. Reliabilities were similar for each grade level.

Teacher ratings of peer relations

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was rated by the form teacher for each class (see Appendix 6). There were two scales that were relevant to this study: Peer Problems and Prosocial Behaviour. Results from the other scales are not reported here and were used in a separate research project.

The SDQ was developed as an alternative to the Rutter parent and teacher questionnaires, which are behavioural screening questionnaires that have proved valid and reliable in many contexts (Elander & Rutter, 1996). Goodman (1997)

[1] This designation of *average* status to all those children who did not fit one of the four extreme status groups is at variance with the way average status was defined in (Coie et al., 1982) because of differences in the research questions being addressed in the two studies. In the earlier study, peer behaviour descriptions of extreme groups, such as rejected children, were contrasted with a non-extreme group, thus *average* was defined within a circumscribed region about the zero point for standard scores. In the present study, continuity of status is at issue and all children had to be placed in some category for the analysis of the data. Average status has a different meaning in the two studies and was not of central importance in the present study.

reports a high correlation between the total scores generated by the SDQ and Rutter questionnaires (between .87 and .92), providing evidence for the concurrent validity of the SDQ. Reliabilities for this sample were .79 for Peer Problems and .84 for Prosocial Behaviour.

Mentalising ability

Mentalising ability was assessed using a task which involved the attribution of mental states to characters in a series of vignettes (see Appendix 7). These vignettes are a subset of the "Strange Stories" developed by Happé (1994). The stories are simple accounts of events, which concern the different motivations that can lie behind everyday utterances that are not literally true. For example, in one story a girl called Anna breaks her mother's favourite vase. When her mother comes home, Anna tells her mother that the dog broke it. The participant is first asked a question to check his /her comprehension of the story, i.e. "Is it true, what Anna told her mother?". He/she is then asked why Anna said this, and their response is recorded and scored.

Twelve stories were selected that covered pretence, lying, joking, telling a white lie, figure of speech, misunderstanding, sarcasm, persuasion, contrary emotion, appearance/reality, forgetting and double bluff. These were presented in a random order to the children, and each story was read out to the student. If the participant did not answer the question to check comprehension correctly, the story was read through a second time.

The original coding system developed by Happé (1994) was a 2-point system. This has been expanded by the research team at The Anna Freud Centre to distinguish more sophisticated answers (Target, Janes, Schneider, & Ensik, 1999). This coding system was adapted for the current study (see Bosacki & Astington, 1999, for a similar coding scheme), resulting in a 4-point coding system.

Zero points are given for an incorrect response. This includes 'I don't know / no answer' or an incorrect answer to the comprehension question. There are three levels of correct response. The lowest level is a correct physical response, which states the physical truth rather than an understanding of the mental state of the protagonist or the motivation for their action. The next level is a rudimentary mental response, which explains the correct motivation and reasoning behind the behaviour. The highest level involves a more complex mental attribution, such as reflection (e.g. he thought this because ...) or advanced, iterative, second order mentalising (e.g. he did this because he thought x thought this). Only one score was given per response, so that participants were given credit for their 'best' answer. That is, if a participant gave a response that appealed to both physical and mental states, the justification would be scored as mental state. Thus the total score represented a best estimate of the participant's ability to attribute mental states.

Procedure

Ethical approval for the study was obtained under the auspices of a larger project undertaken at the school (Appendix 1). Prior to the commencement of the study, letters inviting the children to participate in the study were sent out to parents (Appendix 2) which explained the nature of the project and what would be required of the child. This included a consent form (Appendix 3), which the student returned to their form tutor. All data collection was conducted in the school setting by the author and a second trained interviewer. Participants were paid £2 in vouchers as a token of appreciation for taking part in the research. A pilot study was conducted with 6 students, to establish the test procedure.

Each student took part in two separate sessions. In the first session, the student met with an interviewer on his/her own. Before testing began, the student was assured of the confidentiality with which their responses would be treated, and asked not to discuss the procedure with peers. They were asked to fill in a diagram of three concentric circles, to indicate how close they were to important people in their lives. This enabled the interviewer to establish rapport with the student and obtain information about the family structure, including the maternal and paternal attachment figures. This was followed by the Middle Childhood Attachment Interview which was videotaped and lasted between 30 – 45 minutes. At the end of the interview there was a period of debriefing. This was followed by peer nominations. Students were given an alphabetical list of their classmates and asked to name three peers who were liked most and three who were liked least. Finally the vocabulary test and the mentalising task were administered. Each session was

conducted in one teaching period of 50 minutes. Any of the individual tasks that were not completed in the first session were administered in the following session. The second session was conducted, on average, 4-5 weeks after the first interview session.

In the second session, students were seen in small groups (2-5) to complete questionnaire measures. This included the IPPA and other measures which are not reported here. If a student needed to complete individual measures, they were taken to a separate room by the author. At least one researcher was always available to help in the administration of the questionnaires, and individual help was given to children with poor reading skills.

The data was entered twice, by each researcher and discrepancies eliminated. There were 17 items missing from the IPPA in total (0.5%). Mean scores rather than total scores for each scale were calculated. Two of the tests of verbal ability were eliminated because English was a second language for the student.

RESULTS

Overview

Results are presented in six sections. Section I provides a series of preliminary analyses. It summarises the demographic characteristics of the participant sample and non-participants. For each measure that is used, general characteristics of the sample are given and steps taken for the purpose of data reduction are described.

Section II examines the convergent validity of the MCAI, using the parent scales of the IPPA. Section III looks at the relationship between the three measures of peer functioning: the self-report measure of friendship quality (peer scales of the IPPA), peer reports of social acceptance, and teacher ratings of peer functioning.

The research questions are addressed in sections IV to VI. Section IV addresses the question of whether security of attachment is related to peer relationships. The relationship between security of attachment and the three measures of peer functioning is examined. For each measure of peer functioning, the relationship between the two measures of attachment (the MCAI and parent scales of the IPPA) is examined.

Section V reports on the relationship between mentalising and security of attachment and section VI looks at the relationship between mentalising and the measures of peer functioning.

The research questions that are relevant to any particular section of the results will be presented in a box at the beginning of the section.

Finally, some excerpts from the MCAI are given to illustrate the quality of the narratives for secure and insecure adolescents.

SECTION I: PRELIMINARY ANALYSIS

Demographic data

The age range of the sample was 12:3 years, to 13:8 years, with a mean age of 13:1 years (SD = 0.3). There were equal numbers of males and females in the sample. Forty nine percent of the students were Black African or Afro-Caribbean, 44 % were White European and 7% were of Asian origin. The mean scaled score on the WISC was 7.8 (SD = 2.6) providing an indication of verbal ability as generally below average (10) for this age group. Forty four percent of adolescents were living with both biological parents. Most were living with their mother (91%) but only 48% were living with their father.

Students who did not participate in the study, did not differ from those who took part in terms of age ($t_{(88)} = -1.15$, ns), gender ($X^2_{(1)} = 1.92$, ns) or ethnicity ($X^2_{(2)} = 1.61$, ns). Measures of verbal ability were not available for those who did not take part. However, it seemed to the researchers that these students may have had more difficulties than others in the class and included a high proportion of students who were chronically absent from school. This group did differ significantly from the students who took part in terms of their peer group nominations ($X^2_{(4)} = 16.01$, $p<0.01$). There was a particularly high proportion of children with a "rejected" status (42.1%) when compared to the group who participated (8.6%). The non-participants

were also rated by teachers as having more difficulties which had an impact on overall distress and social impairment ($U = 346.0$, $p<.001$).

The MCAI scales

Normal distribution of scores for all scales was assessed by examination of the frequency of scores as displayed by histograms, and checking the significance of the skewness and kurtosis.

The distribution of each of the MCAI scales was examined. It was found that all of the scales common to mother and father were normally distributed but the scales scored separately (Preoccupied Anger, Idealisation, Dismissal) were all negatively skewed, reflecting the fact that the majority of children have low levels of each of these constructs.

The intra-correlations for the scales were computed using Pearson's product-moment correlation coefficient (r).

Table 1. Intra-correlations of MCAI scales

	EO	Bal	UoE	PA-F	PA-M	ID-F	ID-M	DS-F	DS-M	RES[1]
Bal	.65**									
UoE	.81**	.65**								
PA-F	.20	.20	.19							
PA-M	.00	-.06	-.03	.25*						
ID-F	-.29*	-.41**	-.35**	-.11	.19					
ID-M	-.26*	-.41**	-.53**	.05	.22	.53**				
DS-F	-.65**	-.42**	-.53**	-.16	-.06	.34**	.19			
DS-M	-.77**	-.54**	-.65**	-.25*	.07	.33**	.32**	.83**		
RES	.58**	.47**	-.57**	.09	-.19	-.22	-.36**	-.26*	-.37**	
COH	.82**	.63**	.86**	.06	-.20	-.46**	-.59**	-.58**	-.70**	.67**

*p<.05
**p<.01
Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed.
N=71 for mother and n=66 for father

[1]Key to scale abbreviation. EO – Emotional Openness; Bal – Balance of Positive/Negative References to Attachment Figures; UoE – Use of Examples; PA-F/M – Preoccupied Anger with respect to Father/Mother; ID-F/M – Idealisation with respect to Father/Mother; DS-F/M – Dismissal with respect to Father/Mother; RES – Resolution of Conflicts; COH – Overall Coherence.

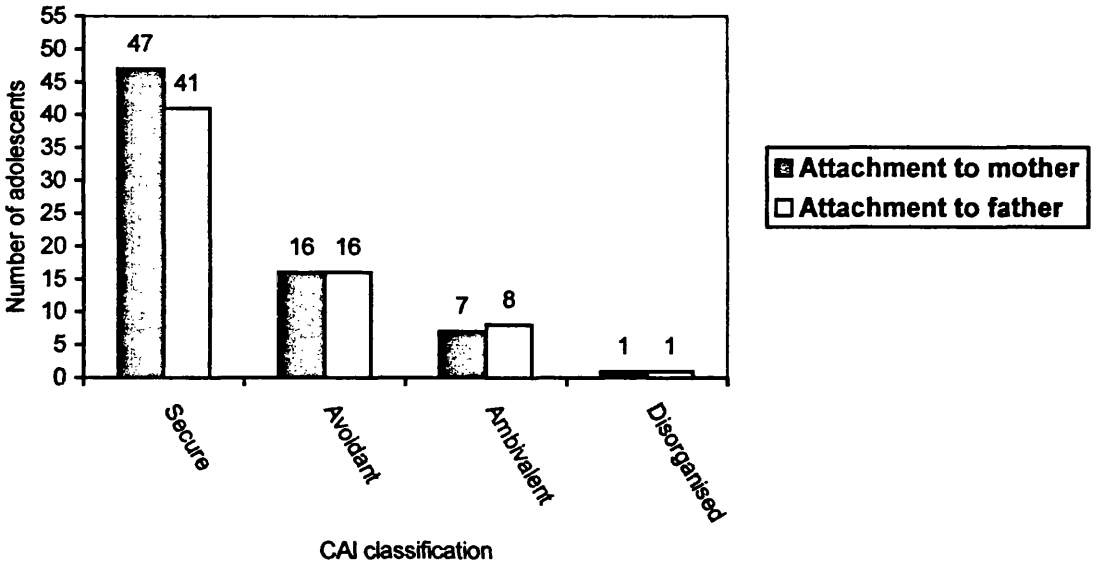
Many of the scales are correlated with each other. Overall Coherence is the single scale that is most representative of attachment classification, since it integrates information from the other scales to some degree. As would be expected, it is highly correlated with the other scales, with the exception of Preoccupied Anger.

The sister scale in the AAI is the discourse Coherence scale (Main & Goldwyn, 1991), which has been shown to be highly related to the secure versus insecure dichotomy in the discrete classifications. In the following analyses, Overall Coherence is used as a continuous measure, representative of attachment, in addition

to the attachment classifications. As a continuous measure, it provides greater resolution than broad classifications, and also allows a wider range of data analytic strategies to be used that may have greater statistical power than the non-parametric methods most often used with classification data.

The MCAI has four possible classifications: Secure/Free, Avoidant/Restricted, Ambivalent or Entangled and Disorganised. The profile of classifications for this sample is shown in graph 1.

Graph 1. Attachment patterns for the sample



This profile, with 66% securely attached, 23% insecure avoidant, 10% insecure ambivalent and a very small number of insecure disorganised with respect to mother, is in line with other non-clinical samples (Steele & Steele, 1994).

Due to the small numbers in the Ambivalent and Disorganised groups, and because there are no hypotheses based on associations between specific classifications and

outcome, the sample was divided into Secure and Insecure groups for all further analysis.

Attachment using the parent sub-scales of the IPPA

Attachment to parents was also assessed using a self-report instrument, the parent sub-scales of the IPPA. Unlike the MCAI, this asks about "parents" rather than mother and father separately. The sub-scales of Trust in Parents, Communication with Parents, Alienation from Parents and Attachment Total for Parents were used in the analyses of data. These were all normally distributed. It should be noted that Attachment Total for Parents is a composite measure (Trust plus Communication minus Alienation).

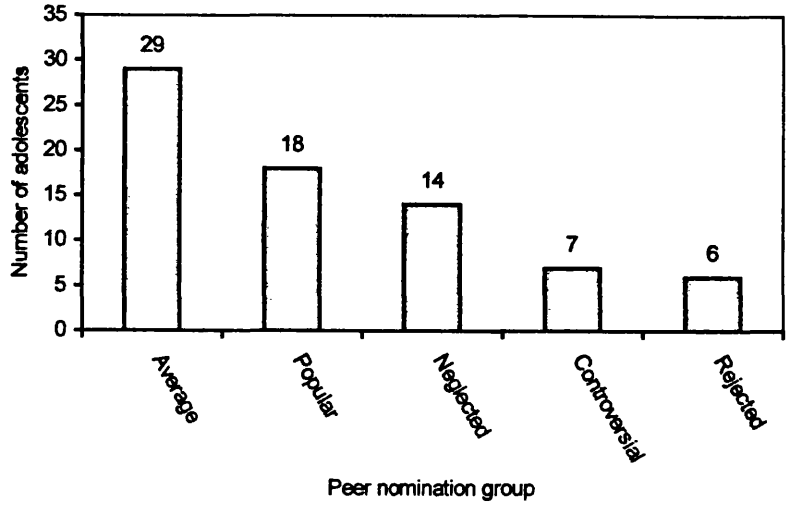
Friendship quality assessed by the peer sub-scales of the IPPA

Similarly, the IPPA sub-scales of Trust in Peers, Communication with Peers, Alienation from Peers and Attachment Total for Peers were used as measures of friendship quality. These scales were all normally distributed.

Peer acceptance

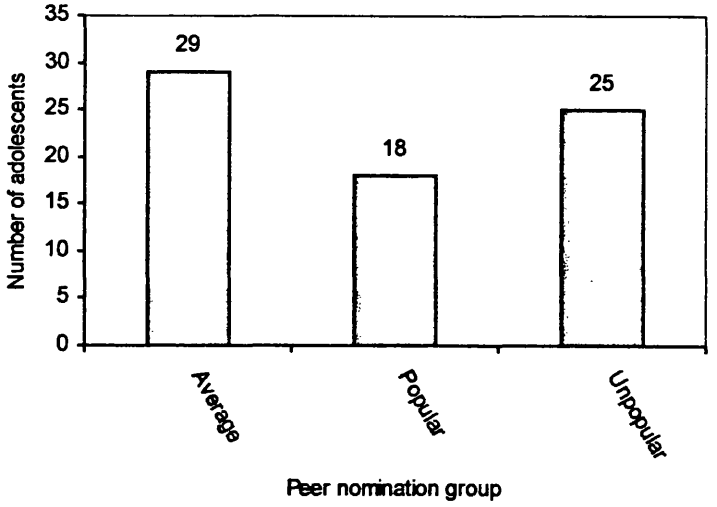
Adolescents were allocated to the following groups, according to the peer nominations they received: Popular, Average, Neglected, Controversial and Rejected. The profile of the groups for this sample is shown in graph 2.

Graph 2. Peer nomination groups for the sample



In order to reduce the number of categories for further analysis and ensure an adequate number in each group, three categories were created: Popular, Average and Unpopular, which are shown in graph 3.

Graph 3. Profile of composite peer nomination groups



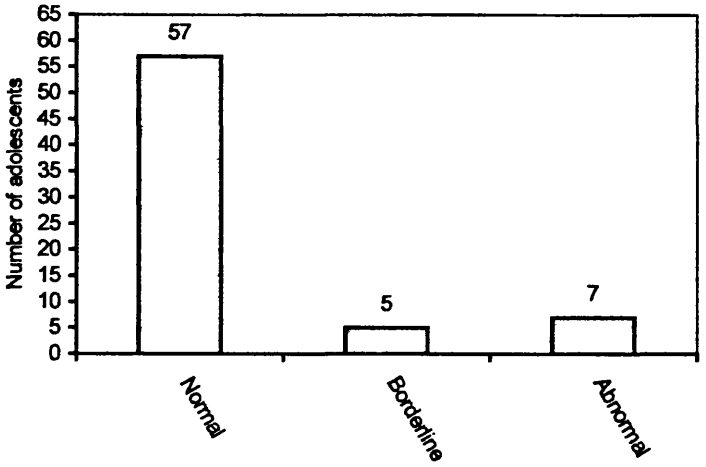
In addition to these groups, Social Preference scores ("most liked" minus "least liked" scores) were also used as a continuous measure of social acceptance, to allow for the use of data analysis with greater power than those used for categorical data.

