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Department of Psychology
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ATTACHMENT AT THE TRANSITION TO ADOLESCENCE: CONCORDANCE WITH CONCURRENT MATERNAL ATTACHMENT AND CHILD'S OWN ATTACHMENT IN INFANCY

by

Maureen Gaffney

Being a thesis submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy by the University of Dublin

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SUMMARY

The study investigated three main sets of research questions derived from attachment theory developed by John Bowlby (1969/1982b, 1973, 1979, 1980, 1988) and Mary Ainsworth (1967, 1982; Ainsworth, Blehar, Waters, & Wall, 1978). The first and principal set of research questions investigated (a) the use of the Adult Attachment Interview (AAI: George, Kaplan, & Main, 1984, 1985, 1996) as an appropriate measure of attachment organisation in children aged 11-12; (b) the concurrent concordance between attachment organisation of the children and their mothers, also assessed on the AAI; (c) the concordance between the children's attachment in infancy, assessed at 18 months in the strange situation (Ainsworth et al., 1978) and at age 11-12 on the AAI and (d) the concordance between infant attachment and maternal attachment assessed over 10 years later.

The second set of questions investigated the effects of the mother's marital status at the time of the infant's birth and the effects of life changes on concurrent mother-child attachment concordance; continuity of infant-child attachment; and mother-infant attachment concordance. The third set of questions investigated the self-reported attachment styles of mothers and children in their relationship with each other, and in general relationships, assessed by a variety of self-report measures, also derived from attachment theory. These included the Relationship Questionnaire (RQ: Bartholomew & Horowitz, 1991) used both categorically and as prototype, and the Relationship Scales Questionnaire (RSQ: Griffen & Bartholomew, 1994). The concordance between self-reported attachment style and attachment organisation, measured by the AAI, was also investigated.

The sample of 22 mothers and their 11-12 year old children was recruited from the Dublin Child Development Study (DCDS), a longitudinal study of predominantly working class, first-born infants and their mothers. It included children who were classified insecure in infancy as well as those classified secure; mothers who were single at the time of the child's birth as well as those who were married, boys as well as girls. Strange situation data were available for 20 of the 22 children in the study.

The AAI was administered to each of the 22 children and their mothers. The children also

completed the Self-Interview (Cassidy, 1988). In the case of mothers, life changes in the 18 months prior to the assessment were assessed by the Life Experience Survey (LES: Sarason, Johnson, & Siegel, 1978); in the case of children, life events since their fifth birthday were assessed by the Life Events Questionnaire (LEQ: Berden, Althaus, & Verhulst, 1990). Each AAI transcript was independently coded by two trained coders, and in the case of disagreements, by a third coder, who were blind to all information about the subjects. The strange situation tapes were recoded by independent coders. Inter-coder agreement for both the AAI and the strange situation was high.

The AAI and its coding system was found to discriminate the different attachment classifications of attachment for children in this age group in the same way as it does for adults and adolescents, although no children were classified Preoccupied. A significant 72.7% two-way (secure versus insecure) correspondence was found between mothers and their children. This result parallels the 75% correspondence found in a meta-analysis of correspondence between parents and their infants (van IJzendoorn, 1995) and between adult women and their mothers (Benoit & Parker, 1994). The three-category match was 45.5% and the four-category match was 40.8%.

With regard to the continuity of attachment from infancy to age 11-12, the results indicate an interesting pattern of continuity and discontinuity, which appears related to theoretically meaningful factors, including the mother's marital status at the time of the birth; life stability and stress. The concordance between infant attachment and maternal attachment over 10 years later was found to be non-significant. The results indicate a number of possible 'contextual constraints' on the intergenerational transmission of attachment not previously identified in the literature, including mother's marital status at the time of the birth; infants being reared in multiple-caretaker environments; and maternal experience of caretaking in her own family of origin.

On the three self-report measures, a majority of the mothers and children reported themselves as having a secure attachment style in their relationship with each other. Self-report of attachment style in general relationships was more variable. The correspondence between the mothers' and children's self-reported attachment styles was low. With regard to the concordance between self-reported attachment style and AAI classifications, the results showed variable but non-significant levels of correspondence. The pattern of results and the implications of the study were discussed.

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INTRODUCTION

Attachment theory, as jointly developed by John Bowlby (Bowlby, 1969/1982, 1973, 1979, 1980, 1988) and Mary Ainsworth (Ainsworth et al., 1978) has become one of the most influential theories in the field of developmental psychology. Central to attachment theory is Bowlby's view of how early attachment experiences with parents become mentally represented in an internal working model of attachment, which then serves to regulate and predict how the individual behaves in relationships, particularly in relation to caretaking his/her own children. The development of valid and reliable empirical methods to assess Bowlby's concept of internal working models of attachment in infancy and adulthood constituted a major advance in attachment theory and research.

Attachment theory has developed in three main phases (Main, 1995). The first phase was Bowlby's (1969/1982, 1973, 1979,1980, 1988) ethological-evolutionary theory of the attachment behavioural system and his theory of working models of attachment. The second phase was the discovery of individual differences in patterns of attachment by Ainsworth and her associates. The third phase was the move to the level of representation in the study of individual differences in attachment organisation, pioneered by Main and her associates (Main et al.,1985).

The development of the strange situation assessment procedure by Ainsworth and her associates (Ainsworth et al., 1978) led to the discovery of three patterns of infant attachment behaviour - *secure*, *avoidant* and *resistant*. To these three 'organised' categories (Main, 1995) a fourth category - *disorganised/disoriented* - was later added (Main & Solomon,1986,1990). The development of the Adult Attachment Interview (AAI) by Main and her associates (George et al., 1984,1996; Main & Goldwyn, 1984, 1998) operationalised the 'internal working model' as an individual's current 'state of mind with respect to attachment'. The five AAI attachment classifications - *secure-autonomous, dismissing, preoccupied* and *unresolved (disorganised/disoriented)* are seen as the adult analogue to the infant classifications in the strange situation (Main, et al., 1985; Main & Goldwyn, 1998).

The AAI is a semi-structured protocol in which the individual is asked about early attachment experiences. Coherence versus incoherence in narrative is the central focus of

the AAI scoring and classification system (Main & Goldwyn, 1984; Main, 1995). Thus, the participant's presentation of his or her 'experiences' is considered relevant primarily as it is judged to adhere to or violate the coherence of the overall narrative. The classification of adult 'state of mind with respect to attachment' rests not only on judgments as to whether the speaker is valuing of, dismissing of, or preoccupied by, early attachment relationships and experiences, but also on the analysis of discourse usage. It was found that the form in which an individual presents his/her narrative of early attachment experiences (regardless of the content of those experiences) systematically predicted caregiving to his/her own infant, and the infant's attachment behaviour in the strange situation (Main et al., 1995).

Many studies have now demonstrated the strong concordance between a parent's 'state of mind with respect to attachment', as measured by the AAI, and infant attachment, as measured by the strange situation (for review, see Hesse, 1999; van IJzendoorn,1995). A meta-analysis of parent-infant attachment found high concordance between parents and their infants in studies using prospective, concurrent, and retrospective designs (van IJzendoorn, 1995); between adult women and their own mothers (Benoit & Parker, 1994); and between adolescent mothers and their own infants (Ward & Carlson, 1995).

A small number of studies have investigated the continuity of attachment from infancy to young adulthood with mixed results. Some studies have found substantial continuity between infant attachment (with mother) and attachment in adolescence/young adulthood (Hamilton, in press; Main & Hesse, 1998; Waters, Merrick, Treboux, Crowell, & Albersheim, 1998). Others have found no significant concordance (Weinfield, Sroufe, & Egeland, in press; Zimmermann, Grossmann, & Fremmer-Bombik, 1998). In addition, lower continuity has been found in individuals who have experienced negative life change (Waters et al. 1998; Weinfield et al. in press). Over-all, the mixed results echo the findings with regard to more short-term continuity of attachment in infancy and early childhood, that is, that continuity is very high in stable middle-class samples (Easterbrooks & Goldberg, 1990) and less evident in economically deprived samples, characterised by single-parent families or unstable family relationships (Vaughn, Egeland, Sroufe, & Waters, 1979; van IJzendoorn, 1995).

Researchers have identified a significant gap in the study of attachment at the transition to adolescence. Researchers and theorists from different traditions - psychoanalytic,

developmental, and attachment - have identified the transition to adolescence as a key period in psychosocial development, with evidence for both continuities and discontinuities in development. Yet, there are virtually no studies of attachment organisation at this stage of development.

First, the lack of a valid and reliable measure of attachment for this age group has been identified as a major issue to addressed (Goldberg 1995; Moss, Rousseau, Parent, St-Laurent, & Saintonge,1998). Second, there are no studies of attachment concordance between mothers and their children at this stage of development. The need to fill this gap in understanding is underscored by the fact that the findings with regard to the concordance between adolescents and their mothers are mixed. Stage of adolescence, family structure, stress and adversity have been identified as factors affecting mother-adolescent concordance (Allen, Land, Liebman, Bell, & Jodl, 1997; Rosenstein & Horowitz, 1996); Zimmermann, Fremmer-Bombik, Spangler, & Grossmann, 1995). This mixed pattern of results suggests that the transition to adolescence is a particularly crucial time to investigate attachment organisation, mother-child attachment concordance, and continuity of attachment from infancy. In addition, the findings suggest that family structure and life stress may constitute important influences on mother-child attachment concordance and continuity of attachment from infancy.

In attachment theory, parents' mental representations of attachment are thought to be expressed in the sensitivity of their response to their children, which in turn is considered the most likely vehicle for the intergenerational transmission of attachment. In a meta-analysis of 10 studies van IJzendoorn (1995) found that while parental attachment accounted for about 12% of the variation in parental responsiveness, there was still a 'transmission gap' to be explained. The wider social context of attachment has been investigated by a number of researchers (for review, see Thompson, 1998), particularly Belsky and his associates (Belsky, Belsky,1996, 1999; Belsky & Isabella, 1988; Belsky, Rosenberger, & Crnic, 1995). They have used Bronfenbrenner's (1979) ecological framework as a means of expanding the attachment research agenda to the broader context of human development that surrounds the mother-infant relationship.

Among the 'distal' factors found to affect the quality of maternal care and the child's security of attachment are maternal personality and psychological attributes and more general sources of stress and social support (see, Belsky, 1999). They have shown that it

is the accumulation of risk factors, rather than the presence of any one risk factor, which affects infant attachment security. Little is yet known about the influence and role of a child's other attachments, particularly grandparents, on the child's long-term development (Howes, 1999). One study of adolescent parents indicates that living with and/or receiving support from a grandmother enhances attachment security between adolescent mothers and their infants (Spieker & Bensley, 1994). In addition, grandmothers' representations of attachment appear to influence an adolescent mother's caregiving and attachment relationship with her child (Benoit & Parker, 1994; Ward & Carlson, 1995).

Most studies, however, have not addressed the social-ecological context in which parent-infant concordance of attachment is embedded. One 'contextual constraint' on the transmission of attachment identified in Israeli kibbutzim (Sagi, van IJzendoorn,Scharf, Joels, Koren-Karie, Mayseless, & Aviezer, 1997) is whether infants slept in communal groups or in traditional home-based sleeping arrangements. Two issues which remain for research in this area, therefore, are the investigation of the 'transmission gap' (insecure parents who have secure children and secure parents who have insecure children) and the identification of the 'contextual constraints' that explain those gaps. The study of these exceptions to the general rule is important for generating hypotheses about both the mechanisms and the limitations of the adult attachment paradigm (van IJzendoorn, 1995).

Attachment researchers working within the strange situation/AAI theoretical and empirical traditions, which could be termed the 'developmental tradition', who use laboratory-based or narrative measures, have tended to work largely without reference to those attachment researchers working within the social-psychological tradition, who use self-report measures of attachment style. A persistent problem remains with regard to how the different measures of attachment used by the two traditions relate to each other. The few studies comparing AAI classifications with self-report measures show modest but non-significant concordance between them (e.g. Crowell, Treboux & Waters, 1999). Attachment theorists from the social-psychological tradition argue that there may be a single representational system or 'set of core relational tendencies underlying responses to the various attachment measures' (Bartholomew & Shaver, 1998, p.41) but an individual's domain-specific, or relationship-specific, attachment patterns may be substantially different from each other (Bartholomew & Shaver, 1998).

This argument suggests that there may be high concordance between the self-report

attachment styles of mothers and their children and that their self-reported attachment style in the mother-child relationship may show higher concordance with the AAI than self-reported attachment style in the general relationship domain. These hypotheses have not hitherto been investigated in the attachment literature.