Teacher ratings

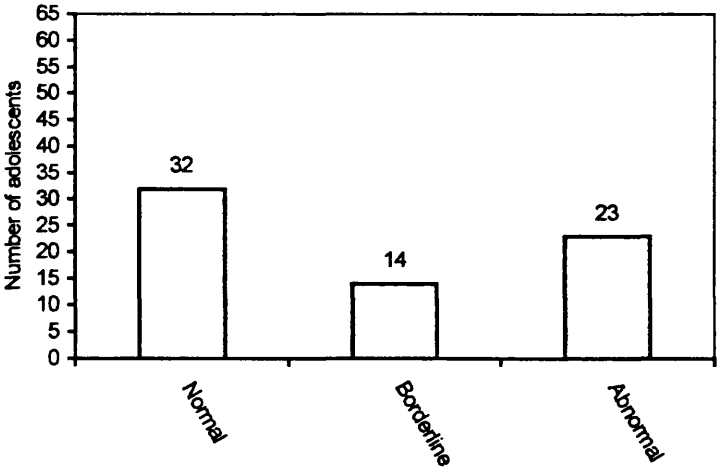
Two scales from the Strengths and Difficulties Questionnaire (SDQ) which related to peers were used: Peer Problems and Prosocial Behaviour. Teacher-rated data were available for 69 children in the sample, as one of the students changed form class in the course of the study. The Prosocial Behaviour scale was normally distributed, but the distribution of the Peer Problems scale was negatively skewed, with the majority of children having few problems. In the following analyses, the non-parametric version of statistical tests was also performed. There were no differences in the significance of the findings using parametric tests and, given that parametric tests are robust (unaffected my moderate departures from the underlying assumptions), the parametric versions are reported.

From the scores, "caseness" was calculated, and the profile of the adolescents who participated in the research is illustrated below.

Graph 4. Profile of "caseness" for teacher-rated Peer Problems



Graph 5. Profile of "caseness" for teacher-rated Prosocial Behaviour



According to teacher ratings, there is a relatively high proportion of adolescents who have poor relationships with peers. Ten per cent achieve "caseness" for Peer Problems and 33% for (lack of) Prosocial Behaviour.

Relationship of the measures to demographic factors

In order to determine if any covariates should be used in the subsequent analysis, each measure was examined in relation to demographic variables.

Attachment assessed by the MCAI

There were no differences found between Secure and Insecure groups in terms of age (mother, $t_{(69)} = -.30$, ns; father, $t_{(64)} = .77$, ns), gender (mother, $X^2_{(1)} = 0.34$, ns; father, $X^2_{(1)} = 0.02$, ns), ethnicity (mother, $X^2_{(2)} = 0.62$, ns; father, $X^2_{(2)} = 0.28$, ns) or verbal ability (mother, $t_{(66)} = 1.40$, ns; father, $t_{(62)} = 1.01$, ns).

However, a significant correlation was found between Overall Coherence and verbal ability ($r = 33$, $p<0.01$).

Attachment assessed by the parent scales of the IPPA

None of the parent scales of the IPPA were significantly related to age or verbal ability, as shown in table 2.

Table 2. Correlations between the parent sub-scales of the IPPA, age and verbal ability

IPPA sub-scale	Age	Verbal ability (WISC scaled score)
Trust in Parents	.08	.02
Communication with Parents	.14	-.11
Alienation from Parents	.05	-.12
Totals for Parents	.05	.00

Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed.
N=70 for age and n=68 for verbal ability

The peer sub-scales of the IPPA

Similarly, none of the peer scales of the IPPA were significantly related to age or verbal ability, as shown in table 3.

Table 3. Correlations between the peer sub-scales of the IPPA, age and verbal ability

IPPA sub-scale	Age	Verbal ability (WISC scaled score)
Trust in Peers	.08	.00
Communication with Peers	.18	.04
Alienation from Peers	.18	-.05
Totals for Peers	.04	.00

Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed. N=70 for age and n=68 for verbal ability

Peer acceptance

Social Preference was not correlated with age (r = .04, ns) or verbal ability (r = .16, ns). Using one-way analyses of variance (ANOVAs), no significant differences were found between peer nomination groups on the basis of age ($F_{(2,67)} = 1.86$, ns) or verbal ability ($F_{(2,66)} = .96$, ns). There were also no differences found for gender ($X^2_{(2)} = 3.87$, ns) or ethnicity ($X^2_{(4)} = 7.14$, ns), using chi-square tests.

Teacher ratings of peer relationships

There were no significant correlations between the teacher-rated scales of peer functioning and age or verbal ability, and no differences according to gender or ethnicity as shown in table 4.

Table 4. Relationship between teacher-rated scales and demographic factors

Teacher-rated scales	Age (r)	Verbal ability: WISC scaled score (r)	Gender (t)	Ethnicity (F)
Peer Problems	-.18	-.08	.40	1.98
Prosocial Behaviour	.11	-.03	-.51	1.24

Correlations using age and verbal ability were calculated using Pearson's correlation coefficient for ranked data. Differences according to gender were calculated using a t test, and differences according to ethnicity were calculated using a one-way ANOVA.
N=69 for age, gender and ethnicity and n=67 for verbal ability

Mentalising

The scores on the mentalising task were normally distributed. There were no differences in performance according to gender ($t_{(68)} = .87$, ns) or age ($r = .16$, ns). However, mentalising ability was correlated with verbal ability ($r = .49$, $p < .01$).

In summary, there were no differences between any of the measures according to age, sex, or ethnicity. However, both the scale of Overall Coherence from the MCAI and performance on the mentalising task were correlated with verbal ability.

SECTION II: CONVERGENT VALIDITY OF THE MCAI

The parent scales of the IPPA provide a measure of convergent validity for the MCAI. Correlations were performed between the MCAI scales that were common to mother and father and the IPPA parent scales. These are shown in table 5.

Table 5. Correlations between MCAI scales (common to mother and father) and IPPA Parent sub-scales

	IPPA parent sub-scales			
MCAI scales	Trust in parents	Communication with parents	Alienation from parents	Attachment to parents
Emotional openness	.31**	.34**	-.11	.32**
Balance of positive/negative references	.16	.14	.03	.10
Use of examples	.26*	.31**	-.18	.31**
Resolution of conflicts	.32**	.27*	-.36**	.37**
Overall coherence	.37**	.31**	-.31**	.41**

*p<.05
**p<.01
Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed.
N=70

Many of the MCAI scales are correlated with the IPPA parent sub-scales. Balance of Positive/Negative References to attachment figures does not correlate with the IPPA scales which is to be expected, given that the IPPA does not differentiate between mother and father. Overall Coherence is positively correlated with Trust in Parents and Communication with Parents, and it is negatively correlated with Alienation from Parents. The resulting Attachment Total for Parents is also strongly correlated.

This does therefore provide support for the convergent validity of the MCAI.

In order to determine whether secure and insecure adolescents could be distinguished using the parent scales of the IPPA, t-tests were performed comparing these two groups. Attachment to mother and father was compared. The results are given in tables 6 and 7.

Table 6. Comparison of mean scores on the parent scales of the IPPA for secure and insecure (mother) adolescents

	Mean score (standard deviation)	
IPPA sub-scale	Secure with mother	Insecure with mother
Trust in Parents	6.1 (0.8)	5.3 (0.9)
Communication with Parents	5.8 (1.1)	5.0 (1.3)
Alienation from Parents	2.4 (0.9)	3.6 (1.3)

N=46 for the secure group and n=24 for the insecure group.

Adolescents who were securely attached to mother reported higher levels of Trust ($t_{(68)} = 3.14$, $p<.001$) and Communication ($t_{(68)} = 3.07$, $p<.01$) and lower levels of Alienation from Parents ($t_{(68)} = 4.29$, $p<.001$), than those who were insecurely attached.

Table 7. Comparison of mean scores on the parent scales of the IPPA for secure and insecure (father) adolescents

	Mean score (standard deviation)	
IPPA sub-scale	Secure with father	Insecure with father
Trust in Parents	6.0 (0.7)	5.6 (1.1)
Communication with Parents	5.9 (0.8)	5.2 (1.5)
Alienation from Parents	2.6 (1.0)	3.1 (1.3)

N=39 for the secure group and n=26 for the insecure group.

For attachment to father, there are no significant differences between secure and insecure adolescents for reported Trust ($t_{(63)} = 1.49$, ns) or Alienation from Parents ($t_{(63)} = 1.92$, ns) but secure adolescents report higher levels of Communication ($t_{(63)} = 2.47$, $p<.05$).

In order to examine the independent contributions of security of attachment with mother and father to Total Attachment to Parents (composite score) from the IPPA, a multiple regression was performed. Only those adolescents who had two parental attachment figures were included in the analysis. As expected, this showed that the combined effect of security of attachment to mother and to father was significantly related to Total Attachment to Parents ($r = .49$; $F_{(2,62)} = 9.61$, $p<.001$). Security of attachment to mother made a significant independent contribution ($t = -3.10$, $p<.01$) but security of attachment to father did not ($t = -.92$, ns). However, a further test showed that the differences between these associations were not significant ($t_{(61)} = 1.06$, ns).

SECTION III: CORRESPONDENCE OF THE MEASURES OF PEER RELATIONSHIPS

There are two scales rated by the teacher, Peer Problems and Prosocial Behaviour. These were not correlated with each other (r = -.13, ns).

Comparing the teacher-rated and peer-rated measures, those adolescents who were given lower Social Preference ratings by peers were also rated by teachers as having more Peer Problems as shown in table 8. For the participant sample, there was no significant correlation between popularity and prosocial behaviour. However, data was available for the whole group for these measures, and it can be seen that the strength of the association increases when including the non-participants.

Table 8. Correlations between teacher ratings and Social Preference

	Social Preference	
Teacher ratings	Participant sample (n = 69)	Whole group (n = 87)
Peer Problems	-.33**	-.32**
Prosocial Behaviour	.11	.25*

*p<.05
**p<.01
Pearson's product-moment correlation test (r) was used. All correlations are two-tailed.
N=69 for the participant sample and n=87 for the whole group.

A comparison was also performed to examine differences between different peer nomination groups for the teacher ratings. The results are given below.

Table 9. Teacher rated peer functioning according to peer nomination groups

	Mean score (standard deviation)		
Teacher ratings	Popular	Average	Unpopular
Peer Problems	0.9 (1.3)	1.1 (1.4)	2.8 (3.1)
Prosocial Behaviour	5.6 (2.5)	6.1 (2.7)	5.1 (2.2)

N=18 for the popular group, n=29 for the average group and n=22 for the unpopular group.

The Unpopular peer nomination group has higher teacher-rated peer problems than the average or popular groups (using a one-way ANOVA, $F_{(2, 66)} = 5.60$, $p<.01$). The Unpopular group also show slightly lower levels of prosocial behaviour but a one-way ANOVA shows no differences between groups ($F_{(2, 66)} = 1.03$, ns).

The teacher ratings of peer functioning and peer-rated popularity therefore do show some degree of correspondence. However, when comparing these two measures with the self-report measure of friendship quality, no strong relationship was found as shown in table 10 and 11 below.

Table 10. Correlations between the peer sub-scales of the IPPA and Social Preference

IPPA sub-scale	Social Preference
Trust in Peers	.17
Communication with Peers	.04
Alienation from Peers	-.14
Totals for Peers	.16

Pearson's product-moment correlation coefficient (r) was used. All correlations are two-tailed.
N=70

Table 11. Correlations between teacher ratings and the peer sub-scales of the IPPA

Teacher ratings	Trust in Peers	Communication with Peers	Alienation from Peers	Total Attachment to Peers
Peer Problems	-.14	-.26*	-0.13	-.12
Prosocial Behaviour	.14	.19	-.02	-.19

*p<.05
Pearson's product-moment correlation coefficient was used (r). All correlations are two-tailed.
N=69

Correlations between the teacher-rated scales and the IPPA peer sub-scales are not strong, although there is a significant association between adolescents with more teacher-rated peer problems reporting worse Communication with Peers at the p<.05 level.

Summary

The following table provides an overall summary of the associations between different peer measures.

Table 12. Summary table of relationships between peer measures

	Friendship quality (self-report)	Popularity (peer-rated)	Peer problems (teacher-rated)
Popularity (peer-rated)	×		
Peer problems (teacher-rated)	×	✔ ✔	
Prosocial behaviour (teacher-rated)	×	× (✔ for whole group)	×

SECTION IV: ATTACHMENT AND PEER RELATIONSHIPS

Question 1:

Is there a relationship between security of attachment and peer relations in early adolescence? The relationship between attachment and friendship quality, peer-rated popularity and teacher-rated peer problems and prosocial behaviour will be examined.

It is predicted that adolescents who are securely attached will report a higher quality of friendships than those who are insecurely attached. No specific predictions are made about associations with the other measures.

Question 6:

The differences in attachment to mother and father will be explored with regard to differences in peer relations;

Relationship between attachment and friendship quality

Attachment assessed using the MCAI

The peer sub-scales of the IPPA represent differences in perceived friendship quality. To examine whether differences in friendship quality were related to security of attachment, assessed using the MCAI, correlations were performed between the Overall Coherence scale from the MCAI and the IPPA peer sub-scales. Overall Coherence was used as it is the single scale most likely to represent security of attachment, to some degree integrating information from the other scales.

Table 13. Correlations between Overall Coherence and IPPA peer sub-scales

	Overall Coherence
Trust in peers	.35** (.37**)
Communication with peers	.21 (.22*)
Alienation from peers	-.13 (-.17)
Attachment to peers	.32** (.34**)

*p<.05
**p<.01
Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed.
N=70
The correlations, controlling for verbal ability, are given in brackets.

As table 13 shows, the MCAI scale of Overall Coherence is significantly correlated with Trust of Peers and the Attachment Total for Peers, and these remain significant after controlling for the contribution of verbal ability.

To compare adolescents according to their security of attachment, t-tests were performed with the IPPA peer sub-scales for secure and insecure students. Attachment to mother and father were examined separately. Table 14 outlines differences in friendship quality according to security of attachment to mother.

Table 14. Mean scores on the IPPA peer sub-scales for adolescents securely and insecurely attached to mother.

	Mean score (standard deviation)	
IPPA sub-scale	Secure with mother	Insecure with mother
Trust in Peers	5.5 (1.1)	4.8 (0.8)
Communication with Peers	5.1 (1.0)	4.9 (0.8)
Alienation from Peers	3.1 (0.7)	3.5 (1.2)

N=46 for the secure group and n=24 for the insecure group.

Secure adolescents report significantly greater trust in peers ($t_{(68)} = -3.43$, $p<0.01$) and less alienation from peers ($t_{(68)} = 2.28$, $p<0.05$) but there was no difference in communication with peers ($t_{(68)} = -1.15$, ns).

Table 15 shows the same comparison with respect to attachment to father.

Table 15. Mean scores on the IPPA peer sub-scales for adolescents securely and insecurely attached to father

	Mean score (standard deviation)	
IPPA sub-scale	Secure with father	Insecure with father
Trust in Peers	5.4 (1.0)	5.0 (1.0)
Communication with Peers	5.1 (1.0)	4.9 (0.9)
Alienation from Peers	3.1 (0.8)	3.2 (1.1)

N=39 for the secure group and n=26 for the insecure group.

There are no significant differences for any of the IPPA peer sub-scales according to attachment security to father (Trust, $t_{(63)} = -1.77$, ns; Communication, $t_{(63)} = -1.30$, ns; Alienation, $t_{(63)} = .20$, ns).

In order to examine the contribution of security of attachment with mother and father to total attachment to peers (summary score), a multiple regression was performed. Only those adolescents who had two parental attachment figures were included in the analysis. This showed that the combined effect of security of attachment to mother and to father was significantly related to total attachment to peers ($r = .39$; $F_{(2,62)} = 5.45$, $p<.001$). Security of attachment to mother made a significant independent contribution ($t = -2.96$, $p<.01$) but security of attachment to father did not ($t = -.39$, ns). However, a further test was carried out to look at the significance of the difference between these two predictors, and none was found ($t_{(62)} = 1.60$, ns). It would seem, therefore, that security of attachment to mother is significantly related to friendship quality. The contribution of security of attachment to father is less certain but differences between the two are not robust.

Attachment assessed using the parent sub-scales of the IPPA

In order to examine this same relationship, using the self-report measure of attachment, the correspondence between the parent scales of the IPPA and friendship quality assessed by the peer scales of the IPPA was also examined.

Table 16. Correlations between IPPA parent sub-scales and IPPA peer sub-scales

	Trust in peers	Communication with peers	Alienation from peers	Attachment to peers
Trust in parents	.31**	.08	-.25*	.30*
Communication with parents	.30*	.30*	-.09	.31**
Alienation from parents	-.32**	-.04	.57***	-.42***
Total attachment to parents	.36**	.15	-.35**	.39**

*p<.05
**p<.01
***p<.001
Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed.
N=70

Relationship between attachment and peer-rated popularity

Attachment assessed using the MCAI

To examine the relationship between attachment, assessed by the MCAI, and peer acceptance, the MCAI scale of Overall Coherence was correlated with Social Preference. There was no significant correlation found between the two ($r = .16$, ns). No difference was found in social preference for secure or insecure adolescents ($t_{(68)} = .95$, ns).

Similarly, there were no differences between nomination groups according to security of attachment to mother ($X^2_{(2)} = 2.71$, ns) or father ($X^2_{(2)} = 1.39$, ns).

Attachment assessed using the parent sub-scales of the IPPA

The correspondence between attachment assessed by the parent sub-scales of the IPPA and social acceptance was also examined. No relationship was found between them (see table 17), although there was a trend towards adolescents with low Social Preference to feel more Alienated from Parents ($r = -.20$, $p = .097$).