The review of the literature in both the developmental and social-psychological tradition suggested the three main sets of research questions that were the focus of this study. The first and principal set of research questions investigated (a) the use of the AAI as a measure of attachment organisation in children aged 11-12; (b) the concurrent concordance between attachment organisation of the children and their mothers; (c) the concordance between the children's attachment in infancy and at age 11-12; (d) the concordance between infant attachment and maternal attachment assessed over 10 years later.

The second set of questions investigated the effects of the mother's marital status at the time of the infant's birth and life changes on concurrent mother-child attachment concordance; continuity of infant-child attachment; and mother-infant attachment concordance.

The third set of questions investigated the self-reported attachment styles of mothers and children in their own relationship, and in general relationships, assessed by a variety of self-report measures, themselves derived from attachment theory. These included the Relationship Questionnaire (RQ: Bartholomew & Horowitz, 1991), used both categorically and as prototype, and the Relationship Scales Questionnaire (RSQ: Griffin & Bartholomew, 1994). The concordance between self-reported attachment style and attachment organisation, measured by the AAI, was also investigated.

The sample for this study was recruited from the DCDS study, a larger community-based longitudinal study of predominantly working class, first-born infants and their mothers. The sample of 22 mothers and their 11-12 year old children was selected to include children who had been classified insecure in infancy as well as those who had been classified secure; mothers who had been single at the time of the child's birth as well as those who had been married, boys as well as girls. It was anticipated that the inclusion of single and married mothers would enable the study to examine attachment in infancy and childhood in a variety of ecological and childrearing contexts. Strange situation data was available for 20 of the 22 children in the study.

The AAI was administered to each of the 22 children and their mothers. The standard version of the AAI was administered to the children, with some very minor modifications in a few of the follow-up probes. The children also completed the Self-Interview (Cassidy, 1988). In the case of mothers, life changes in the 18 months prior to the assessment were assessed by the Life Experience Survey (LES: Sarason et al., 1978); in the case of children, life events since their fifth birthday were assessed by the Life Events Questionnaire (LEQ: Berden et al.,1990). Data was also gathered on the living arrangements of mother and child during the child's infancy and childhood. Each AAI interview was transcribed verbatim and each transcript was independently coded by two trained coders, and in the case of disagreements, by a third coder, who were blind to all information about the subjects. The independent coder was different for the mothers and children, to prevent any possible 'cross-over' effect in the coding. The strange situation tapes were recoded by independent coders. Inter-coder agreement for both the AAI and the strange situation was high.

It was expected that this design would allow an examination of the concordance of infant-mother attachment in a wide variety of caretaking contexts. As well as the formal analysis of data, the study also set out to conduct a qualitative, case by case analysis of each of the four possible grouping of secure/insecure mother-secure/insecure child; secure/insecure infant-secure/insecure child; and secure/insecure mother-secure/insecure infant.

The structure of the thesis

The strange situation, the AAI and the self-report measures of attachment, have each generated, over the past two decades, a very substantial research literature. The transition to adolescence, encompassing, as it does, the end of latency or middle childhood, and the beginning of adolescence, also involves the very extensive child/adolescent development literature, covering changes in cognitive, social, and self-concept development, as well as changes in parent-child perception, interaction and attachment. Hence, this literature review, of necessity,will be substantial. It will be structured in the following way: Chapter 1 will deal with the first phase in the development of attachment theory, focusing on Bowlby's ethological-evolutionary theory and internal working models of attachment. Chapter 2 will deal with the second phase in the development of attachment theory, focusing on Ainsworth's individual differences in patterns of attachment. Chapter 3 will deal with the third phase in the development of attachment theory, focusing on Main's

'move to the level of representation'. Chapter 4 will deal with the social-psychological/personality theory perspectives on attachment theory. Chapter 5 will deal with the transition from childhood to adolescence, focusing on psychoanalytic, general developmental, and attachment theory perspectives. Chapter 6 will present an overview of the present study, setting out the research questions to be addressed; the hypotheses to be tested; and the methods used. Chapter 7 will present the results in relation to the measurement of child attachment at age 11-12. Chapter 8 will present the results in relation to mother-child attachment concordance. Chapter 9 will present the results in relation to the concordance between attachment in infancy and at age 11-12; as well as the concordance between infant attachment and maternal attachment over 10 years later. Chapter 10 will present the results in relation to mothers' and children's self-reported attachment styles. Chapter 11 will present a general summary and discussion of all the results of the study.

CHAPTER 1

THE DEVELOPMENT OF ATTACHMENT THEORY
PART I: BOWLBY'S ETHOLOGICAL-EVOLUTIONARY THEORY AND INTERNAL WORKING MODELS OF ATTACHMENT

Introduction

Attachment theory was first formulated by the British psychiatrist and psychoanalyst John Bowlby (Bowlby, 1969/1982, 1973, 1979,1980, 1988). Throughout those years, the Canadian developmental psychologist, Mary Ainsworth made significant contributions to the development of the theory, and crucially for the development of the field, devised a powerful set of empirical methods for studying attachment processes in infancy, individual differences in the patterning of attachment, their precursors and sequelae (see Ainsworth, 1967,1982; Ainsworth & Bell, 1969; Ainsworth et al., 1978.). Thus, it can be said that the extraordinary growth and richness in the study of human attachment organisation over the post three decades has been largely based on the work of these two scholars. A further major contribution to modern attachment theory and research has been made by the American developmental psychologist, Mary Main, who, as well as discovering a new pattern of attachment, has developed empirical methods that have allowed a 'move to the level of representation' in the study of attachment (George et al., 1984,1985, 1996; Main et al., 1985).

Bowlby's ethological-evolutionary theory of attachment and internal working models of attachment.

> *'By ethology out of psychoanalysis: an experiment in interbreeding'.*
> *Bowlby, 1980.*

In his three volumes of *Attachment and Loss* (1969/1982b, 1973, 1980), Bowlby, drawing upon evolutionary theory, ethology, control systems theory, cognitive science, as well as his own training and work in the psychoanalytic field, developed the original theory of attachment. The history of the development of attachment theory, and Bowlby's

contribution, has been summarised by many scholars (e.g. Bretherton, 1985, 1991, 1992, 1995; Cassidy, 1999; Hazan & Shaver, 1993).