Table 17. Correlations between the parent scales of the IPPA and Social Preference

IPPA sub-scale	Social Preference
Trust in Parents	.13
Communication with Parents	-.08
Alienation from Parents	-.20
Totals for Parents	.12

Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed. N=70

Relationship between attachment and teacher ratings of peer functioning

Attachment assessed using the MCAI

The relationship between Overall Coherence from the MCAI and the teacher ratings was examined using Pearson's product-moment correlation test. No correspondence was found between Peer Problems and Overall Coherence ($r = -.20$, ns) but there was a significant correlation between Prosocial Behaviour and Overall Coherence ($r = .30$, $p<.05$). This effect remained after controlling for verbal ability ($r = .31$, $p = .01$).

The relationship of security of attachment to mother and father was also examined for Peer Problems and Prosocial Behaviour. The mean scores are given in tables 18 and 19.

Table 18. Comparison of secure/insecure (mother) adolescents on teacher ratings

	Mean score (standard deviation)	
Teacher rating	Secure with mother	Insecure with mother
Peer Problems	1.3 (2.0)	2.2 (2.5)
Prosocial Behaviour	6.5 (2.4)	4.1 (1.9)

N=45 for the secure group and n=24 for the insecure group.

Table 19. Comparison of secure/insecure (father) adolescents on teacher ratings

	Mean score (standard deviation)	
Teacher rating	Secure with father	Insecure with father
Peer Problems	1.0 (1.4)	2.2 (2.7)
Prosocial Behaviour	6.0 (2.4)	5.2 (2.4)

N=38 for the secure group and n=26 for the insecure group.

Differences were examined using multiple regressions. In order to compare the contribution of security of attachment to both mother and father, only those adolescents who had two parental attachment figures were included. It was found that the combined effect of security of attachment to mother and to father was significantly related to prosocial behaviour ($r = .42$; $F_{(2,60)} = 6.53$, $p<.01$). Security of attachment to mother made a significant independent contribution ($t = -3.38$, $p<.001$) but security of attachment to father did not ($t = -.87$, ns). A test to assess the significance of the differences between the correlations for mother and father showed that there was a significant difference ($t_{(62)} = 2.54$, $p<.05$). It would seem, therefore, that security of attachment to mother is significantly related to prosocial behaviour but security of attachment to father does not make an independent contribution.

In contrast, the combined effect of security of attachment to mother and father was not significantly related to peer problems ($r = .27$, $F_{(2,60)} = 2.36$, ns). There was no independent contribution of security of attachment to mother ($t = -.64$, ns) but security of attachment to father did make a significant contribution ($t = 2.07$, $p = .04$). This effect, however, was not large and should be treated with caution.

Attachment assessed using the parent sub-scales of the IPPA

The correspondence between parent attachment based on the IPPA and the teacher ratings was also investigated, using Pearson's product-moment correlation test. As the table below shows, no correspondence was found between these two measures.

Table 20. Correlations between IPPA parent sub-scales and teacher ratings of peer functioning

Teacher-rated scales	Trust in Parents	Communication with Parents	Alienation from Parents	Attachment to Parents
Peer Problems	-.14 (-.17)	-.27* (-.20)	-.13 (-.13)	-.12 (-.12)
Prosocial Behaviour	.11	.12	.03	.10

Pearson's correlation coefficient (r) was used. All correlations are two-tailed
N=69

Summary

The following table summarises the associations between attachment measured by the MCAI and IPPA, and the peer measures.

Table 21. Summary table of relationships between peer measures

	MCAI attachment	IPPA parent attachment
Friendship quality (self-report)	✔ ✔	✔ ✔
Popularity (peer-rated)	✘	✘
Peer problems (teacher-rated)	✘	✘
Prosocial behaviour (teacher-rated)	✔	✘

SECTION V: ATTACHMENT AND MENTALISING

Question 2:
How is mentalising ability related to security of attachment and peer relations? It is expected that more securely attached adolescents will have higher levels of mentalising ability and that this will mediate between security of attachment and peer relations. More specifically, it is also predicted that mentalising ability will be related to the overall coherence scale of the MCAI.

Is security of attachment related to mentalising ability?

Assessment assessed using the MCAI

The relationship of mentalising ability to the Overall Coherence scale of the MCAI was examined using Pearson's product-moment correlation coefficient. Mentalising ability was predicted to be positively related to Overall Coherence, which incorporates reflective function, and a significant correlation was found ($r = .29$, $p<.05$).

However, since both the MCAI scales and scores on the mentalising task were related to verbal ability, a partial correlation was performed, controlling for verbal ability. The correlation between the two was no longer significant ($r = .11$, ns) after controlling for verbal ability.

The total score on the mentalising task was also compared for adolescents securely and insecurely attached to mother and father. No significant differences were found between the two groups for mother ($t_{(68)} = 1.35$, ns) or father ($t_{(68)} = 1.62$, ns).

Attachment assessed using the parent sub-scales of the IPPA

The relationship between attachment assessed by the parent scales of the IPPA and mentalising were also assessed. No relationship was found between any of the sub-scales, as shown below.

Table 22. Correlations between the parent scales of the IPPA and mentalising ability

IPPA parent scales	Mentalising ability
Trust in Parents	-.04
Communication with Parents	-.17
Alienation from Parents	-.06
Total attachment to parents	-.06

Pearson's product-moment correlation coefficient (*r*) was used.
All correlations are two-tailed.
N=70

SECTION VI: MENTALISING AND PEER RELATIONSHIPS

Is mentalising ability related to quality of friendships?

No correspondence was found between mentalising ability and any of the IPPA peer sub-scales, illustrated in the following table.

Table 23. Correlations between the IPPA peer sub-scales and mentalising ability

IPPA peer sub-scales	Mentalising ability
Trust in Peers	-.12
Communication with Peers	-.10
Alienation from Peers	.01
Attachment to Peers	-.10

Pearson's product-moment correlation coefficient (*r*) was used. All correlations are two-tailed. N=70

Is mentalising ability related to peer acceptance?

A correlation between mentalising ability and Social Preference was performed and, although this was not significant (r = .20, p = .09), there was a positive trend towards adolescents with a higher capacity for mentalising to have a higher social preference score. After controlling for verbal ability, this remained unchanged (r = .21, p = .09).

Differences in mentalising ability between the different peer nomination groups were explored using a one-way ANOVA. No differences were found between groups ($F_{(2, 68)} = 3.60$, ns).

Is mentalising ability related to teacher ratings of peer functioning?

Using Pearson's product-moment correlation test, no associations were found between the teacher-rated scales and mentalising performance (Peer Problems, r = -.23; Prosocial Behaviour, r = .18, ns).

Examples of MCAI responses

To give an illustration of the adolescents' responses to the MCAI, excerpts from a number of interviews will be given to illustrate secure, avoidant and ambivalent attachment styles.

At the beginning of the interview, the adolescent is asked to think of three words to describe their relationship with their mother/father. The responses to this question for three adolescents are given below.

Secure attachment

Can you think of three words to describe your relationship with your mum?
Honesty..... I can talk to my mum, and argumentative.
Can you think of an example of when you felt there was honesty between you and your mum?
Once I told my mum something and I didn't want her to tell my dad because sometimes my dad doesn't take things as well as my mum. I told her that once I tried a cigarette and she said, if you try it and don't like it, that's good because maybe you won't try it when you're older. I told my dad and I thought he might get upset because granddad died of lung cancer. When I told him, I didn't expect him to be so calm, because normally he'd go on, but he said, you've tried it now, just don't try it again. I thought it was good that I could tell my dad, and my mum never told my dad.
How did you feel?
I felt better, I'd had it on my mind for so long, now I'd told someone, it felt better.
How do you think your dad felt?
I think he was quite pleased that I was honest but I think he was also a bit upset with me for trying a cigarette and I know how much he hates it.

The second thing you said was that you can talk to your mum. Can you think of a time when it felt like that?

I can talk to her, like about me growing up, and I've got a boyfriend. My dad says, you're too young for boyfriends. My mum tells me the wrongs and rights of boys, that I can't talk to my dad about because I get a bit embarrassed.

Can you think of an example of when you felt you could talk to your mum?

Recently, I went out with this boy, and I told her about him, and mum said, I don't think you should really go out with him because it doesn't sound as if he really wants to go out with you, so I felt like I could talk to mum, like she was my age. I can talk to my friends but it seems better coming from my mum because she's had experience.

How do you think your mum feels when you talk to her?

I think she's happy that I'm coming to her to ask her these questions.

The third word you used was argumentative. Can you think of an example of when it was argumentative?

Nearly every day, but the arguments are so stupid and silly. Say my room's a mess, she'll get a bit upset and say your room's always a mess, and it gets into a row. I say I always tidy my room.

When was the last time that happened?

Yesterday, about tidying my room. My mum's hurt her back and dad's been round to help and I said, dad, will you help me tidy my room? Mum said, you don't need help, dad needs to sit down, do it on your own. I said no, so it got into an argument.

How did it feel when it got into an argument?

I felt ... in a way it makes me laugh because we're arguing over something so petty. In another way, I think it's stupid.

How do you think your mum feels?

I think she feels the same because she says, L., that's so petty, that argument.

This girl is able to speak openly about her relationship with her mother. She can describe her own feelings and those of her parents. She does not refer to her mother in solely positive terms but shows that she can consider both the good and bad qualities of her relationship with her attachment figures. She can speak fluently and thoughtfully, without requiring many prompts from the interviewer.

Avoidant attachment

Can you think of three words to describe your relationship with your mum?
Fun.... I get on fine.
Can you think of another word?
(Pause) No.
OK, we'll start with those. Can you think of an example of when it was fun with your mum?
No, she's not fun, but when I see mum it's happy.
Can you think of a time recently when it felt like that?
I can't explain. When I see my mum...
How do you feel?
I don't know. When I see my mum I feel ordinary.

The next thing you said was that you get on fine with your mum. Can you think of a time when you were getting on fine?
Just ordinary, everyday life.
Has there been a time like that recently?
Not really.

OK, and now can you think of a third word to describe your relationship with your mum?
No.

In contrast to the last example, the responses of this adolescent are much more restricted. The interview is characterised by short responses, in which the adolescent frequently responds with, "I don't know", "I can't remember" or "I can't explain", blocking further discussion of the topic. Discussion of both positive and negative emotions is largely absent.

Throughout the interview, there is a minimising of the importance of attachment figures, particularly at times of need, such as when hurt or ill, or at times of loss or separation.

For example, the following excerpt describes one adolescent's description of a separation:

Have you ever stayed away from your parents for more than a day?
I went to Hastings for two to three weeks.
When was that?
In 1997.
Who did you go with?
My older and younger brother.
What did you do?
Mostly stayed indoors on computers.
What was it like being away from your parents?
It was all right, I wasn't sad or anything.
What do you think it was like for your mum and dad?
They missed me.
How do you know?
Because I wasn't there to annoy mum.
What was it like seeing them again?
It was all right, OK.

What did they do?

Nothing much, said, hi, how are you, gave me a hug and that was it.

Ambivalent attachment

Can you think of three words to describe the relationship with your dad?

Bad. Non-caring. Disrespectful.

Can you think of a time when you felt your relationship was bad with your dad?

He never knew our hobbies, and he always left us alone when he was babysitting us or something. He went upstairs and left us downstairs to do the washing up or something.

Can you think of a particular time like that?

Last year.

What happened?

Mum went out with her friends and he was left to baby-sit us, and he normally used to play with us, but then he didn't any more. He just left us and said do the washing up or something. He sent us to tidy up the place normally.

How did you feel then?

I felt upset really cos he didn't really care for us much.

Why do you think he did that?

I dunno really, he just changed for some reason.

The next word you used was non-caring. Can you think of an example of when he was non-caring?

He didn't really care about us much, he didn't care about my mum. He just went off with his mates, and done bad things and that.

Can you think of a particular time when it felt non-caring?

All the time really. For the past seven years he's always been non-caring to us.

And can you think of an example of when it felt he was disrespectful?
He didn't respect us really. We helped him out and that but he didn't care.
He just done it again and again and we gave up on him.
Can you think of a particular time?
He was always like that. He didn't really care much.
How do you feel about that?
It was unhealthy cos he didn't care.

This adolescent was securely attached to his mother but had an ambivalent attachment to his father. His anger towards his father emerges at several different points, and he describes him in a contemptuous manner. Throughout the interview, it was clear that he remained preoccupied with his father, returning to similar themes in response to different questions.

DISCUSSION

Summary of Results

The first aim of the current study was to explore the relationship between attachment and peer relationships in a group of adolescents. It was predicted that security of attachment would be related to friendship quality, and this was supported, with respect to attachment to mother. Security of attachment was not found to be related to peer popularity but it was related to teacher ratings of prosocial behaviour with respect to attachment to mother.

The second aim was to examine the role of mentalising in attachment and peer relationships. Mentalising ability was found to be related to Overall coherence from the MCAI and verbal ability. However, it made no independent contribution to the association, after controlling for verbal ability. Mentalising was not related to any measure of peer relationships, although there was a trend towards a link between mentalising and popularity.

Overview of the sample

The demographic data outlined in Chapter Three shows that the participant group consisted of early adolescents (mean age 13:1 years), from an ethnically diverse population. A high proportion of these adolescents are not living with both biological parents (56%). For about a third of the sample (33%), their father is an attachment figure but they do not live with him. It is important to note that overall

performance on the task assessing verbal ability was poor, the mean falling below the average range for this age group, at a scaled score of 7 (average is 10). This may reflect a combination of poor educational and socio-economic factors, resulting in a reduced performance that may not be representative of the wider population. It would be of interest in future to compare the sample to a less disadvantaged population in this age band.

Attachment and verbal ability

Attachment was examined by comparing secure and insecure adolescents. Because the Overall Coherence scale is potentially valuable as a way of scoring attachment security as a continuous variable, this scale was also used in questions concerning attachment. Although it was expected to be highly related to the classification system, it cannot be assumed to be equivalent.

The demographic factors of age, gender and ethnicity were not related to security of attachment. This is consistent with the two studies which have examined the psychometric properties of the MCAI (Pilley, 1999; Shmueli-Goetz, 1998) where no differences were found for these variables.

Given that a subject's ability to speak in an organised, coherent, thoughtful manner about experiences is a key factor in determining attachment classification, it is important to establish the discriminant validity of the MCAI with respect to verbal ability.

When examining differences between secure and insecure adolescents, no difference was found according to verbal ability. However, verbal ability was found to be significantly correlated with the Overall Coherence scale. Pilley (1999) found no difference between secure and insecure children according to intelligence or expressive language ability. However, the relationship of verbal ability to specific scales has not been examined, so it is not clear if this finding is unusual.

Although it was not expected, this finding is not at odds with research in the existing literature for the Adult Attachment Interview. Van Ijzendoorn, Dijkstra, & Bus (1996) conducted a series of meta-analyses on 32 studies to investigate the association between attachment, intelligence and language competence. They found that differences in intelligence did not have a significant effect on differences in quality of attachment, but secure children were more competent in the language domain than insecure children (combined effect size, $r = .28$). Rather than viewing language ability as a potential confounding variable, van Ijzendoorn et al. (1996) propose that language development is stimulated in the context of a secure relationship and suggest that this is an expected outcome. Taking this argument further, they suggest that secure attachment might be a protective factor in the context of high-risk childrearing settings, acting as a buffer against adverse circumstance (Morisset, Barnard, Greenberg, Booth, & Spieker, 1990). As this hypothesis predicts, they did find larger effect sizes for the relation between attachment and language in clinical groups. It may also be relevant, therefore, that the sample in the current study was relatively socially deprived with a low average verbal ability.

Another study has specifically investigated the discriminant validity of the AAI, looking at the role of various factors, including intelligence and general discourse style (Crowell et al., 1997). They did not find a relationship between AAI classification and discourse style (on a neutral topic regarding employment history) but, in contrast to other studies they did find some differences in intelligence scores. They suggest that this somewhat unexpected finding might relate to the heavy emphasis on verbal abilities in the IQ test used (Lamke & Nelson, 1973) but do recommend using a measure of mental ability as a covariate in research with the AAI.

Crowell et al. (1997) also looked specifically at the coherence of transcript scale from the AAI. They found that this scale was significantly related to subjects' age, years of education and intelligence scores. They point out that while this is an interesting finding, it is perhaps not entirely surprising that the ability to speak in an organised way might be related to verbal intelligence (Lui, Colon-Downs, Lord, Wang, & Crowell, 1995).

Care should be taken when making comparisons between the AAI and the MCAI as the measure and its correlates in adults and children cannot be assumed to be the same. However, the findings from the AAI do highlight issues that need to be clarified in the MCAI, particularly its relationship to intelligence and verbal ability. It would seem prudent to recommend that a measure of mental/verbal ability is used in research with the MCAI as a potential correlate.

The other variable positively correlated with verbal ability is mentalising ability. This will be discussed when considering the research questions about mentalising.

Correspondence of attachment measures

While the MCAI and the parent sub-scales of the IPPA are both designed to measure attachment, they use different methods. The MCAI is a semi-structured interview, which uses analysis of the child's narrative about attachment-related episodes as well as incorporating information about the behaviour of the child during interview. It considers attachment to mother and father separately. The IPPA, by contrast, is a self-report measure, which asks about attachment to "parents".

A number of authors have questioned the validity of assessing attachment with self-report instruments (Carlson, Onishi, & Gjerde, 1997; Crowell & Treboux, 1995) noting the difficulties of assessing unconscious or automatic processes with measures that tap people's conscious reports. On the other hand, Crowell, Fraley, & Shaver (1999) give several reasons supporting the use of self-report instruments. They accept that, in some cases, the conscious beliefs people hold are inaccurate reflections of the underlying organisation of the attachment system, but argue that conscious and unconscious processes typically operate in the same direction to achieve a goal (Jacoby, Toth, Lindsay, & Debner, 1992).