Although, historically, attachment theory arose as an alternative to psychoanalytic theory, particularly object relations theory (Bowlby, 1982a), it has been observed that the influence of psychoanalytic principles, particularly in his later work, is pervasive (Bretherton, 1985). Although trained in the psychoanalytic tradition, almost from the beginning of his career, Bowlby expressed reservations about the over-riding emphasis that psychoanalysis put on the fantasy world of the child, with the corresponding neglect of the importance of real events in the child's life. As early as 1940, he published a paper on the importance of a child's early experiences on subsequent development, particularly on the adverse effects of early separation of the child from its mother. In that paper, his emphasis on the need for intensive, first-hand study of the organism, as well as the immediate environment, and the interaction between the two, presages the ideas that were later to become central to attachment theory. He also emphasised that effective psychotherapeutic intervention with mothers with parenting difficulties involved helping them 'recapture', and tolerantly understand, their own memories of childhood, thereby allowing them to become increasingly sympathetic and tolerant to the same things in the child. This insight presaged the later discoveries of the intergenerational transmission of attachment relations (Bretherton, 1985) and of the link between a mother's representational mental processes, particularly memory for her own childhood experiences, and her child's security of attachment (e.g. Fonagy, Steele, & Steele, 1991; Kaplan & Main, 1986; Main et al, 1985; Main & Goldwyn, 1984).

Bowlby's work on early mother-child separation and 'maternal deprivation' (Bowlby,1951), particularly his work with James Robertson (Robertson & Bowlby, 1952; Robertson,1953), with children who were hospitalised and institutionalised, was the impetus for the development of a new theory of attachment. He observed that institutionalised children suffered extreme distress, and sometimes failed to thrive, despite being fed and cared for by staff. These observations could not be adequately accounted for by psychoanalytic theory, which postulated that a child's love for its mother is derived from the mother's satisfaction of the child's hunger drive.

The field of ethology provided the intellectual framework for Bowlby's ideas, as well as a research method - field observation -, that corresponded to his own favoured work

methods. He was particularly influenced by the work of Konrad Lorenz (1957) on imprinting, a process that explained the formation of strong social bonds that were not based on feeding. His close collaboration with Robert Hinde, an ethologist, gave further impetus to this development. Hinde, in turn, was influenced by Bowlby to study the interaction of infant rhesus monkeys with their mothers and the effects of mother-infant separation (Hinde & Spencer-Booth,1967). The findings of that study lent experimental support to Bowlby's position.

Bowlby's first formal statement of attachment theory was presented in a series of three papers to the British Psychological Society in London: *'The nature of the child's tie to his mother'* (Bowlby, 1958); *'Separation anxiety'* (Bowlby, 1960a) and '*Grief and mourning in infancy and childhood* (Bowlby, 1960b). Drawing heavily on ethological concepts, he articulated what were to become central concepts in attachment theory (see Bretherton, 1991 for an extended account). He proposed that several instinctual responses that mature in the course of the child's first year, sucking, clinging, crying, following and smiling, become organised into *attachment behaviours* focused on a specific mother-figure during the second half of the first year, with clinging and following playing 'a more central part' (Bowlby 1958, p. 21). Certain stimuli, both internal and external, were involved in activating or terminating such behavioural responses, which are often organised into complex chains that can be altered by learning.

Bowlby borrowed this concept of the *attachment behavioural system* from ethology to describe a species-specific system of behaviours that lead to certain predictable outcomes, at least one of which leads to reproductive fitness - a concept that involves inherent motivation (Cassidy, 1999). This notion was in turn compatible with Piaget's (1954) formulation of the child's inherent motivation to explore. Thus, in a radical departure from psychoanalysis, he rejected the idea of attachment being a by-product of a primary 'drive'. Children become attached whether their parents are feeding them or not. His ideas were supported by new evidence that attachment develops independent of feeding (Ainsworth, 1967; Schaffer & Emerson, 1964). He also drew a clear distinction between dependency and attachment, noting that psychological attachment and detachment are functions in their own right, and that attachment, rather than being indicative of regression, performs a natural, adaptive function throughout the life span.

Bowlby pointed out that psychoanalytic theory was inadequate to explain the intense

attachment of infants to a mother-figure, and their intense protest to separation from that figure, at that time dramatically evident in the work of Harlow (Harlow & Zimmermann, 1958). He drew attention to the findings of Robertson (Robertson & Bowlby, 1952) who had identified three phases of separation response: protest, related to separation anxiety; despair, related to grief and mourning, and denial or detachment, related to defence. Bowlby's explanation of separation anxiety rejected the idea that it occurred only in children who had an impaired relationship with their mothers, and postulated instead that separation anxiety is experienced when attachment behaviour is activated but cannot be terminated.

He drew a distinction between *anxiety* and *fear of some external event* that activates escape behaviour from that frightening event, noting that children escape to a haven of safety, somebody to whom they are attached, the 'terminating object' of their instinctual responses. He emphasised that separation anxiety needed to be understood in terms of why only a very specific 'object' can terminate that response. Rejection by the mother or separation from her could give rise to hostility and primitive defences in the child, including excessive separation anxiety or a pseudo independence. In addition, the child can later experience *expectant anxiety*, when there is a likelihood of threat and its haven of safety is not likely to be available. Contrary to the then psychoanalytic view that infants cannot experience grief because of insufficient ego development, he proposed that the child experiences grief and mourning whenever attachment behaviours are activated, and the mother-figure continues to be unavailable. Moreover, they react to grief and mourning in the same way as adults do, that is, by directing thoughts and behaviour towards the lost figure, by hostility, pleas for help, despair and finally, reorganisation of their attachment.

These three papers, together with some then unpublished work on defences to loss, constituted the basic blueprint of attachment theory (Bretherton, 1991) and were later published in the three-volume *Attachment and Loss* series. Thus, the ontogenesis of attachment theory was the attempt to explain (1) the phenomenon of separation anxiety (2) the similarities between adult and child mourning, and (3) defensive processes, that is, the selective exclusion of signals, from within and without, that would normally activate attachment behaviour (Bretherton, 1985).