A particular example from these two measures would be the defensive use of idealisation. The MCAI is able to assess whether a child appears to be idealising an attachment figure, for example, if they cannot produce convincing examples to back

up glowing, positive descriptions. The IPPA would not be able to distinguish an idealised from a realistic picture of the parental relationship.

Given the differences in method, there was a reasonably high level of correspondence between the MCAI and the IPPA parent sub-scales. The relationship appeared to be stronger with respect to security of attachment to mother. This might be influenced by the nature of the sample, which has a number of adolescents without a paternal attachment figure. When the association with adolescents who had two parental attachment figures was examined, the effect was stronger for attachment to mother but differences between security of attachment to mother and father were not significant.

Relationship between peer measures – what are they measuring?

It is important to consider which aspects of peer functioning each instrument is measuring, and to think about the impact this has on the correspondence between the three measures used in this study.

The peer sub-scales of the IPPA are a self-report measure of perceived friendship quality. The questionnaire asks about similar aspects of adolescent's relationship with "friends" as it does for "parents", assessing trust, communication and alienation from friends. According to attachment theory, the adolescent will be drawing on his/her internal working model of relationships in thinking about his/her relationship with friends.

The other peer measures are peer-rated popularity and teacher ratings of peer functioning. There are correlations between these two measures but neither of these is strongly associated with the self-report measure of friendship quality.

Why is there such a weak association between reported friendship quality and the other two measures? One question that arises is whether the measures are providing an accurate picture of the child's peer relationships. Popularity measures have been extensively investigated and the available evidence appears to support their external validity (Bukowski & Hoza, 1989). For example, Gottman, Gonso, & Rasmussen (1975) and Masters & Furman (1981) have reported that popular children receive more positive reinforcement from peers than do unpopular children.

The external validity of friendship measures has not received as much attention and it is possible that the adolescent's self-report of friendships does not reflect the actual quality of their friendships. In some ways, this might not be the right question to ask. The self-report measure is, by its very nature, subjective and is expected to draw on the child's internal representation of relationships. If generalised representations emerge from early interpersonal experiences, low correlations may reflect distortions in children's perceptions, rather than lack of validity of the instruments. However, it is also assumed that the child's representation of relationships will affect their actual relationships, so it would be expected to find some association between the two. The few studies that do exist, support the validity of children's reports of their friendship quality (Berndt, Hawkins, & Hoyle, 1986; Berndt & Perry, 1986; Bukowski, Hoza, & Newcomb, 1984). One recent study has specifically examined the role of internal representations as a mediator between family relations and actual peer relations.

Rudolph et al. (1995) found that negative representations of the self and others *were* associated with increased social impairment, including dysfunctional social behaviour (based on observation) and lower social status with peers (teacher-rated) for children in middle childhood.

One factor affecting the internal validity of these measures is the difference between the participants and the non-participants in this study. The data available about the non-participants suggests that this group had more difficulties and worse peer relationships that the participants. The sample used in this study might therefore be restricted to the lower end of the range. Further support for this suggestion comes from looking at the correspondence between popularity and teacher ratings. Data on all of the students (participants and non-participants) was available for these measures and correlations between the two were stronger for the entire group when compared to the participant sample (see table 6). This needs to be considered when interpreting the findings. It may be that some link would have emerged between the different peer measures if the range was not restricted.

Alternatively, a lack of correspondence between the peer measures reflects the fact that they are measuring different aspects of peer relations. A distinction has been drawn between popularity and friendship (Bukowski & Newcomb, 1987; Masters & Furman, 1981). Bukowski & Hoza (1989) argue that popularity and friendship have distinct theoretical origins and, although they are conceptually related, recent literature suggests that they contribute uniquely to children's social adjustment and development (Bukowski, Hoza, & Boivin, 1993). For example, Parker & Asher (1993) compared friendship adjustment and acceptance by the peer group in 8 – 10

year olds. They showed that many low-accepted children had best friends and were satisfied with these friendships. However, these children's friendships were lower in quality than those of other children. Having a friend, friendship quality and group acceptance made separate contributions to the prediction of loneliness, highlighting the value of distinguishing children's friendship adjustment from their general peer acceptance.

Which aspects of peer relations is the teacher assessing? There are two teacher-rated scales concerning peer relations: peer problems and prosocial behaviour. Peer-rated popularity was correlated with the teacher-rated scale of peer problems but not prosocial behaviour.

It is likely that a teacher will have more information about the child's general social skills in interacting with others, rather than the *quality* of their close relationships. Looking at each scale in more detail, the peer problems scale includes items that appear to be assessing the child's status/popularity: "Generally liked by other children", and "Picked on or bullied by other children". It does ask about friendships: "Has at least one good friend", "Rather solitary, tends to play alone", but again the focus is on how many friends a child has, rather than the quality of the child's friendships.

Interestingly, the second teacher-rated scale, prosocial behaviour, was not related to popularity. Examples of statements are, "Helpful if someone else is hurt, upset or feeling ill" and "Shares readily with other children (treats, toys, pencils etc.)". It might be expected that general skills in prosocial behaviour would have some

bearing on a child's popularity. In this case, the range restriction of the sample does appear to be having an effect, since the relationship between these two factors does become stronger when considering data from the whole group.

Although the relationship is weak, there was a trend linking one aspect of friendship quality – communication - with teacher-rated peer problems. Given that this relationship was weak, caution should be taken when interpreting this, particularly when multiple comparisons are made in the analysis, increasing the chance of a Type I error. However, to counterbalance this, the range restriction of the sample may also have weakened potential associations. Further investigation is needed to establish whether this link exists for adolescents.

To summarise, it appears that the measures of peer-rated popularity and teacher ratings of peer functioning are measuring different aspects of the child's peer relations to friendship quality. It may be that popularity and the teacher ratings of peer relationships are measuring more general social skills that are different from those involved in close friendships. This will be discussed further when considering the role of attachment.

Attachment and peer relationships

The first major research question concerns the relationship between attachment and peer relationships. This will be evaluated by discussing the relationship between attachment and each of the different aspects of peer functioning that were measured: friendship quality, popularity and teacher-rated social skills and prosocial behaviour.

Friendship quality

It was predicted that adolescents who were securely attached would report better quality friendships than those who were insecurely attached and this hypothesis was supported. Adolescents who were securely attached reported higher levels of trust in peers, communication with peers and lower levels of alienation from peers than insecure adolescents. This fits in with the model proposed by attachment theory, that the internal working model of relationships developed in the context of early parent-child interaction, does generalise to non-attachment relationships involving affectional bonds.

There was a trend towards the effect being stronger with respect to attachment to mother when compared with attachment to father. However, when comparing adolescents who had two parental attachment figures, differences were not significant.

This study did not support the findings from other research which have found a particular link between the child's relationship with their father and peer relations (e.g. Henggeler et al., 1991; Patterson et al., 1990). It may be that other aspects of the child-father relationship, such as the father's behaviour in play, may overshadow or interact with the influences of the infant-father attachment (e.g. Parke, 1995). For example, in toddlers, LaFreniere, Provost, & Dubeau (1992) found qualitative differences in maternal and paternal variables, suggesting that secure base behaviour is a more important dimension of mother-child relations, and affective sharing during play is a more salient marker of the quality of father-child relations.

The same positive relationship was found between the self-report measure of attachment – the parent scales of the IPPA – and friendship quality assessed by the peer scales of the IPPA. Many of the parent sub-scales were significantly correlated with the peer sub-scales. Attachment to parents is associated most strongly with trust in peers and negatively correlated with alienation from peers, but it is only weakly associated with communication with peers. It may be that the two dimensions of trust and alienation are central to the internal representations of relationships that carry over to non-attachment relationships. The items concerning trust were designed to assess the adolescent's trust (felt security) that attachment figures understand and respect his/her needs and desires. Items concerning alienation assess anger towards or emotional detachment from attachment figures, since frequent and intense anger or detachment are seen to be responses to actual or threatened disruption to an insecure attachment bond (Armsden & Greenberg, 1987).

Attachment, measured by both the MCAI and the IPPA, therefore shows a similar positive association with the perceived quality of friendships. Although the correlations are generally moderate in both cases, some of the parent scales from the IPPA show relatively strong associations with the peer scales. For example, feeling alienated from parents is highly correlated with feeling alienated from peers ($r = .57$). This is perhaps to be expected, since the same method (self-report) is used to assess both parent and peer domains and similar dimensions of relationships are being assessed. Crowell et al. (1999) have reviewed the use of different methods in measuring adult attachment. As expected, they report that higher correlations are found when similar methods are used rather than a different kind of technique

(interview vs. self-report). In the former case, the higher estimate presumably benefits in part from common method variance.

These findings contradict the proposal that adolescents might compensate for inadequate parental relationships in higher quality peer relationships. Instead, they support the hypothesis that qualities of the internal representations held by adolescents with respect to the primary mother-child attachment generalises to influence close, dyadic friendships with peers.

How might parent-child attachment affect later friendships with peers? There are a number of different ways that attachment security could influence other close relationships, which have been summarised previously (e.g. Elicker et al., 1992; Kerns, 1996; Lieberman et al., 1999; Sroufe et al., 1999). First, a history of emotional availability and responsiveness, which defines a secure attachment relationship, is a foundation for positive expectations concerning relationships with others. Secure children are thought to have a positive view of themselves and an expectation of others as responsive to their needs. Thus, secure children are likely to elicit positive responses from peers by behaving in a synchronous and co-operative manner (Cohn et al., 1991). Second, parental responsiveness leads to a sense of efficacy, providing the basis of a sense of self-worth and self-esteem. Third, the pattern of modulated affect regulation developed within the attachment relationship becomes the prototype for the self-regulation of emotion required in the peer world. Finally, children with secure histories, will understand about reciprocity, or "give and take" in their peer relationships. By contrast, individuals with insecure working models may, because of the distrust or uncertainty engendered by their relational

expectations, anticipate less support from others and may actually deter the kind of supportive care from which they would benefit.

It is also important to consider other types of mechanism, in addition to representational processes that might link early attachments and subsequent affectional and non-affectional bonds. There may be more direct connections between attachments and other bonds. Parents of secure children may provide their children with more opportunities to establish social networks and to make friends. Some evidence for this supposition comes from Lieberman's (1977) investigation of attachment security and peer relationships, in which attachment security was positively related to the extent of children's contacts with peers (Berlin & Cassidy, 1999).

Popularity

The second aspect of peer relationships that was examined was peer-rated popularity. There was no significant correspondence between attachment assessed by the MCAI or the IPPA and popularity. This finding is consistent with the view that working models of attachment generalise only to other close relationships with affectional bonds, rather than more distant, superficial friendships (Bowlby, 1969 1982). Youngblade & Belsky (1992) suggest that the attachment relationship gives children opportunities to learn how to handle intimacy and closeness, which may be more important for the formation of close friendships, than for peer acceptance.

It may be that the more general social skills required to achieve popularity or higher status in a peer group are different to those needed for successful close relationships.

It is also important to consider other factors that might be important in predicting popularity. There is evidence that rejected children lack social skills (e.g. Dodge, Pettit, McClaskey, & Brown, 1986) but this is not the only important factor. For example, physical attractiveness has been shown to be correlated with sociometric status (e.g. Tizard & Rees, 1975). Also, around puberty, early physical maturation is a variable affecting popularity and status (Smith, Cowie, & Blades, 1998). Although close friendships will also be affected by factors other than social skills, it is possible that these have a stronger influence on more distant relationships.

It still remains to explain why this study found no association between attachment and popularity when other researchers have found this link. Perhaps the most compelling explanation is one concerning the age group under investigation. The majority of studies that have found a link between security of attachment and popularity have studied children from early to middle childhood (ranging from about 6-12 years) (Cohn, 1990; Kerns et al., 1996; LaFreniere & Sroufe, 1985; Rudolph et al., 1995; Sroufe et al., 1999). Lieberman et al. (1999), in contrast, investigated older children (pre-adolescents and early adolescents), comparable in age to the participants used in the current investigation. They found that security of attachment related to children's reports of friendship qualities and lack of conflict with their best friends (assessed using the Friendship Qualities Scale, Bukowski, et al. 1994), but not to popularity (from peer nominations). They therefore found the same pattern of results as the current study.

These findings support the proposal that different aspects of children's peer relations are important at different ages (Bukowski & Hoza, 1989; Sullivan, 1953).

Specifically, Sullivan argued that the general treatment a child receives from the peer group is especially important during the juvenile period (from about 7 to 9 years). On the other hand, he argued that interaction on a dyadic level, that is, the experience of having a friend, is more important for preadolescents and early adolescents. He clearly implied that this relation is unique, as it presents opportunities for experiences (e.g. intimacy, closeness, and reciprocity) that are not available in other types of peer relations.

Sroufe et al. (1999) also hold this view, emphasising that peer relationships are a developmental system, and arguing that different tasks are pivotal to peer relationships at each advancing phase of development. For pre-school children, engaging in the world of peers is perhaps the major issue. During middle childhood, the capacity for friendships is evolving but, at the same time, finding an effective place in the peer group is also important. For the adolescent, more intimate relationships emerge, and friendships with same-gender and opposite-gender partners become a central concern.

According to this proposal, one would expect the correlation between attachment and popularity to peak during the school-age years, whereas the correlations between attachment and friendship would be expected to increase as children enter early adolescence.

Teacher-ratings of peer functioning

Securely attached adolescents showed no strong differences from those who were insecurely attached with respect to teacher-rated peer problems. However,

adolescents who were securely attached to mother did show significantly higher levels of prosocial behaviour than adolescents who were insecurely attached. Prosocial behaviour was not related to security of attachment to father. Comparing only those children with two parental attachment figures, the difference between mother and father remained significant.

Similarly, the overall coherence of the MCAI was correlated with prosocial behaviour but not peer problems.

As discussed earlier, it is likely that the teacher-rated scale of peer problems is assessing more general social skills associated with popularity, which do not appear to be linked to attachment.

Prosocial behaviour, on the other hand, appears to be measuring different social skills, which are distinct from popularity (although there may be some overlap). These social skills are strongly linked to security of attachment to mother. It may be that experience of a secure attachment relationship with the primary attachment figure does lead to the development of some general social skills associated with prosocial behaviour. Prosocial behaviour involves being considerate of other people's feelings and helping others in need. Sroufe & Fleeson (1986) argue that by participating in a relationship with an empathic, responsive caregiver, the child not only learns how to receive care (and count on help from others) but also learns the very nature of empathic relating. Thus, in more symmetrical relationships (such as peer relationships), the secure child will know how to respond empathically when the other is in need (Lieberman et al., 1999).

There has been other research linking attachment to prosocial behaviour. For example, van Lange, Otten, De Bruin, & Joireman (1997) showed that people who were characterised by prosocial behaviour in a series of social dilemma tasks showed higher levels of secure attachment relative to people with an individualistic or competitive style of interaction. They propose that secure individuals may have learned to perceive interdependent situations and partners as safe and secure, and their trusting manner could lead to cooperative patterns of interaction. In contrast, insecure individuals may have learnt to perceive interdependent situations and partners as unreliable and possibly dangerous or risky, leading to a distrusting manner and non-cooperative behaviour.

The association is not found with respect to attachment to father. There are several possible explanations for this finding. First, some researchers have proposed that one parent (the primary attachment figure) is more influential than the other in the construction of an internal working model (Main et al., 1985; Suess et al., 1992). Throughout this study, there has been a trend towards stronger effects for attachment to mother compared to father, but differences have not been robust. Second, it is important to note that in this sample, even for those adolescents who report on two parental attachment figures, a high proportion do not live with their "father", so that the maternal attachment figure may be more salient for these adolescents. Finally, it may be that the primary attachment figure, with a major role in caretaking, is more influential in the development of prosocial behaviour.

Attachment measured by the IPPA does not show this link with prosocial behaviour. It is not associated with either of the teacher-rated scales. The MCAI does, therefore, seem to be measuring some different aspects of attachment to the IPPA. Considering the content of the two measures, there are differences in the type of attachment related information that is elicited. The MCAI focuses on experiences in which the attachment system is presumed to be activated (upset, injury, illness, separation). The IPPA, on the other hand, does not focus on specific situations but elicits a general view of the parents.

Mentalising ability

Contrary to predictions, there were no differences in mentalising ability when comparing securely and insecurely attached adolescents. Similarly, no relationship was found using the IPPA as an attachment measure.

It was also predicted that mentalising ability would be related to the Overall Coherence scale of the MCAI, which incorporates "reflective function" and there was a significant correlation between the two. However, both the Overall Coherence scale and mentalising ability were also correlated with verbal ability and when this was controlled for, the relationship was no longer significant.

The association between verbal ability and mentalising was not unexpected. In younger children, the association between language ability and understanding of mind is well established. Performance on false-belief tasks has been shown to be linked to both receptive vocabulary (Happé, 1995) and tests of expressive language

(Cutting & Dunn, 1999; Jenkins & Astington, 1996). In a study of preadolescents, Bosacki & Astington (1999) showed a similar relationship between performance on a mentalising task and general vocabulary ability. However, there was no independent contribution of mentalising to the association in this study.

One explanation for this finding is that there is no real relationship between attachment and mentalising and that the association merely results from differences in verbal ability. However, there is growing evidence for the proposal that language development takes place in the context of the development of other cognitive abilities. For example, Paul Bloom (see Bloom, 2000) argues that children learn words through sophisticated cognitive abilities that exist for other purposes, including the ability to infer others' intentions. If this is the case, then we would expect a close association between the capacity to mentalise and verbal ability. An inability to detect independent effects of these two constructs might be due to the sensitivity of the instruments in measuring the constructs.

It was also predicted that the ability to mentalise would be linked to better peer relationships. No relationship was found between mentalising and friendship quality or between mentalising and teacher ratings of peer functioning. However, there was a trend ($p = .09$) towards adolescents with a higher mentalising ability to have a higher social preference score, and this remained unchanged after controlling for verbal ability. Given that the association is weak, the result could be spurious and should be interpreted with caution. However, it may be that the ability to mentalise, being able to work out what other people think, feel and want, gives the child skills which are important in gaining popularity with peers. These skills may be different

to those needed for successful close relationships, where parent-child attachment does seem to make an important contribution. Yet, with such a weak relationship, this idea can only remain as speculative and would require further investigation to see if there is a genuine relationship between mentalising ability and popularity.

Before it can be concluded that mentalising is not strongly related to security of attachment or peer relationships, the validity of the measure used needs to be considered. The mentalising task used in this study, the Strange Stories, was originally developed as an advanced test of theory of mind, using more naturalistic and complex stories than traditional theory of mind tasks. It was designed to distinguish differences in theory of mind ability in autistic subjects, rather than individual differences in normal subjects. In order to maximise the sensitivity of the task to individual differences the scoring system was extended to distinguish more sophisticated answers (based on work by Target et al., 1999).

Since this measure has not been used in this way before, it is difficult to establish its capacity to distinguish individual differences in mentalising. There are also no well-established instruments to compare it with. In younger children, tasks based on the false-belief paradigm have been shown to be robust measures of theory of mind acquisition, but there are no standard measures to investigate individual differences in mentalising in older children.

It may be that an adaptation of a traditional theory of mind task is not the best method to use to investigate individual differences in mentalising. Looking beyond

the theory of mind tradition, there and two other theoretical avenues that might contribute to the development of a more appropriate measure.

The first, which was outlined in the introduction, is the concept of "reflective function", the predisposition to understand behaviour in mental state terms, which is conceptually linked to attachment. A scale has recently been developed to assess reflective function in the middle childhood age range which could be used to assess mentalising (Oandasan, 1999). It was decided not to use this measure because of the potential overlap in methodology. At the moment, reflective functioning is a separate measure, but it is planned to incorporate this as a scale within the MCAI. It was felt, therefore, that an independent measure of mentalising would be preferable. However, since the relationship between these measures has not yet been established, it would be interesting to investigate this further, to find out whether reflective functioning does make an independent contribution to various outcome measures, such as peer functioning.

The second area that might contribute to the development of a more sensitive measure of mentalising is the domain of social cognition, which has explored different dimensions of social understanding. Drawing on this research, Bosacki & Astington (1999) developed a task for use with preadolescents involving the interpretation of ambiguous social situations. The concepts of conceptual role-taking, empathic sensitivity, person perception and alternative thinking were assessed. The scoring system was based on schemes both from the social cognition and theory of mind literature to provide a measure of the understanding of mental states and feelings in others. The task comprised two brief vignettes of ambiguous

social situations, and participants were asked questions to assess understanding of particular aspects of other's mental states. Bosacki & Astington (1999) describe the task as providing a balance between projective, open-ended narrative tasks (Fox, 1991; Selman, 1980) and more forced-choice, experimental tasks. The Strange Stories are closer to the latter category, and may not be as sensitive to individual differences with normal children in this age group.

Finally, in future research in this area, it would seem important to think carefully about which aspects of mentalising are being assessed and which aspects of peer relations these are related to. There are some findings from research with younger children that suggest that mentalising may not be a unitary skill. In younger children (40 months), Dunn (1995) found that understanding beliefs and understanding emotions were not significantly correlated with one another. It may be, as Astington & Gopnik (1991) have suggested, that different kinds of explanation may be needed for different aspects of social understanding.

Similarly, with peer relations, it is not yet clear which aspects of social behaviour might be linked to mentalising. In Bosacki and Astington's (1999) study of preadolescents, social understanding was found to be related to some, but not all aspects of social competence. The most robust correlation was found with the empathy sub-scale, suggesting that perhaps emotion understanding is important in preadolescents.

Methodology

Strengths

The majority of students from three form classes at a school in South London made up the sample. This group has the advantage of being ethnically diverse and includes children from a range of different socio-economic backgrounds and family structures. This is in contrast to the participants in existing studies of the MCAI, who have come from predominantly white, working-middle class, two parent households (Pilley, 1999; Shmueli-Goetz, 1998). This sample therefore extends the generalisability of findings from the MCAI. Data is currently being collected on clinic-referred children with emotional and behavioural difficulties and it will be interesting to compare this group with the other samples.

A further strength of this study is the use of multiple measures of attachment and peer relationships. For the measurement of attachment, an interview and self-report measure were used. The IPPA has the advantage of being quick and easy to administer but it is subject to the biases of self-report data, and it was not designed to differentiate among the attachment patterns delineated by Ainsworth and her colleagues. The MCAI is more time and labour intensive but aims to provide an objective rating of attachment classification in line with those defined for infants and adults. As a newly devised measure, the MCAI is still under development and the IPPA provided a means of assessing convergent validity.

Some longitudinal studies have measured attachment in infancy and looked at the quality of later peer relationships. Although relationship patterns established during infancy will often remain stable throughout childhood, attachment security can

change. In a cross-sectional study such as this one, associations between attachment and peer relationships are likely to be stronger if both are assessed concurrently.

Peer relationships are also measured using different methods and assess different aspects of peer relations. Self-report, peer-rated and teacher-rated assessments were used providing a range of different perspectives on the adolescent's peer relationships.

Limitations

Although the sample included a cross-section of socio-economic backgrounds and family structures, the extent of the social and educational disadvantage might have had an impact on the findings in this study. This is reflected in the low verbal ability of the sample. In addition, although the number of students who did not take part in the study was small, there was some evidence to suggest that they had greater difficulties in peer relationships than the participants. As discussed earlier, this range restriction might have reduced the association between variables.

There has been relatively little research into attachment and mentalising in adolescence. This has meant that it is difficult to find well-established measures to use. The MCAI is a recently developed measure but the evidence collected to date supports its validity and reliability. The mentalising measure used in this study, however, was non-standard and it is not clear whether the lack of positive associations to attachment and to peer relations reflects a genuine lack of correspondence or whether it reflects a lack of validity in the instrument.

Finally, this study is limited in terms of being able to state the direction of the pathway between attachment and peer relationships. Theoretically, the parent-child attachment is viewed as the fundamental context in which children develop an internal representation of relationships which then generalises to other relationships, including friendships with peers. However, with a cross-sectional study, it is not possible to justify causal inferences about the links between attachment and peer relations.

Alternative hypotheses about the connection between attachment and peer relations cannot be evaluated fully on the basis of this study and existing research (Lamb & Nash, 1989). Although the findings are consistent with the hypothesis that peer relationships are shaped by experiences in family relationships, it is also possible that experiences with peers alter the nature of the child-mother relationship. Bi-directional influence may be especially likely in adolescence when individuals acquire more sophisticated reasoning abilities that allow them to rethink their views of relationships (Main et al., 1985). Another possibility is that associations between a child's relationships with his or her mother and peers are due to a third variable, in particular, characteristics of the child. For example, a child's sociability or physical attractiveness may influence how both parents and peers respond to the child (Kerns et al., 1996). Effects are likely to be multiply determined, acting in both directions which will need to be identified via longitudinal designs (Lieberman et al., 1999).

An important longitudinal study is the Minnesota project (Sroufe et al., 1999). From their data on attachment and peer relations from infancy to adolescence, they conclude that peer relationships at any given age do, in fact, predict later social

competence, and also that such predictive peer competencies are themselves predicted by qualities of parent-child relationships that precede them. Peer and parent-child assessments together predict later social functioning better than either domain alone. Thus, for most children, there is a cascading effect, with early family relationships providing the foundation for deeper and more extensive and complex peer relationships. Each phase of peer competence builds on earlier peer experience and yet, continues to be dependent on attachment history and other aspects of early parent-child support.

Clinical implications and further research

Insecure attachment has been associated with a wide range of difficulties in later life, ranging from conduct disorder (Greenberg & Speltz, 1988; Lyons-Ruth, 1996), substance use/delinquency in adolescence (Allen, Hauser, & Borman-Spurrell, 1996) to personality disorder in adult life (Fonagy et al., 1996; Patrick, Hobson, Castle, Howard, & Maughan, 1994). While insecure attachment is not equated with psychopathology, it is regarded as an important vulnerability factor. It is proposed that early secure attachment can support the development of social competence and facilitate resilience for coping with adverse life events without developing psychological symptoms (e.g. Svanberg, 1998). Early intervention with children would seem important to try to prevent these negative outcomes.

Previous research had established that parent-child attachment has an important effect on social skills in younger children. This study supports the proposal that the attachment relationship continues to have an important influence on social abilities in

adolescence. The findings also suggest that an intervention based around the family unit and aimed at improving the attachment relationship, is likely to generalise to improvements in other close relationships.

Further research is needed to investigate the mechanisms involved in the transmission of dysfunction from family to peer relationships to inform the development of effective treatment programmes. If disturbed family relations lead to social difficulties primarily through the internalisation of negative beliefs, as proposed, identification and modification of such cognitions would be important. Even if representations act only to maintain earlier problems, early intervention could disrupt this escalating cycle and decrease children's vulnerability to future socio-emotional problems (Rudolph et al., 1995).

Although attachment theory focuses on dyadic relationships, it is important to recognise that these will be embedded in a wider family system which will influence the development and maintenance of attachment relationships. For example, it would seem appropriate to consider what family stems theorists (see Marvin & Stewart, 1990) call "crises of transition", such as the birth of a younger sibling, parental separation or divorce, beginning school or severe illness, which may affect the security-insecurity of a child's bond to an attachment figure (or figures). Uniting an attachment approach and a family systems approach may provide important avenues for both research and intervention (Stevenson-Hinde, 1990; Akister, 1998).

There is little known about factors that mediate between attachment and peer relations. It would seem particularly important to establish which variables might act

as protective factors or factors which promote resilience. One such potential factor is the capacity to mentalise. Fonagy et al. (1994) propose that children develop resilience against the transmission of insecurity from parent to child through the acquisition of the capacity to mentalise. If the mother is able to reflect on the infant's mental state, the infant's need to use defensive behaviours (insecurity) will be reduced.

In addition, the capacity to mentalise may also affect aspects of resilience beyond the transgenerational process. To take a few examples: a reliable capacity to reflect upon mental states enables the child to make optimal use of the individuals available to him, both through family (Quinton et al., 1984) and informal (Braithwaite & Gordon, 1991) relationships. A superior ability to mentalise may explain the greater interpersonal awareness and empathy (Pellegrini, 1980; Cowen et al., 1990) observed in resilient children. But perhaps even more important is the feedback aspect of reflection. The opportunity to reflect upon intention allows for the modification of unhelpful internal working models of relationships through encounters with new significant figures (Fonagy et al., 1994).

Exploring the capacity to mentalise in older children and adolescents is therefore an important area of future research. The first task will be the development of valid and reliable tools to measure this construct.

Conclusions

Attachment in older children and adolescents has been relatively under-researched. One reason for this has been the lack of a reliable and valid measure of attachment for this age group. The MCAI does seem to be an appropriate measure for early adolescents, and will allow research in this area to be extended. The association of verbal ability with the overall coherence scale warrants further investigation. The findings also suggest that, while overall coherence is highly related to attachment security, it should not be considered equivalent to the classification system.

Comparing the attachment measures, in many areas the findings using the MCAI and the IPPA were broadly similar, although the IPPA is not able to distinguish between attachment to mother and father. This provides support for the convergent validity of the MCAI. However, there were some differences suggesting that the MCAI may be more sensitive to certain aspects of the attachment relationship.

The main finding was that in adolescence, security of attachment to mother was related to the quality of the child's friendships and also to prosocial behaviour more generally, but not to general acceptance by peers. Thus it may be more important to examine components of the parent-child relationship that are expected to generalise to close relationships with peers, rather than peer relations in general (Lieberman et al., 1999). There were few differences according to security of attachment to mother or father, although there was a tendency for a more robust link between attachment to mother and peer relations. It will be interesting to see whether this reflects characteristics of the sample or whether this is generally true of adolescents.

Finally, the relationship that was found between mentalising and attachment was mediated by verbal ability. It remains to be seen whether further research, and the development of more sophisticated instruments, will show that mentalising is independently associated with attachment.

References

Ainsworth, M. D. S. (1989). Attachments beyond infancy. American Psychologist, 44, 709-716.

Ainsworth, M. D. S. (1990). Some considerations regarding theory and assessment relevant to attachment beyond infancy. In: M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), Attachment in the preschool years: theory, research and intervention (pp.463-488). The University of Chicago Press.

Ainsworth, M. D. S., Bell, S. M., & Stayton, D. J. (1971). Individual differences in Strange Situation behaviour of one year olds. In: H. R. Schaffer (Ed.), The origins of human social relations. London, England: Academic Press.

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the Strange Situation. Hillsdale, NJ: Erlbaum.

Ainsworth, M. D. S. & Marvin, R. On the shaping of attachment theory and research: An interview with Mary D. S. Ainsworth (Fall 1994). In: E. Waters, B. E. Vaughn, G. Posada, K. Kondo-Ikemura (Eds.), Caregiving, cultural, and cognitive perspectives on secure-base behavior and working models: New growing points of attachment theory and research. Monograph of the Society for research in Child Development. (Serial No. 244) (pp.3-21)

Ainsworth, M. D. S. & Wittig, B. (1969). Attachment and exploratory behavior on one-year-olds in a strange situation. In: B. M. Foss (Ed.), Determinants of infant behavior (Vol. 4) (pp.111-136). London: Methuen.

Akister, J. (1998). Attachment theory and systemic practice: Research update. Journal of Family Therapy, 20, 353-366.

Allen, J. P., Hauser, S. T., Bell, K. L., & O'Connor, T. G. (1994). Longitudinal assessment of autonomy and relatedness in adolescent-family interactions as

predictors of adolescent ego development and self-esteem. Child Development, 65, 179-194.

Allen, J. P., Hauser, S. T., & Borman-Spurrell, E. (1996). Attachment theory as a framework for understanding sequelae of severe adolescent psychopathology: An 11-year follow-up study. Journal of Consulting and Clinical Psychology, 64, 254-263.

Allen, J. P., Hauser, S. T., Eickholt, C., Bell, K. L., & O'Connor, T. G. (1994). Autonomy and relatedness in family interactions as predictors of expressions of negative adolescent affect. Journal of Research on Adolescence, 4, 535-552.

Allen, J. P. & Land, D. (1999). Attachment in adolescence. In: J. Cassidy & P. R. Shaver (Eds.), Handbook of attachment: Theory, research and clinical applications (pp.319-335). New York: The Guilford Press.

Allen, J. P., Moore, C. M., Kuperminc, G. P., & Bell, K. L. (1998). Attachment and adolescent psychosocial functioning. Child Development, 69, 1406-1419.

Armsden, G. C. & Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence. Journal of Youth & Adolescence, 16, 427-454.

Astington, J. & Gopnik, A. (1991). Theoretical explanations for children's understanding of the mind. British Journal of Developmental Psychology, 9, 7-31.

Astington, J. & Jenkins, J. (1995). Theory of mind development and social understanding. Cognition and Emotion, 9, 151-165.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice-Hall.

Barker, C., Pistrang, N., & Elliott, R. (1994). Research methods in clinical and counselling psychology. Chichester, England, UK: John Wiley & Sons.

Baron-Cohen, S., Tager-Flusberg, H., & Cohen, D. J. (1993). Understanding other minds: Perspectives from autism. Oxford: Oxford University Press.

Berlin, L. J. & Cassidy, J. (1999). Relations among relationships: contributions from attachment theory and research. In: J. Cassidy & P. R. Shaver (Eds.), Handbook of attachment: theory, research and clinical applications (pp.688-712). New York: The Guilford Press.

Berndt, T. J., Hawkins, J. A., & Hoyle, S. G. (1986). Changes in friendship during a school year: Effects on children's and adolescents' impressions of friendship and sharing with friends. Child Development, 57, 1284-1297.

Berndt, T. J. & Ladd, G. W. (Eds.) (1989). Peer relationships in child development. New York, NY, USA: John Wiley & Sons.

Berndt, T. J. & Perry, T. B. (1986). Children's perceptions of friendships as supportive relationships. Developmental Psychology, 22, 640-648.

Bloom, P. (2000). How children learn the meanings of words. Cambridge, MA: The Mit Press.

Blos, P. (1967). The second individuation process of adolescence. The psychoanalytic study of the child, 22, 162-186.

Bosacki, S. & Astington, J. W. (1999). Theory of mind in preadolescence: Relations between social understanding and social competence. Social Development, 8, 237-255.

Bowlby, J. (1969/1982). Attachment and Loss: Vol. 1: Attachment. New York: Basic Books.

Bowlby, J. (1973). Attachment and loss: Vol. 2. Loss. New York: Basic Books.

Bowlby, J. (1979). The making and breaking of affectional bonds. London: Tavistock.

Bowlby, J. (1980). Attachment and loss: Vol. 3. Loss: Sadness and depression. New York: Basic Books.

Bowlby, J. (1988). A secure base: Parent-child attachment and healthy human development. New York: Basic Books.

Braithwaite, R. L. & Gordon, E. W. (1991). Success against the odds. Howard University Press.

Bretherton, I. & Munholland, K. A. (1999). Internal working models in attachment relationships. In: J. Cassidy & P. R. Shaver (Eds.), Handbook of attachment: theory, research and clinical applications (pp.89-111). New York: The Guilford Press.