In its later, more refined form, Bowlby proposed that attachment is one of several distinct but interlocking behavioural systems, including caregiving, affiliation and sexual mating. It

was with this claim, that the attachment system is a *distinct motivational system,* that Bowlby most profoundly departed from traditional psychoanalytic theory. In fact, he believed that the attachment system rivals mating and feeding in biological importance (Bowlby,1982a). Each system has unique functions and is responsive to different cues from the environment. During infancy and childhood, attachment is the preeminent system, and when fully activated, precludes activation of the other systems. *A basic assumption of attachment theory is that the maintenance of proximity to a protective adult is the primary mechanism for the regulation of infant safety and survival* (Bowlby, 1969). Although Bowlby originally proposed that the biological function of the attachment system in nonhuman primates was primarily protection from predators, the importance of the system is now best understood in terms of serving multiple survival functions (Main, 1981). Proximity seeking not only protects from predators, but also from starvation, natural disasters, adverse temperature changes, from attacks from conspecifics and from the risk of separation from the group.

To ensure the protection of members of ground-living primate troops who are younger and/or weaker from such dangers, infants evolved a set of behaviours that function to maintain that proximity to the adult caregiver - crying, calling, pursuing, clinging - the attachment behavioural system - that is instinctively guided but also responsive to environmental cues. Attachment behaviour is understood to be activated, modified and terminated by changes in the internal or external environment - threatened or actual separation from, or reunion with, the attachment figure and these changes are associated with the strongest emotions, such as love, joy, fear, anger and despair (Bowlby, 1969, 1973). While most easily activated in infants, Bowlby believed that attachment remains a significant factor in individual psychological functioning 'from the cradle to the grave' (Bowlby, 1979, p.129).

The development of the individual attachment behavioural system

The attachment system as outlined by Bowlby (1969/1982b, 1973, 1979) does not become organised until the sometime during the second half of the first year, although it builds on component systems that are operative earlier. Bowlby proposed that there are four phases in the development of the attachment behavioural system - the first three occurring during the first year of life, and the fourth beginning sometime around the child's third birthday. The end point of the process of attachment formation is what is called 'the goal-corrected

partnership', where the goal of proximity maintenance is adjusted for the child's ability to delay gratification and to mentally represent the attachment figure's availability. At this point, the caregiver and the child can begin to negotiate the terms of their relationship and verbally communicate their respective goals.

Because of their extreme immaturity at birth, human infants could only survive if an adult is willing to provide protection and care. Thus, even at birth, infants show behaviours that appear to have the function of bringing them into proximity and interaction with a caregiver. Adult caregiving is regulated by a complementary behavioural system. Infants smile and adults find smiles gratifying. Infants cry and adults are motivated to soothe them. Adults move away and infants visually track them. Although morphologically dissimilar, all these infant behaviours (smiling, crying, following) serve the same proximity maintenance function. In the first few months of life, these behaviours come to be preferentially directed towards particular persons. For example, the infant cries when the mother, but not another, leaves the room, or lifts its arms in greeting to the mother, but not to a visitor (Stayton et al, 1973). However, specific or 'focused' attachments do not appear until the third quarter of the first year, when the proximity and interaction-seeking behaviours become integrated into a coherent system, organised around a particular figure or figures. As Bretherton (1985) points out, it is only to the focusing of the system on a small hierarchy of familiar figures and its resistance to 'reprogramming' that the term 'attachment', as formulated by Bowlby (1969/1982b) and Ainsworth (1973) is properly applied.

Bowlby proposed that since these earlier signalling behaviours become organised into what he called a 'goal-corrected system' of proximity and security regulation at around the same time as the infant develops the capacity to move around, this suggests that it too has survival value (Stayton et al, 1971). The onset of locomotion now makes it possible for the infant to explore and move away from the mother in a way that could put the infant in danger, thus, the development of a focused attachment to the attachment figure will make it less likely that the infant will move too far from this protective figure.

Attachment as a goal-corrected control system

Bowlby conceptualised attachment as a 'goal-corrected control system', similar in some respects to the physiological systems that, for example, regulate body temperature or

blood pressure. Further, he argued that in a more general sense, the attachment to familiar persons and places, and fear of the new and the strange may function - in line with other behavioural systems - to maintain a steady state between an individual and his environment (Bowlby, 1973). He construed such homeostatic systems as an 'outer ring' of life-maintaining systems, complementary to the 'inner ring' of systems that maintain physiological homeostasis. As long as the outer ring successfully maintains an individual within a familiar environment, the stress placed on the systems maintaining physiological homeostasis is reduced.

In Bowlby's view, the attachment behavioural system, construed as a psychological organisation existing within the person, is so constituted that feelings of security and actual conditions of safety are highly correlated, although the correlations are not perfect (Bretherton, 1985). The system's set goal is to regulate behaviours designed to maintain proximity with the attachment figure. Any real or perceived risk to that set-goal results in anxiety which in turn, activates attachment behaviours and will persist until the set-goal is achieved. The establishment and maintenance of that proximity results in feelings of love and 'felt security' (Sroufe & Waters, 1977) and threats and disruptions in the relationship result in anxiety, sadness, anger or despair. Hence, Bowlby proposed that attachment is an emotional bond.

From an external perspective, the set-goal is actual proximity or contact with the attachment figure. But, from the psychological perspective of the attached individual, the set-goal is 'felt security'. Bretherton (1985) points out that both perspectives are useful and necessary, but the distinction between them should be kept clearly in mind. 'Felt security' has been criticised as too broad a set-goal - relying on the attachment figure is not likely to be the only source of feeling secure (Ainsworth, 1990). Instead, she clarified the set-goal of the the attachment system as maintenance of proximity, given that the definition of closeness is extended by cognitive development. She argued that Bowlby's definition of availability 'turns on cognitive processes; (a) belief that lines of communication with the attachment figure are open (b) that physical accessibility exists, and (c) that the attachment figure will respond if called upon for help' (Ainsworth, 1990, p.474). Attachment behaviour is most obvious when the person is frightened, tired, sick or distressed, and is attenuated when the attachment figure provides protection, help, and soothing. Simply *knowing* that the attachment figure is available and responsive provides a strong feeling of security, thus encouraging the individual to value and maintain the relationship (Bowlby,

1982a).

Bowlby (1973) proposed that since the attachment behavioural system had such an immediate relation to infant survival, it was essentially conservative and antithetical to systems mediating exploration and other forms of stimulation-seeking behaviour. Although the exploratory system may encourage the child to move away from the attachment figure, the experience of fear or stress will encourage the child back. Thus, the child's behaviour is an interplay between the different systems (Bretherton & Ainsworth, 1974), and their joint operation will facilitate exploration under sufficiently safe conditions.