Buhrmester, D. (1992). The developmental courses of sibling and peer relationships. In: F. Bou & J. Dunn (Eds.), Children's sibling relationships (pp.192-240). Hillsdale, NJ: Erlbaum.

Buhrmester, D. & Furman, W. (1987). The development of companionship and intimacy. Child Development, 58, 1101-1113.

Bukowski, W. M. & Hoza, B. (1989). Popularity and friendship: Issues in theory, measurement and outcome. In: T. J. Berndt & G. W. Ladd (Eds.), Peer relationships in child development (pp.15-45). New York: Wiley.

Bukowski, W. M., Hoza, B., & Boivin, M. (1993). Popularity, friendship, and emotional adjustment during early adolescence. In: B. Laursen (Ed.), New directions for child development, 60 (pp.24-38). San Francisco: Jossey-Bass Publishers.

Bukowski, W. M., Hoza, B., & Newcomb, A. F. (1984). Friendship, popularity, and the "self" during early adolescence. Unpublished manuscript.

Bukowski, W. M. & Newcomb, A. F. (1987). The stability and determinants of sociometric status and friendship choice: A longitudinal perspective. Developmental Psychology, 20, 265-274.

Carlson, K., Onishi, M., & Gjerde, P. (1997). Assessment of romantic attachment: Comparison of self-report and interview methodologies. Paper presented at the annual meeting of the American Psychological Association, Chicago.

Cassidy, J., Kirsh, S. J., Scolton, K. L., & Parke, R. D. (1996). Attachment and representations of peer relationships. Developmental Psychology, 32, 892-904.

Cohn, D. A. (1990). Child-mother attachment of six-year-olds and social competence at school. Child Development, 61, 152-162.

Cohn, D. A., Patterson, C. J., & Christopoulos, C. (1991). The family and children's peer relations. Journal of Social & Personal Relationships, 8, 315-346.

Coie, J. D. & Dodge, K. A. (1983). Continuities and changes in children's social status: A five year longitudinal study. Merrill-Palmer Quarterly, 29, 261-282.

Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions of social status: A cross-age perspective. Developmental Psychology, 17, 557-570.

Coie, J. D., Dodge, K. A., & Kupersmidt, J. (1990). Peer group behavior and social status. In: S. R. Asher & J. D. Coie (Eds.), Children's status in the peer group (pp.17-59). New York: Cambridge University Press.

Collins, W. A. (1990). Parent-child relationships in the transition to adolescence: Continuity and change in interaction, affect and cognition. In: R. Montemayor, G. R. Adams & T. P. Gullotta (Eds.), Advances in adolescent development (pp.85-106). Newbury Park, CA, Sage

Cowen, E. L., Wyman, P. A., Work, W. C. & Parker, G. R. (1990). The Rochester child resilience project: overview and summary of first year findings. Development and Psychopathology, 2, 193-212

Crittenden, P. M. (1990). Internal representational models of attachment relationships. Infant Mental Health Journal, 11, 259-277.

Crowell, J. A., Fraley, R. C., & Shaver, P. R. (1999). Measurement of individual differences in adolescent and adult attachment. In: J. Cassidy & P. R. Shaver (Eds.), Handbook of attachment: theory, research and clinical applications (pp.434-465). New York: The Guilford Press.

Crowell, J. A. & Treboux, D. (1995). A review of adult attachment measures: Implications for theory and research. Social Development, 4, 294-327.

Crowell, J. A., Waters, E., Treboux, D., O'Connor, E., Colon-Downs, C., & Feider, O. (1997). Discriminant validity of the adult attachment interview. Child Development, 67, 2584-2599.

Cutting, A. L. & Dunn, J. (1999). Theory of mind, emotion understanding, language, and family background: Individual differences and interrelations. Child Development, 70, 853-865.

Denham, S. A., McKinley, M. J., Couchoud, E. A., & Holt, R. (1990). Emotional and behavioural predictors of preschool peer ratings. Child Development, 61, 1145-1152.

Denham, S. A., Zoller, D., & Couchoud, E. A. (1994). Socialisation of preschoolers emotion understanding. Developmental Psychology, 30, 928-936.

Dockett, S. (1997, April). Young children's peer popularity and theories of mind. Poster presented at the biennial meeting of the Society for Research in Child Development, Washington, DC.

Dodge, K. A., Pettit, G. S., McClaskey, C. L., & Brown, M. (1986). Social competence in children. Monographs of the Society for Research in Child Development, 51, 1-85.

Donelan-McCall, N. & Dunn, J. (1996). School work, teachers, and peers: The world of first grade. International Journal of Behavioral Development, 21, 155-178.

Dunn, J. (1995). Children as psychologists: The later correlates of individual differences in understanding of emotions and other minds. Cognition and Emotion, 9, 187-201.

Dunn, J., Brown, J., & Beardsall, L. (1991). Family talk about feeling states and children's later understanding of other's emotions. Developmental Psychology, 27, 448-455.

Elander, J. & Rutter, M. (1996). Use and development of the Rutter Parents' and Teachers' Scales. International Journal of Methods in Psychiatric Research, 6, 63-78.

Elicker, J., Englund, M., & Sroufe, L. A. (1992). Predicting peer competence and peer relationships in childhood from early parent-child relationships. In: R. D. Parke & G. W. Ladd (Eds.), Family-peer relationships: Modes of linkage (pp.77-106). Hillsdale, NJ, USA: Lawrence Erlbaum Associates, Inc.

Fernyhough, C. (1996). The dialogic mind: A dialogic approach to the higher mental functions. New Ideas in Psychology, 14, 47-62.

Fonagy, P., Leigh, T., Steele, M., Steele, H., Kennedy, R., Mattoon, G., Target, M., & Gerber, A. (1996). The relation of attachment status, psychiatric classification, and response to psychotherapy. Journal of Consulting and Clinical Psychology, 64, 22-31.

Fonagy, P., Steele, H., Steele, M., & Holder, J. (1997). Children securely attached in infancy perform better in belief-desire reasoning task at age five. Child Development, Manuscript submitted

Fonagy, P., Steele, M., Steele, H., Higgitt, A. C., & Target, M. (1994). The Emmanuel Miller Memorial Lecture 1992: The theory and practice of resilience. Journal of Child Psychology and Psychiatry, 35, 231-257.

Fonagy, P. & Target, M. (1997). Attachment and reflective function: Their role in self-organization. Development & Psychopathology, 9, 679-700.

Fonagy, P., Redfern, S., & Charman, T. (1997). The relationship between belief-desire reasoning and a projective measure of attachment security (SAT). British Journal of Developmental Psychology, 15, 51-61.

Fox, R. (1991). Developing awareness of mind reflected in children's narrative writing. Journal of Developmental Psychology, 9, 281-298.

Fraley, R. C. & Davis, K. E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. Personal Relationships, 4, 131-144.

Frith, U., Morton, J., & Leslie, A. M. (1991). The cognitive basis of a biological disorder: Autism. Trends in Neuroscience, 14, 433-438.

Furman, W. & Wehner, E. (1994). Romantic views: Toward a theory of adolescent romantic relationships. In: R. Montemayor & G. R. Adams (Eds.), Personal relationships during adolescence. Advances in adolescent development: An annual book series, Vol. 6 (pp.168-195). Thousand Oaks, CA: Sage Publications.

George, C., Kaplan, N., & Main, M. (1985). The Adult Attachment Interview. Unpublished manuscript. University of California at Berkeley.

Giordano, P. C., Cernkovic, S. A., Groat, H. T., Pugh M.D., & Swinford, S. P. (1998). The quality of adolescent friendships: Long term effects? Journal of Health & Social Behavior, 39, 55-71.

Gold, M. & Yanov, D. S. (1985). Mothers, daughters, and girlfriends. Journal of Personality and Social Psychology, 49, 654-659.

Goldberg, W. A. & Easterbrooks, M. A. (1984). The role of marital quality in toddler development. Developmental Psychology, 20, 504-514.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. Journal of Child Psychology & Psychiatry & Allied Disciplines, 38, 581-585.

Gopnik, A. (1996). Theories and modules; creation myths, developmental realities, and Neurath's boat. In: P. Carruthers (Ed.), Theories of theory of mind (pp.169-183). Cambridge: Cambridge University Press.

Gottman, J. M., Gonso, J., & Rasmussen, R. (1975). Social interaction, social competence, and friendship in children. Child Development, 46, 709-718.

Greenberg, M. T. & Speltz, M. L. (1988). Attachment and the ontogeny of conduct problems. In: J. Belsky & T. Nezworski (Eds.), Clinical implications of attachment (pp.177-218). Hillsdale, NJ: Erlbaum.

Grossmann, K. E. & Grossman, K. (1991). Attachment quality as an organizer of emotional and behavioral responses in a longitudinal perspective. In: C. M. Parkes, J. Stevenson-Hinde, & et al. (Eds.), Attachment across the life cycle. London, England UK: Tavistock/Routledge.

Hamilton, C. E. (1995). Continuity and discontinuity of attachment from infancy through adolescence. Paper presented at the biennial meeting of the Society for Research in Child Development, Indianapolis, IN.

Happé, F. (1994). An advanced test of theory of mind: Understanding of story characters' thoughts and feelings by able autistic, mentally handicapped, and normal children and adults. Journal of Autism and Developmental Disorders, 24, 129-155.

Happé, F. (1995). The role of age and verbal ability in the theory of mind task performance of subjects with autism. Child Development, 66, 843-855.

Harlow, H. & Harlow, M. (1965). The affectional systems. In: A. Schrier, H. Harlow, & F. Stollnitz (Eds.), Behavior of non-human primates. New York: Academic Press.

Harris, P. L. (1991). The work of the imagination. In: A. Whiten (Ed.), Natural theories of mind: Evolution, development and simulation of everyday mindreading. Oxford: Blackwell.

Harris, P. L. (1992). From simulation to folk psychology: The case for development. Mind and Language, 7, 120-144.

Hartup, W. (1980). Peer relations and family relations: Two social worlds. In: M. Rutter (Ed.), Scientific foundations of developmental psychiatry. London: Heinemann.

Henggeler, S. W., Edwards, J. J., Cohen, R., & Summerville, M. B. (1991). Predicting changes in children's popularity: the role of family relations. Journal of Applied Developmental Psychology, 12, 205-218.

Hertz-Lazarowitz, R. L., Rosenberg, M., & Guttman, J. (1989). Children of divorce and their intimate relationships. Youth & Society, 21, 85-104.

Hill, J. P. & Holmbeck, G. N. (1996). Attachment and autonomy during adolescence. Annals of Child Development, 3, 145-189.

Hobson, R. P. (1993). Autism and the development of mind. Hove: Lawrence Erlbaum Associates.

Howes, C., Matheson, C. C., & Hamilton, C. E. (1994). Maternal, teacher, and child care history correlates of children's relationships with peers. Child Development, 65, 264-273.

Isabella, R. A. (1993). Origins of attachment: Maternal interactive behaviour across the first year. Child Development, 64, 605-621.

Jacoby, L. L., Toth, J. P., Lindsay, D. S., & Debner, J. A. (1992). Lectures for a layperson: Methods for revealing unconscious processes. In: R. F. Bornstein & T. S. Pittman (Eds.), Perception without awareness (pp.31-120). New York: Guilford Press.

Jenkins, J. & Astington, J. (1996). Cognitive factors and family structure associated with theory of mind development in young children. Developmental Psychology, 32, 70-78.

Kahn, C. M. (1989). Family relationships and friendships in adolescence: Continuities and discontinuities. Unpublished doctoral dissertation, Catholic University of America, Washington, DC

Kerns, K. A. (1996). Individual differences on friendship quality: Links to child-mother attachment. In: W. M. Bukowski, A. F. Newcomb, & W. Hartup (Eds.), The company they keep (pp.137-157). New York: Cambridge University Press.

Kerns, K. A. & Barth, J. (1995). Parent-child attachment and physical play: Convergence across components of parent-child relationships and their relations to peer competence. Journal of Social & Personal Relationships, 12, 243-260.

Kerns, K. A., Klepac, L., & Cole, A.-K. (1996). Peer relationships and preadolescents' perceptions of security in the child-mother relationship. Developmental Psychology, 32, 457-466.

Klagsbrun, M. & Bowlby, J. (1976). Responses to separation from parents: A clinical test for young children. British Journal of Projective Psychology and Personality Study, 21, 7-26.

Kobac, R. R. & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. Child Development, 59, 135-146.

LaFreniere, P., Provost, M. A., & Dubeau, D. (1992). From an insecure base: Parent-child relations and internalising behaviour in the pre-school. Early Development & Parenting, 1, 137-148.

LaFreniere, P. J. & Sroufe, L. A. (1985). Profiles of peer competence in the preschool: Interrelations between measures, influence of social ecology, and relation to attachment history. Developmental Psychology, 21, 56-69.

Lalonde, C. & Chandler, M. (1995). False belief understanding goes to school: On the social-emotional consequences of coming early or late to a first theory of mind. Cognition and Emotion, 9, 167-185.

Lamb, M. E. & Nash, A. (1989). Infant-mother attachment, sociability, and peer competence. In: T. J. Berndt, G. W. Ladd, & et al. (Eds.), Peer relationships in child development (pp.219-245). New York, NY, USA: John Wiley & Sons.

Lamke, T. A. & Nelson, M. J. (1973). The Henmon-Nelson Tests of Mental Ability. Boston: Houghton Mifflin.

Larson, R. W., Richards, M. H., Moneta, G., Holmbeck, G., & Duckett, E. (1996). Changes in adolescents' daily interactions with their families from ages 10 to 18: Disengagement and transformation. Developmental Psychology, 32, 744-754.

Leslie, A. M. (1987). Pretence and representations: The origins of 'theory of mind'. Psychological Review, 94, 412-426.

Lewis, M. & Feiring, C. (1989). Early predictors of childhood friendship. In: T. J. Berndt & G. W. Ladd (Eds.), Peer relationships in child development. (pp.246-273) New York: Wiley.

Lieberman, A. F. (1977). Preschoolers' competence with a peer: Relations with attachment and peer experience. Child Development, 48, 1277-1287.

Lieberman, M., Doyle, A.-B., & Markiewicz, D. (1999). Developmental patterns in security of attachment to mother and father in late childhood and early adolescence: Associations with peer relations. Child Development, 70, 202-213.

Lillard, A. S. (1993). Pretend play skills and the child's theory of mind. Child Development, 64, 348-371.

Lui, X.-D., Colon-Downs, C., Lord, C., Wang, C., & Crowell, J. (1995) Experience and the development of AAI coherence. Poster presented at the biennial meeting of the Society for Research in Child Development, Indianapolis.

Lyons-Ruth, K. (1996). Attachment relationships among children with aggressive behavior problems: The role of disorganized early attachment patterns. Journal of Consulting and Clinical Psychology, 64, 64-73.

Main, M. (1991). Metacognitive knowledge, metacognitive monitoring, and singular (coherent) versus multiple (incoherent) models of attachment: Findings and directions for future research. In: C. M. Parkes, J. Stevenson-Hinde, & P. Marris (Eds.), Attachment across the life cycle (pp.127-159). London: Routledge.

Main, M. & Goldwyn, R. Adult attachment rating and classification system, Version 6.0. Unpublished manuscript, University of California at Berkeley. 1991.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A move to the level of representation. In: I. Bretherton & E. Waters, Growing points in attachment theory and research. Monographs of the society for research in child development, 50, 66-106.

Marvin, R. S. & Stewart, R. B. (1990). A family systems framework for the study of attachment. In: M. T. Greenberg, D. Cicchetti & E. M. Cummings (Eds.),

Attachment in the preschool years: theory, research and intervention. (pp. 51-86). Chicago: The University of Chicago Press.

Masters, J. C. & Furman, W. (1981). Popularity, individual friendship selection, and specific peer interaction among children. Developmental Psychology, 17, 344-350.

Matthews, D. & Keating, D. (1995). Domain specificity and habits of mind: An investigation of patterns of high-level development. Journal of Early Adolescence, 15, 319-343.

Meins, E. (1997). Security of attachment and the social development of cognition. Hove: Psychology Press.

Meins, E., Fernyhough, C., Russell, J., & Clark-Carter, D. (1998). Security of attachment as a predictor of symbolic and mentalising abilities: A longitudinal study. Social Development, 7, 1-24.

Moos, R. H. & Moos, B. (1986). Family Environmental Scale manual: Second edition. Palo Alto, CA: Consulting Psychologists Press.

Morisset, C. E., Barnard, K. E., Greenberg, M. T., Booth, C. L., & Spieker, S. J. (1990). Environmental influences on early language development: the context of social risk. Development & Psychopathology, 2, 127-149.

Oandasan, C. L. (1999). Reflective functioning in the latency period: An exploratory study using a new measure - the Child Reflective Functioning Scale. Unpublished MSc. dissertation. The Anna Freud Centre and University College London

Olson, D. H. & Portner, J. (1982). FACES II: Family adaptability and cohesion evaluation scales. Family Social Sciences, University of Minnesota, St Paul, Minnesota.

Parke, R. D. (1995). Fathers and families. In: M. H. Bornstein (Ed.), Handbook of parenting: Vol. 3. Status and social conditions of parenting (pp.27-63). Hillsdale, NJ: Erlbaum.

Parker, J. G. & Asher, S. R. (1987). Peer relations and later personal adjustment: are low-accepted children "at risk"? Psychological Bulletin, 102, 389.

Parker, J. G. & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. Developmental Psychology, 29, 611-621.

Patrick, M., Hobson, P., Castle, D., Howard, R., & Maughan, B. (1994). Personality disorder and the mental representatives of early social experience. Development & Psychopathology, 6, 375-388.

Patterson, C. J., Kupersmidt, J., & Griesler, P. C. (1990). Children's perceptions of self and of relationships with others as a function of sociometric status. Child Development, 61, 1335-1349.

Pellegrini, D. (1980). The social-cognitive qualities of stress-resistant children. Unpublished doctoral dissertation. University of Minnesota.

Pellegrini, D. (1985). Social cognition and competence in middle childhood. Child Development, 56, 253-264.

Perner, J. (1991). Understanding the representational mind. Cambridge: MIT Press.

Pilley, T. (1999). A psychometric study of the child attachment interview: reliability and validity. Unpublished D.Clin.Psy dissertation. University College London

Putallaz, M. & Heflin, A. H. (1990). Parent child interaction. In: S. R. Asher & J. D. Coie (Eds.), Peer rejection in childhood (pp.189-216). New York: Cambridge University Press.

Quinton, D., Rutter, M. & Liddle, C. (1984). Institutional rearing, parenting difficulties, and marital support. Psychological Medicine, 14, 107-124.

Rubin, K. (1972). Relationship between egocentric communication and popularity among peers. Developmental Psychology, 7, 364.

Rudolph, K. D., Hammen, C., & Burge, D. (1995). Cognitive representations of self, family and peers in school-age children: Links with social competence and sociometric status. Child Development, 66, 1385-1402.

Schaffer, R. (1996). Social Development. Oxford, UK: Blackwell.

Selman, R. (1980). The growth of interpersonal understanding. New York: Academic Press.

Shmueli-Goetz, Y. (1998). The development of the Child Attachment Interview and the study of its psychometric properties. Unpublished PhD dissertation. University College London.

Shmueli-Goetz, Y., Target, M., Datta, A., & Fonagy, P. (2000). Middle Childhood Attachment Interview Coding and Classification Manual – Version III. Unpublished manuscript. University College London.

Slomkowski, C. & Dunn, J. (1996). Young children's understanding of other people's beliefs and feelings and their connected communication with friends. Developmental Psychology, 32, 442-447.

Smith, P., Cowie, H., & Blades, M. (1998). Friends and school. In: Understanding children's development (3rd edition) (pp.109-141). Oxford, England UK: Blackwell.

Sroufe, L. A., Egeland, B., & Carlson, E. A. (1999). One social world: The integrated development of parent-child and peer relationships. In: W. A. Collins & B. Laursen (Eds.), Relationships as developmental contexts. The Minnesota

symposia on child psychology, Vol. 30. (pp.241-261). Mahwah, NJ, USA: Lawrence Erlbaum Associates, Inc.

Sroufe, L. A. & Fleeson, J. (1986). Attachment and the construction of relationships. In: W. Hartup & Z. Rubin (Eds.), Relationships and development (pp.51-71). New York: Cambridge University Press.

Steele, H. & Steele, M. (1994). Intergenerational patterns of attachment. Advances in Personal Relationships, 5, 93-120.

Steinberg, L. (1990). Autonomy, conflict, and harmony on the family relationship. In: S. S. Feldman & G. R. Elliot (Eds.), At the threshold: The developing adolescent (pp.255-276). Cambridge, MA: Harvard University Press.

Steinberg, L. & Brown, B. B.(1989). Beyond the classroom: parental and peer influences on high school achievement. Paper presented at the meetings of the American Educational Research Association.

Stevenson-Hinde, J. (1990). Attachment within family systems: An overview. Infant Mental Health Journal, 11, 218-227.

Suess, G., Grossman, K., & Sroufe, L. A. (1992). Effects of infant attachment to mother and father on quality of adaptation in preschool: From dyadic to individual organization of the self. International Journal of Behavioral Development, 15, 43-66.

Sullivan, H. S. (1953). The interpersonal theory of psychiatry. New York: Norton.

Suomi, S. J. (1999). Attachment in rhesus monkeys. In: J. Cassidy & P. R. Shaver (Eds.), Handbook of attachment: theory, research and clinical applications (pp.181-197). New York: The Guilford Press.

Svanberg, P. O. G. (1998). Attachment, resilience and prevention. Journal of Mental Health, 7, 543-578.

Target, M., Janes, K., Schneider, T., & Ensik, K. (1999). Coding manual for the Happé Strange Stories, used in middle childhood and pre-adolescents. Unpublished manual, the Anna Freud Centre and University College London.

Target, M., Fonagy, P., Shmueli-Goetz, Y., Datta, A., & Schneider, T. (1998). The child attachment interview (CAI) protocol. Revised Edition VI, 1/5/99. Unpublished manuscript. University College London.

Thompson, R. A. (1993). Socioemotional development: enduring issues and new challenges. Developmental Review, 13, 372-402.

Tizard, B. & Rees, J. (1975). The effect of early institutional rearing on the behaviour problems and affectional relationships of four-year-old children. Journal of Child Psychology & Psychiatry & Allied Disciplines, 16, 61-73.

Treboux, D., Crowell, J. A., Owens, G., & Pan, H.(1994). Attachment behaviors and working models: Relation to best friendships and romantic relationships. Paper presented at the biennial meeting of the Society for Research in Adolescence, San Diego, CA

van Ijzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the adult attachment interview. Psychological Bulletin, 117, 1-17.

van Ijzendoorn, M. H., Dijkstra, J., & Bus, A. G. (1996). Attachment, intelligence, and language: A meta-analysis. Social Development, 4, 2584-2599.

van Lange, P. A. M., Otten, W., De Bruin, E. M. N., & Joireman, J. A. (1997). Development of prosocial, individualistic, and competitive orientations: theory and preliminary evidence. Journal of Personality and Social Psychology, 73, 733-746.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. (Edited by M. Cole, V. John-Steiner, S. Scribner, & E. Souberman), Cambridge, MA: Harvard University Press.

Waters, E., Merrick, S. K., Albersheim, L., & Treboux, D.(1995). Attachment security from infancy to early adulthood: A 20-year longitudinal study. Paper presented at the biennial meeting of the Society for Research in Child Development, Indianapolis, IN

Waters, E., Wippman, J., & Sroufe, L. A. (1979). Attachment, positive affect and competence in the peer group: Two studies in construct validation. Child Development, 50, 821-829.

Watson, A. C., Nixon, C. L., Wilson, A., & Capage, L. (1999). Social interaction skills and theory of mind in young children. Developmental Psychology, 35, 386-391.

Wechsler, D. (1992). Wechsler Intelligence Scale for Children - Third edition UK. New York: The Psychological Corporation, Harcourt Brace Jovanovich Publishing.

Weinfield, N. S., Sroufe, L. A., Egeland, B., & Carlson, E. A. (1999). The nature of individual differences in infant-caregiver attachment. In: J. Cassidy & P. R. Shaver (Eds.), Handbook of attachment: Theory, research, and clinical applications (pp.68-88). New York, NY, USA: The Guilford Press.

Wellman, H. (1988). First steps in the theorizing about the mind. In: J. Astington, P. Harris, & D. Olson (Eds.), Developing theories of mind (pp.64-92). New York: Cambridge University Press.

Werner, R. & Cassidy, K. (1997). Children's psychological understanding and its relationship to social information processing and social competence. Poster presented at the biennial meeting of the Society for Research in Child Development, Washington, DC.

Wilks, J. (1986). The relative importance of parent and friends in adolescent decision making. Journal of Youth & Adolescence, 15, 323-334.

Wright, J. C., Binney, V., & Smith, P. K. (1985). Security of attachment in 8-12-year-olds: revised version of the separation anxiety test, its psychometric properties and clinical interpretation. Journal of Child Psychology and Psychiatry, 36, 757-774.

Youngblade, L. M. & Belsky, J. (1992). Parent-child antecedents of 5-year old close friendships: A longitudinal analysis. Developmental Psychology, 28, 700-713.

Youngblade, L. M., Park, K. A., & Belsky, J. (1993). Measurement of young children's close friendship: A comparison of two independent assessment systems and their associations with attachment security. International Journal of Behavioral Development, 16, 563-587.

Zimmerman, P., Schuerer-Englisch, H., & Grossmann, K. E.(1996). Social relationships in adolescence: Continuity and transformations. Paper presented at the biennial meeting of the European Association for Research on Adolescence, Liege, Belgium.

INDEX OF APPENDICES

APPENDIX 1

THE MAUDSLEY
Advancing mental health care

Maudsley Hospital

Denmark Hill
London
SE5 8AZ

Telephone: 0171 703 6333
Fax: 0171 819 2171

ETHICAL COMMITTEE (RESEARCH)

Tel: (0171 919) 2892

26th February, 1997

Dr D Bolton
Department of Psychology
Institute of Psychiatry

Dear Dr Bolton

Re: **The role of attachment in emotional and behavioural disorders in early and mid-adolescence: working models, genetics and differential experiences (008/97)**

The Ethical Committee (Research) considered and approved the above study at its meeting on 21 February 1997.

Initial approval is given for one year. This will be extended automatically only on completion of annual progress reports on the study when requested by the EC(R). Please note that as Principal Investigator you are responsible for ensuring these reports are sent to us.

Please note that projects which have not been commenced within two years of original approval must be re-submitted to the EC(R).

Please let me know if you would like to nominate a specific contact person for future correspondence about this study.

Any serious adverse events which occur in connection with this study should be reported to the Committee using the attached form.

Please quote Study No. 008/97 in all future correspondence.

Yours sincerely,

Margaret M. Chambers

Margaret Chambers
Committee Administrator

APPENDIX 2

Chestnut Grove School

45 Chestnut Grove, Balham, SW12 8JZ
Tel: 020 8673 8737 Fax: 020 8675 1190 E-Mail:chestnutgr@aol.com
Headteacher: Margaret Peacock MA

Information sheet for parents and guardians

Dear Parent or Guardian,

The purpose of this letter is to introduce a project at Chestnut Grove school, entitled the "Improving Behaviour Project", that is designed to find out more about students' experiences at school. The aim of the project is to understand how students view their experiences in the classrooms, with teachers, and with their peers. In addition, we are interested in how students' views and attitudes about school may be related to their experiences at home and how they view their own abilities and motivation. By better understanding the experiences of students at Chestnut Grove, we may be in a better position to respond to their educational needs. The project will involve a brief interview about peers in his/her registration group and experiences at home, as well as questionnaires about the student's view of his/her strengths and weaknesses in achievement and academic development. All of the interviews and questionnaires have been used many times before with students; in the past, most students have found the interviews and questionnaires to be interesting and enjoyable. One of the interviews will be video recorded. Students will miss a class period to participate in the project. Every effort will be made to ensure that students do not miss important classroom material. All the information collected will be held in strict confidence, and any identifying information will be removed. The information will be used to inform the school about the factors that help promote student success.

All students in two year 8 groups are being invited to participate in the project. Your son/daughter is a member of one of those two groups and is therefore being invited to participate. Participation in this project is entirely voluntary. Also, if you and your child agree to take part in this study but then wish to withdraw, you may do so at any time without giving a reason. If you decide not to take part in this study or you change your mind and decide to withdraw from the study, this will in no way affect your child's education at Chestnut Grove school.

Students may benefit from participation in the project by having the opportunity to share their views about their experiences at school. Students will be given a £2 voucher as a reward for participating. We do not anticipate that there are any significant risks of participating in the project. The project has been approved by the University ethical review committee. The project is being conducted by Dr. Tom O'Connor from the University of London, and his colleagues Harriet Humfress and Jeremy Slaughter, from University College London. If you have any questions about this project, please contact Dr. Tom O'Connor at 020 7848 0862 or Les Dennis at Chestnut Grove school.

APPENDIX 3

Parent/guardian consent form for participation in the Chestnut Grove project.

My son/daughter is a member of one of the two form tutor groups that were invited to participate in the project. I give my permission for my son/daughter to participate in the "Improving Behaviour Project" as described above.

.....
Name of child (please print)

.....
Signature Date

Please return to your son/daughter's form tutor.

APPENDIX 4

THE MIDDLE CHILDHOOD ATTACHMENT INTERVIEW (MCAI) PROTOCOL

Devised By

Mary Target, Peter Fonagy, Yael Shmueli-Goetz, Adrian Datta, and Tiffany Schneider.

The Sub Department of Clinical Health Psychology, University College London, Gower Street, London WC1E 6BT.

Middle Childhood Attachment Interview (MCAI) Protocol

(8 TO 12 YEAR OLDS) (Revised Edition VII, 1/6/99)

The MCAI aims to access children's mental representations of attachment figures and significant others (if appropriate). One way of trying to access these representations is to ask children about their experiences with, and perceptions of, their parents.

The MCAI is not predominantly designed to elicit biographical or episodic information, rather it attempts to capture the affective and procedural qualities of the relationships described.

Central to the MCAI is the degree to which the child conceives of his or her parents as emotionally available and responsive, and is thereby able to use them as a secure base. More specifically, the MCAI seeks to tap into memories (or fantasies) the child may have concerning times of crisis (e.g., personal injury, bullying), losses, and separations from parents, in addition to positive aspects of their relationships with their parents (cuddling, talking, spending time together).

The interviewer should consistently hold in mind the importance of assessing the child's view of the Relationship Episodes (REs). Therefore, prompts should reflect this emphasis.

Some children are able to recount coherently and sequentially the events within which the REs are contained. However, others may require additional help in the form of scaffolding from the interviewer in order for them to tell the story in a way that can easily be understood and subsequently coded. The questions ask the child about his or her relationship with attachment figures and about specific situations in that relationship, such as when Mum gets upset or when Mum and Dad argue.

During the interview it is extremely important to obtain specific examples from the child in response to EACH question. This is VERY important particularly

for questions 2 which asks the child for three words to describe themselves and questions 3 and 5 which ask what it's like to be with Mum and Dad respectively. You MUST ask the child for an example for each of the words they give, as the coding system for this interview relies upon the child giving specific examples to illustrate each of the words he/she uses. For instance, in question 3 the child might say that it feels safe, happy and relaxing to be with Mum so you must ask the child for an example of when it felt safe, an example of when it felt happy and an example of when if felt relaxing to be with Mum. If the child finds this difficult, then you can ask him/her to "describe a time when it felt ..." , or "tell me about the last time it felt....." to be with Mum. Always follow up brief answers to questions by asking for examples. The coherence of the interview can only be assessed if the child is asked to provide examples for his/her answers – if the child says that when Mum gets upset, she shouts and he/she gets sent to his/her room where he/she plays computer games, then ask for a specific example of when Mum became upset. Remember, an interview where the interviewer accepts answers like "it feels happy to be with Mum because she is nice and does things for me" is likely to be rendered uncodable due to insufficient information. This answer *with* prompting is codable of course, because it is clearly the child who is failing to use examples, not the interviewer who is failing to make the task clear.

Some questions have alternative phrasings if the child doesn't understand what you mean. It is not necessary to strictly adhere to the format of the questions, and you can re-phrase the question if you need to, in order for the child to understand. Use some of the suggestions in the text (e.g. question 10) if the child fails to respond or says "no". For example, if the child says no one they cared about has died, just check by asking about grandparents, uncles, aunts etc. Children who have said "no" may quickly realise that their grandfather did actually die last year when asked specifically about grandparents! Be careful about putting words into the children's mouths though.

The interview is sometimes a little stressful for the children; you should ask for specific examples and use the prompts. If the child says "no" or doesn't reply to a particular question, use the prompt or re-phrase the question to ensure that the child's failure to respond is not due lack of comprehension. DO NOT however, prompt more that once or twice since the child's reported inability to recall may reflect a particular defensive strategy which in itself provides useful information for subsequent coding. You must be aware that particular questions may be more difficult for some children and you therefore need to prompt gently and move on to another question if necessary but without compromising the data.

It is important to note that the MCAI is a semi-structured interview and hence affords some flexibility in the use of prompts depending upon the child's responses. Some children may describe episodes early in the interview that are relevant to subsequent questions. To illustrate, a child may describe the loss of his/her grandparent when describing why he/she chose the word caring to describe his/her relationship with mum. Although it is not recounted in the loss question, it is perfectly acceptable for the child to describe the event. However, it is unnecessary to prompt further for loss there and then and you MUST NOT skip over the loss question. Rather when you get to the loss question you may say "I know you've talked before about the death of your grandfather and I would like to ask you a few more questions about it", thereby acknowledging the child's earlier description. A child may also recount an episode where mum was upset with him/her in response to the question asking for 3 adjectives of what its like to be with mum. In this case, when you get to the question about a time when mum was upset, say "I know you've told me before about that time your mum got upset with you but I wonder if you can remember another time when that happened".

1. Finally, it is often the case that interviewers ask closed or leading questions when confronted with a child who clearly finds it difficult to engage in the task and often reports lack of memory. You MUST AVOID at all cost asking LEADING QUESTIONS or re-phrasing adjectives or

descriptions the child may provide. Asking the child "did you feel upset?" not only implies that the child would be expected to be upset at the time, but also encourages a yes/no response. Asking the child "How did you feel when that happened?" enables the child to express his/her feeling in more detail.

IMPORTANT GENERAL PROMPTS

Prompts are not principally given to find out more episodic information. Instead they are offered to provide clarity concerning the nature and quality of the child's attachment representations. In other words, there is an emphasis within the MCAI on **quality not quantity**.

- If the child responds with concrete, physical attributes or purely factual information (see for example question 2) then attempt to explore the affective nature of the description relayed. If the child does not respond with a RE, do not persist, simply move on.

  If potential REs are identified anywhere throughout the interview then you need to:

  1. Initially ask the child to tell the story from the beginning.

  2. If the child has problems with sequencing their narrative, orientate them by asking for specific details surrounding the events (e.g., Who was there? What happened? Why were you there? What did you do?)