Bowlby (1969/1982b) and Ainsworth (1973) placed what they termed the *secure-base* phenomenon at the centre of attachment theory, and defined the attachment figure as the person the infant uses as a secure base across time and situations. The defining characteristic of the secure-base phenomenon is that it allows the apparently purposeful balance between proximity seeking and exploration, at different times and in different situations. Bowlby suggested that secure-base behaviour was regulated by a neurally-represented control system that coordinated different types of information that are taken in through the sensory systems: clues to danger (physical and psychological) and the availability of the attachment figure (physical and psychological) which in turn regulate the set-goal. The set-goal is first defined in terms of distance and later as felt security, which in turn initiates attachment behaviour (such as signalling, greeting, crying, proximity seeking) and exploratory behaviours.

The attachment bond

Although the attachment behavioural system refers to an organisation of a system within an attached person (Hinde, 1982; Sroufe & Fleeson, 1986), the attachment system exists dyadically between two individuals and develops within the context of contingent child-caregiver interactions (Ainsworth, 1969). Moreover, these interactions need not be positive for attachment to develop, since infants can take abusing parents, for example, as attachment figures. The distinctions between viewing attachment as a relationship construct or as an internalised aspect of an individual's personality continue to pose problems within the field of attachment. Whereas attachment behaviour is behaviour that promotes proximity to the attachment figure, and the attachment behavioural system is the organisation of attachment behaviours within the individual, an attachment bond refers to

an affectional tie. Ainsworth (1989) argues that an attachment bond is not dyadic, but rather is a characteristic of the individual 'entailing representation in the internal organisation of the individual' (p.711). Thus, this bond is not one between two people, rather it is the bond that one person has to another who is perceived as 'stronger and wiser', for example, the bond between an infant and its parent.

This attachment bond is a specific type of a larger class of affectional bonds. According to Ainsworth (1989) an affectional bond is persistent, not transitory; it involves a specific figure who is not interchangeable with anyone else; and involves a relationship that is emotionally significant; and the individual wants to maintain contact with, and feels distressed when separated from that person. In addition to these criteria, an attachment bond has an additional requirement - the individual seeks security and comfort in the relationship with the person. According to Bowlby, *proximity maintenance* (including proximity-seeking and separation protest), the use of the attachment figure as a *safe haven* when frightened or distressed, and the use of the attachment figure as a *secure-base*, from which the child can safely explore are the defining features of attachment and the functions of an attachment relationship. Thus, it is the *seeking* of security (Cassidy, 1999; Hinde, 1982; Weiss, 1982) that is the defining feature. From this distinction follows another - the parent has a *parental bond* to the child, and the child has an *attachment* to the parent. The attachment is considered 'secure' if the individual achieves security and 'insecure' if not.

An attachment bond is not synonymous with attachment behaviour - the activation of attachment behaviour is largely situational. But the attachment bond is considered to exist consistently over time, whether attachment behaviour is present. Although Bowlby (1969/1982b) originally suggested that the attachment system functioned episodically, activated by perceived danger and terminated by perceived safety, attachment theorists now believe that the attachment system is continually active (Bretherton,1980; Main, 1996). Thus, whether or not attachment behaviour is displayed at any given time, the attached individual is, at some level, monitoring the external conditions for safety versus threat, and attending to the physical location and accessibility of the attachment figure. That continual monitoring or attending is not always conscious, but as Main (1995) points out, it is now widely recognised that individuals have the capacity for attending to, processing, and drawing inferences from input that does not reach the usual level of awareness.

Bretherton (1985) believes that to think of the system as continually active clarifies and simplifies the relationship between two phenomena that used to be thought of as distinct, the secure-base phenomenon and proximity seeking. When the child has assessed the situation as non-threatening and thus feels secure, the 'pull' of the attachment figure becomes weaker, but there are limits on how far away from the attachment figure the child will explore (Anderson, 1972). This is an example of how the child is using the attachment figure as a secure-base. However, if the child perceives the environment as even mildly alarming, the system's set goal will change, pulling the child closer to the attachment figure, that is, the child is using the parent as a safe haven.

If however, the child anticipates that the attachment figure will be non-responsive, the set-goal of proximity will also change, but more permanently. In the first case, attachment behaviour seem adaptive, in the second anxious, with the child having to take on more of the responsibility of maintaining proximity.

When the infant's exploratory system appraises a situation as very attractive, while the fear system appraises it as threatening, the child may exhibit conflict behaviour, oscillating between approaching the attachment figure and the stimulus (Bretherton & Ainsworth, 1974). If the child appraises the situation as very threatening, the child will now seek actual contact with the attachment figure, proximity now being insufficient. If the attachment figure does not perceive the situation as dangerous, he or she can comfort the child, but also seek to teach coping strategies. If the danger is perceived as real, both may leave the situation together. In situations where the child is unsure as to the threat, he or she may seek information about its meaning by referencing or searching the attachment figure's face. In Bretherton's view, this referencing behaviour may also be understood as a special form of attachment behaviour.

It is important to distinguish the strength of attachment behaviours from the 'strength' of the attachment bond. Ainsworth (1972) described individual differences in the relationship with the attachment figure as more accurately considered variations in quality than in strength. She further suggested that Hinde's (1979) notion of 'penetration' provided a more useful way of characterising the nature of an attachment bond. According to Hinde, penetration is a dimension of a relationship that describes the centrality of one person to another's life - the extent to which a person penetrates different aspects of the other's life. She argued that as children become older then, their bond with their parent does not become

weaker, but rather penetrates less aspects of the child's life.

Cassidy (1999) also points out a further important distinction that has to be made: The attachment bond reflects only one feature of the child's relationship with its parents - specifically the comfort and security seeking in times of stress. Parents also play other important roles - as playmate, teacher, disciplinarian. However, Bowlby (1969/1982b) argued the relationship is essentially characterised as an attachment relationship with 'the shared dyadic programme given top priority is one of attachment-caregiving' (p.378).