  3. Ask how the child and other (if relevant) felt in the situation.

Presenting the interview

Present the interview by saying:

"This is an interview about you and your family. I am going to ask you some questions about yourself first and then I will ask questions about your relationship with your parents. For each question I will ask you to give me some examples. This interview is not a test and there are no right or wrong answers. I would just like you to tell me what you and your family are like, from your point of view. The interview will last about half an hour (30 minutes)".

1) **Can you tell me about the people in your family?** (May need to qualify by saying "That is the people living together in your house" if child starts describing extended family members. If child only names one parent, ask about 2nd parent, how much contact, etc.).

   If the child's parents are separated or divorced, ask about step parents. It is important to establish who the child considers to be the primary caregivers and ask all subsequent questions about them. It may mean that you ask not only about the biological parents but also about the step mum or grandmother.

   This is a warm-up question and its therefore not aimed at trying to obtain detailed biographical information but rather to establish who are the primary caregivers and to engage the child in the interview and reduce any anxiety.

2) **Tell me three words that describe yourself, that is not what you look like, but what sort of person you are (It may be useful to say "that is your personality". Some children may find it helpful to imagine writing a letter to a pen pal).**

   1..... 2..... 3.....

   a) Ask for specific examples to support each adjective, i.e., "Can you give me an example of when you felt" 1..... 2..... 3.....

      Prompts: After each example, prompt the child as appropriate focusing on any specific relationship episodes (See introduction).

3) **Can you tell me three words to describe your relationship with your mum? (can add "that is, what it's like to be with your Mum?").**

1..... 2..... 3.....

a) Ask for specific examples to support each adjective, i.e., "Tell me about a time when you felt 1..... 2..... 3..... with her"

Prompts: Immediately after each example prompt the child for more detailed description of the relationship episode as necessary (See introduction).

4) **What happens when Mum gets cross with you or tells you off?**

a) **Prompt: If you've done something wrong or done something to make her cross with you, what does she usually say or do?**

Ask for a specific example, can say "Tell me the last time mum got cross or upset with you".

b) **How did you feel when that happened?**

c) **How did you think your mum felt when that happened?**

d) **Why do you think she did _____(whatever the child says mother did, e.g., shouted at you)?**

e) **Do you know why she tells you off or what you have done wrong?**

f) **Do you think it's fair?**

The prompts should be asked around a specific episode. However, if a specific episode is not recounted, then ask the above prompts at the general level. For example, How do you feel when mum gets cross with you?.

5) **Can you tell me three words to describe your relationship with your Dad? (can add "that is, what it's like to be with your Dad?").**

1..... 2..... 3.....

a) Ask for specific examples to support each adjective, i.e., "Tell me about a time when you felt 1..... 2..... 3..... with him"

Prompts: Immediately after each example prompt the child for more detailed description of the relationship episode as necessary (See introduction).

6) **What happens when Dad gets cross with you or tells you off?**

a) **Prompt: If you've done something wrong or done something to make him cross with you, what does he usually say or do?**

Ask for a specific example, can say "Tell me the last time mum got upset with you".

b) **How did you feel when that happened?**

c) **How do you think your dad felt when that happened?**

d) **Why do you think he did _____ (whatever the child said father did e.g., shouted at you)?**

e) **Do you know why he tells you off or what you have done wrong?**

f) **Do you think it's fair?**

The prompts should be asked around a specific episode. However, if a specific episode is not recounted, then ask the above prompts at the general level. For example, How do you feel when dad gets cross with you?.

7) **Can you tell me about a time when you were upset and wanted help?**

Prompt: You were trying to tell someone something and no one understood what you meant? Or, there was something you wanted someone to do and no one understood you?

If the child says that this hasn't happened, offer suggestions: e.g., how would you feel if; your teacher told you off in front of the whole class, or you asked your friend to play after school and they said no because they didn't like you anymore, or you were bullied at school.

Prompt for a specific example when child felt upset or misunderstood.

8) **Do you ever feel that your parents don't really love you?**

a) Prompt: Can you tell me when you felt like that?
b) Do you often feel like that?

9) **What happens when you're ill?**

Prompt for a specific example i.e., "Can you tell me what happened?". What did you do? Did anyone stay at home with you?

10) **What happens when you hurt yourself?**

Prompt for a specific example, i.e., "Can you tell me about a time when...?". What did you do? Who was there?

~~11) Have you ever been hit by an older child or grown up in your family?~~

~~**Prompt** to get as much information as possible about the incident and how the child feels about what happened. If the reply in NO, move to the next question.~~

~~a) Did it happen once or twice or more often?~~
~~b) Can you tell me what happened?~~
~~c) How did you feel?~~

~~12) Have you ever been hit or hurt by someone else, an older child or adult outside your family?~~

~~**Prompt** to get as much information as possible about the incident and how the child feels about what happened. If the reply is NO, move to the next question.~~

~~a) Did it happen once or twice or more often?~~
~~b) Can you tell me what happened?~~
~~c) How did you feel?~~

~~13)Some children I've talked to told me that they have been touched in the private parts of their bodies by someone much older. Has it happened to you?~~

~~**Prompt** to get as much information as possible. If the reply is NO, move to next question.~~

~~a) Did it happen once or twice or more often?~~
~~b) Can you tell me what happened?~~
~~c) How did you feel?~~
~~d) Do you think _____ (perpetrator) knew that you felt like that?~~
~~e) What do you think _____ (perpetrator) felt?~~

14) **Has anyone close to you ever died? Has an animal ever died?**

a) **What happened? Was the death sudden? Did you go to the funeral?**

b) **How did you feel about it?**

c) **How do you think it made other people feel? (e.g. Mum, Dad, sibling?).**

15) **Is there anyone that you cared about who isn't around anymore?**

a) **How did it feel when they went away? Did things change much?**

b) **Do you keep in touch? If yes, how, if no why do you think that is?**

If child says no: Tell me about a time when things changed. (e.g. moved house, went to new school, parents separating, friend left).

a) **How did you feel?**

b) **Do you keep in touch? If yes, how, if no why do you think that is?**

16) **Have you ever been away from your parents for longer than a day? (very important question concerning separation from parents, try therefore to get as much information as possible).**

Prompts: Prompt to get a clear idea of the incident the child is describing (i.e., When, Who they were with, Where to, How long for, What they did)

a) **What was it like to be away from you parent/s?**

b) **What do you think it was like for your mum and dad?**

c) **What was it like seeing mum and dad again?**

17) Do your parents sometimes argue?

Prompt for a specific example, can say "Can you tell me about the last time your parents were arguing"

a) How do you feel? Why do you feel like that?

b) Why do you think they do that?

c) How do you think they feel?

d) Do they know how you feel?

18) a. In what ways would you like to be like your mum?

b. In what ways would you not like to be like your mum?

c. In what ways would you like to be like your dad?

d. In what ways would you not like to be like your dad?

19) Ending Question: If you could make three wishes when you are older what would they be?

(finish up question, should be asked in playful manner and affirm the child's answers, e.g., "ah, that sounds really good".

APPENDIX 5

The next set of questions are about friends and family. Circle the response that you agree with most, how true you think each statement is.

1. I like my friends' points of view on things I am concerned about

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

2. My friends sense when I am upset about something

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

3. When we discuss things, my friends consider my point of view

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

4. Talking over my problems with my friends makes me feel ashamed or foolish

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

5. I wish I had different friends

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

6. My friends understand me

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

7. My friends encourage me to talk about my difficulties

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

8. My friends accept me as I am

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

9. I feel the need to be in touch with my friends more often

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

10. My friends do not understand what I am going through these days

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

11. I feel alone or apart when I am with my friends

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

12. My friends listen to what I have to say

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

13. I feel my friends are good friends

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

14. My friends are fairly easy to talk to

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

15. When I am angry about something my friends try to be understanding

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

16. My friends help me to understand myself better

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

17. My friends are concerned about my well-being

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

18. I feel angry with my friends

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

19. I can count on my friends when I need to get something off my chest

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

20. I trust my friends

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

21. My friends respect my feelings

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

22. I get upset a lot more than my friends know about

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

23. It seems as if my friends are angry with me for no reason

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

24. I tell my friends about my problems and troubles

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

25. If my friends know something is bothering me, they ask me about it.

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

1. My parents respect my feelings

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

2. I feel my parents are successful parents

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

3. I wish I had different parents

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

4. My parents accept me as I am

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

5. I have to rely on myself when I have a problem to solve

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

6. I like to get my parents' point of view on things I am concerned about

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

7. I feel it's no use letting my feelings show

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

8. My parents sense when I am upset about something

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

9. Talking over my problems with my parents makes me feel ashamed or foolish

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

10. My parents expect too much from me

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

11. I get upset easily at home

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

12. I get upset a lot more than my parents know about

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

13. When we discuss things, my parents consider my point of view

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

14. My parents trust my judgement

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

15. My parents have their own problems so I do not bother them with mine

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

16. My parents help me to understand myself better

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

17. I tell my parents about my problems and troubles

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

18. I feel angry with my parents

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

19. I do not get much attention at home

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

20. My parents encourage me to talk about my difficulties

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

21. My parents understand me

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

22. I do not know whom I can depend on these days

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

23. When I am angry about something, my parents try to be understanding

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

24. I trust my parents

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

25. My parents do not understand what I am going through these days

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

26. I can count on my parents when I need to get something off my chest

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

27. I feel that no one understands me

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

28. If my parents know that something is bothering me, they ask me about it

1 always	2 almost always true	3 often true	4 sometimes	5 not often	6 almost never true	7 never true

APPENDIX 6

Strengths and Difficulties Questionnaire - Teacher T 4-16

For each item. please mark the box for Not True. Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's Name _____ Male/Female

Date of Birth _____

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless. overactive. cannot stay still for long	☐	☐	☐
Often complains of headaches. stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats. toys. pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient. usually, does what adults request	☐	☐	☐
Many worries. often seems worried	☐	☐	☐
Helpful if someone is hurt. upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations. easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents. teachers, other children)	☐	☐	☐
Thinks things out before acting,	☐	☐	☐
Steals from home. school or elsewhere	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span			

Do you have any other comments or concerns?

Please turn over - there are a few more questions on the other side

Overall. do you think that this child has difficulties in one or more of the following areas: emotions, concentration, behaviour or being able to get on with other people?

No	Yes - minor difficulties	Yes - definite difficulties	Yes - severe difficulties
☐	☐	☐	☐

If you have answered "Yes", please answer the following questions about these difficulties:

DO the difficulties upset or distress the child?

Not at all	Only a little	Quite a lot	A great deal
☐	☐	☐	☐

DO the difficulties interfere with the child's everyday life in the following areas?

	Not at all	Only a little	Quite a lot	A great deal
PEER RELATIONSHIPS	☐	☐	☐	☐
CLASSROOM LEARNING	☐	☐	☐	☐

DO the difficulties put a burden on you or the class as a whole?

Not at all	Only a little	Quite a lot	A great deal
☐	☐	☐	☐

Signature ..... Date .....

Class Teacher/Head of Year/Other (please specify:)

Thank you very much for your help

Vase

One day, while she is playing in the house, Anna accidentally knocks over and breaks her mother's favourite crystal vase. Oh dear, when mother finds out she will be very cross! So when Anna's mother comes home and sees the broken vase and asks Anna what happened, Anna says, "The dog knocked it over, it wasn't my fault!"

Was it true, what Anna told her mother?

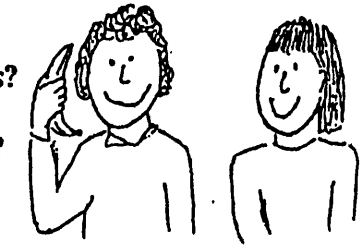
Why did she say this?

Banana

Katie and Emma are playing in the house. Emma picks up a banana from the fruit bowl and holds it up to her ear. She says to Katie, "Look! This banana is a telephone!"

Is it true what Emma says?

Why does Emma say this?



Rabbit

Helen waited all year for Christmas, because she knew at Christmas she could ask her parents for a rabbit. Helen wanted a rabbit more than anything in the world. At last Christmas Day arrived, and Helen ran to unwrap the big box her parents had given her. She felt sure it would contain a little rabbit in a cage. But when she opened it, with all the family standing round, she found her present was just a boring old set of encyclopedias, which Helen did not want at all! Still, when Helen's parents asked her how she liked her Christmas present, she said, "It's lovely, thank you. It's just what I wanted".

Is it true, what Helen said?

Why did she say that to her parents?

Elephant

Today James is going to Claire's house for the first time. He is going over for tea, and he is looking forward to seeing Claire's dog, which she talks about all the time. James likes dogs very much. When James arrives at Claire's house Claire runs to open the door, and her dog jumps up to greet James. Claire's dog is huge, it's almost as big as James! When James sees Claire's huge dog he says, "Claire, you haven't got a dog at all. You've got an elephant!"

Is it true, what James says?

Why does James say this?

Glove

A burglar who has just robbed a shop is making his getaway. As he is running home, a policeman on his beat sees him drop his glove. He doesn't know the man is a burglar, he just wants to tell him he dropped his glove. But when the policeman shouts out to the burglar, "Hey, you! Stop!", the burglar turns round, sees the policeman and gives himself up. He puts his hands up and admits that he did the break-in at the local shop.

Was the policeman surprised by what the burglar did?

Why did the burglar do this, when the policeman just wanted to give him back his glove?

Cough

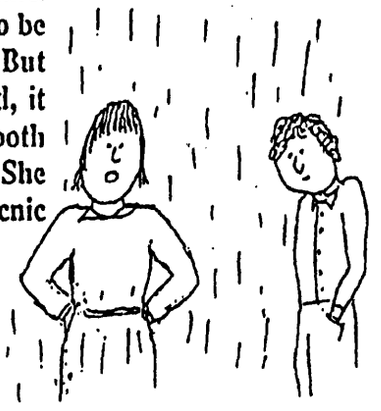
Emma has a cough. All through lunch she coughs and coughs and coughs. Father says, "Poor Emma, you must have a frog in your throat!"

Is it true, what Father says to Emma?

Why does he say that?

Picnic

Sarah and Tom are going on a picnic. It is Tom's idea, he says it is going to be a lovely sunny day for a picnic. But just as they are unpacking the food, it starts to rain, and soon they are both soaked to the skin. Sarah is cross. She says, "Oh yes, a lovely day for a picnic alright!"

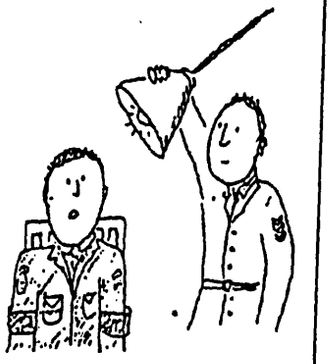


Is it true, what Sarah says?

Why does she say this?

Soldier

During the war, the Red army capture a member of the Blue army. They want him to tell them where his army's tanks are; they know they are either by the sea or in the mountains. They know that the prisoner will not want to tell them, he will want to save his army, and so he will certainly lie to them. The prisoner is very brave and very clever, he will not let them find his tanks. The tanks are really in the mountains. Now when the other side ask him where his tanks are, he says, "They are in the mountains".



Is it true what the prisoner said?

Where will the other army look for his tanks?

Why did the prisoner say what he said?

Kittens

Jill wanted to buy a kitten, so she went to see Mrs.Smith, who had lots of kittens she didn't want. Now Mrs.Smith loved the kittens, and she wouldn't do anything to harm them, though she couldn't keep them all herself. When Jill visited she wasn't sure she wanted one of Mrs.Smith's kittens, since they were all males and she had wanted a female. But Mrs.Smith said, "If no one buys the kittens I'll just have to drown them!"

Was it true, what Mrs.Smith said?

Why did Mrs.Smith say this to Jill?

Painting

Jane and Sarah are best friends. they both entered the same painting competition. Now Jane wanted to win this competition very much indeed, but when the results were announced it was her best friend Sarah who won, not her. Jane was very sad she had not won, but she was happy for her friend, who got the prize. Jane said to Sarah, "Well done, I'm so happy you won!" Jane said to her mother, "I am sad I did not win that competition!"

Is it true what Jane said to Sarah?

Is it true what Jane said to her mother?

Why does Jane say she is happy and sad at the same time?

Ghost

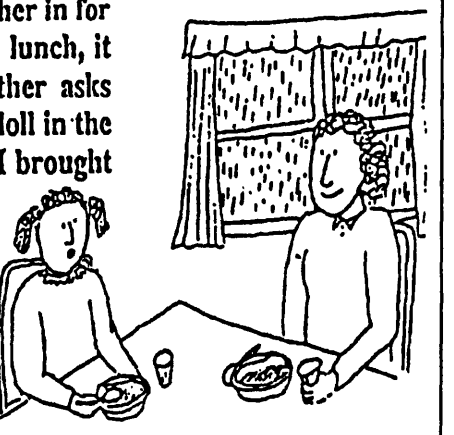
It is Halloween, and Chris is going to a fancy-dress party. He is going as a ghost. He wears a big white sheet with eyes cut out to see through. As he walks to the party in his ghost costume, he bumps into Mr.Brown. It is dark, and Mr.Brown says, "Oh! Who is it?" Chris answers, "I'm a ghost Mr.Brown!"

Is it true, what Chris says?

Why does Chris say this?

Doll

Yvonne is playing in the garden with her doll. She leaves her doll in the garden when her mother calls her in for lunch. While they are having lunch, it starts to rain. Yvonne's mother asks Yvonne, "Did you leave your doll in the garden?" Yvonne says, "No, I brought her in with me, Mummy".



Is it true, what Yvonne says?

Why does Yvonne say this?