Multiple attachments

Bowlby (1969/1982b) argued that most infants form more than one attachment and empirical studies supported his claim (Ainsworth, 1967; Schaffer & Emerson, 1964). Additional attachment figures are likely to include the father (Ainsworth, 1967); siblings (Teti & Ablard, 1989); day-care providers (Howes, Rodning, Galluzzo, & Myers, 1988) and grandparents - although there is almost no empirical literature on attachment relationship with grandparents (Howes, 1999). According to Bowlby, the infant has an attachment hierarchy, with the infant showing a strong preference for the mother, what Bowlby called 'monotropy', especially when distressed (Ainsworth, 1982). However, in her absence the child will seek comfort from other attachment figures (Lamb, 1978; Schaffer & Emerson, 1964). There has been little research on what determines the structure of an infant's attachment hierarchy, but there is a growing literature on attachment relationships within the context of multiple caregivers and a number of criteria have been proposed for identification of attachment figures other than the mother in a child's life. These include provision of physical and emotional care, continuity or consistency in a child's life and emotional investment in the child (Howes, 1999). Neither Bowlby nor Ainsworth addressed why monotropy has evolved as a tendency of human infants. Cassidy (1999) has proposed that it may contribute to the infant's survival and reproductive fitness in multiple ways, including the infant's strong preference, making it more likely that one attachment figure will take principal responsibility for the child; that the child will have a quick automatic response to seek the principal attachment figure in times of danger, rather than engaging in a series of assessments about who may be most responsive in that particular situation. In addition, it may represent the child's contribution to what has been termed 'reciprocal hierarchical bonding' in which the child matches its attachment hierarchy to the hierarchy of the caregiving in its environment. In other words, it may be adaptive for

the child to choose its mother as its principal attachment figure, as the mother has the most to gain in terms of her own reproductive fitness by the infant's survival, and therefore is likely to provide the most caretaking investment in the child (Cassidy, 1999). The existence of multiple attachments raises complex issues for attachment theory - including the concordance or independence among the individual's different attachments; the integration of multiple attachments; and the relationship of multiple attachments to the development of the internal working model; and the effect of multiple attachments on a child's functioning. These issues will be addressed in the next chapter.

Bowlby's theory of Internal working models

Much of Bowlby's early work on the theory of attachment (Bowlby, 1969/1982b) is based on concepts from evolutionary and control-system theories, from which he derived an alternative to traditional psychoanalytic theories of infant motivation. However, in his later work (Bowlby, 1973, 1980, 1988), he also saw how the emerging field of cognitive psychology could be used to simplify and develop the traditional psychoanalytic theory of object relations.

Internal working models and object relations theory

Bowlby's training in psychoanalysis was heavily influenced by object relations theory, a variant of traditional psychoanalytic theory that was then being developed by British psychoanalysts Anna Freud, Melanie Klein, Donald Winnicott and others. Object relations theory places a special emphasis on the role of mental representations of close relationships in personality development (Greenberg & Mitchell, 1983), with a special focus on the the very early relationship between the infant and its mother. According to object relations theory, an infant's first schemata evolve out of experiences of need fulfilment, with attachment figures being perceived as 'good objects' or bad objects', depending on whether they gratify or frustrate infant desires. Only when the infant develops the capacity to maintain a stable internal image of the parent, that is, independent of experiences of need fulfilment, can he or she integrate the frustrating and the gratifying images of the mother and perceive her as one person.

However, object relations theory retains much of traditional psychoanalytic theory's emphasis on sexual and aggressive fantasies. Some object relations theorists, such as

Fairbairn (1952) had suggested that, while the internal world of the infant is peopled by good and bad objects, the infant is capable from the beginning of having a mental schema of persons as whole or part objects, which is independent of need fulfilment. Fairbairn also argued that real experience, that is, how people interact with the infant, has an influence on how the internal world of the infant develops and that the infant's security depends on how effectively he or she deals with these internal good or bad objects. This emphasis on the role of real experience in the infant's internal world was much nearer the concept that Bowlby was developing. With the benefit of hindsight, it is possible to see that object relations theory lies half-way between the traditional drive or instinct theory of Freud and attachment theory as developed by Bowlby (Shaver, Collins & Clarke, 1995).

Internal working models and cognitive psychology

Bowlby was particularly influenced by Craik's (1943) concept of the internal working model. According to Craik, if the individual 'carries a small-scale model of external reality and of its own possible actions within its head it is able to try out various alternatives, conclude which is the best of them, react to future situations before they arise, utilise the knowledge of past events in dealing with the present and the future, and in every way to react in a much fuller, safer and more competent way to emergencies which face it' (Craik, 1943, p.6). To Craik's concept of representation as model building and model use, Bowlby added Piaget's theory of cognitive development and findings from the emerging field of information processing.

In Bowlby's formulation, attachment functions as a goal-corrected control system, with the child, at some level, continuously monitoring the safety/threat of the current situation and the availability of the attachment figure, with the set-goal changing, depending on the results of the child's appraisal. But, influenced by Craik's concept of the internal working model, Bowlby (1969/1982b) proposed that this appraisal is not made anew every time. Instead, through continuous transaction with the world and with other people, particularly the major caretaker, the child learns what to expect, and in time, learns to adjust his or her behaviour. These expectations form the basis of mental representations, or in Bowlby's term 'internal working models' of the world, significant people and the self (Bowlby, 1969/1982b, 1973, 1980). These models can then be used to appraise and guide behaviour in new situations, for example, to predict likely caregiver availability and responsiveness, and appraise the necessity, or otherwise, of keeping the caregiver under close monitoring.

> "Confidence that an attachment figure is, apart from being accessible, likely to be responsive can be seen to turn on at least two variables: (a) whether or not the attachment figure is judged to be the sort of person who in general responds to calls for support and protection; (b) whether or not the self is judged to be the sort of person towards whom anyone, and the attachment figure in particular, is likely to respond in a helpful way. Logically these variables are independent. In practice they are apt to be confounded. As a result, the model of the attachment figure and the model of the self are likely to develop so as to be complementary and mutually confirming." (Bowlby, 1973. p. 238).

As Bretherton (1985) points out, Bowlby's use of the 'internal working model' as a conceptual metaphor has important implications for the development of attachment theory. First, it emphasises the dynamic aspects of mental representation. Using the mental model allows the individual to use past experience to interpret the present and evaluate future courses of action. Second, the use of a 'working model' implies construction and therefore development, with later more complex models replacing earlier and simpler models. Thus, attachment theory is a profoundly developmental theory, Bowlby (1973) believing that at each point development is a product of current circumstances and preceding development.

Sroufe (1988) has argued that the complexity of the developmental viewpoint underlying attachment theory has often been underestimated. Bowlby's concept of the inner working model allows a new perspective on the issue of continuity and change in individual development. Inner working models are actively constructed over time and are subject to change, with 'inner' implying that the model is not simply formed and changed from outside. Rather, new experience and ideas are engaged from the framework of the already constructed model, and change is an active rather than a passive process - with the individual actively seeking, creating, shaping and interpreting experience, with new information tending to be assimilated to the existing inner model - a concept directly borrowed from Piaget. For this reason, and because inner working models, once organised, tend to operate outside conscious awareness, the models tend to be resistant to dramatic change (Bowlby, 1980). These are the forces for continuity.

However, to remain useful, internal working models must be capable of revision, especially in childhood, when development is happening at such a rapid pace. As Bretherton (1985) describes it, the child's developing affective-cognitive understanding enables more sophisticated models of self, others and the world to develop apace. As they become better able to assess the intentions and motives of attachment figures, as they acquire better coping skills and learn to make more accurate appraisals of danger, attachment behaviour may change substantially, becoming less visible with age, and perhaps only appearing in stressful situations. However, the waning of attachment behaviour does not imply the waning of the attachment system and the 'basic interrelationships among the component subsystems remain unaltered' (Bretherton, 1985. p.12).

Bowlby noted that working models are often used long after they have lost their validity because they have become partially or entirely unconscious. When new information contradicts such models, he believed that, in the short-run, the models almost always win the day, and in the long run, very often. Furthermore, while old models can be replaced by new ones, this is done only very reluctantly. To be capable of change, such as happens in psychotherapy and in the process of everyday deliberate self-change, they have to be subjected from time to time to conscious examination, to a check for internal consistency and revision. In this way, the revised model can be used to make a new plan to reach a set goal (Bowlby, 1969). A major feature of healthy development with regard to attachment is the articulation of models of self and others, and the revision and updating of outdated and inconsistent models (Bretherton, 1993).

In Bowlby's conceptualisation, in the person's working model of the world, a key feature is his notion of who his attachment figures are, where they may be found, and how they may be expected to respond. Similarly, in the person's working model of the self, a key feature is his notion of how acceptable or unacceptable he himself is in the eyes of his attachment figure.

However, Bowlby (1973) also noted, largely on the basis of his clinical experience, as well as on the insights of psychoanalysis:

> "that it is not uncommon for an individual to operate, simultaneously, with two (or more) working models of his attachment figure(s) and two (or more) models of himself. When multiple models of a single figure are operative

they are likely to differ in regard to their origin, their dominance, and the extent to which the subject is aware of them" (p.238).

Moreover, he argued that in those suffering from emotional disturbance, the model that has the greatest influence is the one that developed in very early childhood, and is thus constructed on fairly primitive lines, and of which the person may be relatively or completely unaware. Simultaneously, the person may be operating from another, maybe radically incompatible model, that developed later, is more sophisticated, of which the person is more aware and supposes, mistakenly, to be the dominant model.

Bowlby (1973, 1980) invoked a theory of defensive processes to explain his theory of multiple models, proposing that incompatible models of attachment are a product of incompatible interpretations of experience that may become defensively dissociated. He acknowledged that this was 'a version, in different terms, of Freud's hypothesis of a dynamic unconscious' (Bowlby, 1973. p.239). Multiple models can arise when the person holds ideas about the attachment figure and the self, or about the nature, interpretation, or even the very existence of attachment-related events that are contradictory or inconsistent. For example, a child may actually experience rejection by its parents, yet the parents may interpret their behaviour as loving, and moreover, insist that the child cannot examine them or their behaviour objectively, thus effectively imposing a ban on the child reviewing his/her models. Defensively excluding painful or forbidden feelings in this way may provide emotional relief and achieve a representational homeostasis for the child. However, this defensive manoeuvre forces the child to act on a partial model of reality, which, because it is excluded from awareness, cannot be reviewed and updated.

Advances in the theory of the internal working model

Based on Bowlby original insights, attachment theorists have continued to elaborate the understanding of how mental models of attachment formed in infancy play a role in the patterning of personality as the child grows up, and in subsequent parenting behaviour as an adult. Main et al., (1985) proposed that in early development, it may be more accurate to refer to *an internal working model of the relationship* between the child and the attachment figure(s), since the internal working model of self and other are constructed out of dyadic experiences, and cannot be understood without reference to one another. Thus, if a child is rejected, he or she develops a working model of the parent as rejecting and of

itself as not worthy of love. Similarly, Sroufe and Fleeson (1988) proposed that in the course of that continuous dyadic interaction, the child learns to internalise both sides of the relationship:

> "analogous to an actor knowing not only cue lines from the other actors but also enough about the other's roles to know what emotions and attitudes are called for in various scenes.in the manner proposed by 'script' theorists (Nelson & Gruendel, 1981), an abstraction of the relationship is internalised" (Sroufe & Fleeson 1988, p.28.)

Sroufe and Fleeson argued that that process allows the individual to be guaranteed coherence and continuity, even with change and development in the relationship.

This theoretical perspective is, in turn, compatible with Epstein's personality theory, which like attachment theory, has close links with psychoanalytic theory. According to Epstein (1973, 1991), the self-concept is best seen as a self-theory, that is, a set of hierarchically organised major and minor postulates derived from emotional experiences. Major postulates are formed early in life, with subsequent experiences assimilated into the existing postulates. Eventually, they become anchored in a broad network of associated major and minor postulates, making major postulates highly resistant to change. In this theory, identification with the parent's model is implied as the mechanism of intergenerational transmission. Bretherton (1985) however suggested that it may not be the person's identification with their own parent's working models that are involved in continuity or intergenerational transmission, but rather, how the person *construes* these internal working models in adulthood.

Thus, when a person is using two incompatible models of the attachment figure, for example, a model of the parents as abusing, based on real experience, and an idealised model of them as 'really loving', but is only consciously aware of the idealised model, there is a greater probability of intergenerational transmission of abuse. Conversely, when the abuse is understood as an attribute of the parent, not as a reflection on the self as 'worthy of abuse', the transmission is less likely. Bretherton proposes that, in that latter situation, a process of counter identification may be happening, whereby a person has acquired and stores an internal working model of the parent, but is actively and deliberately resisting identification with it, a formulation that corresponds to Fraiberg, Adelson, & Shapiro

(1975) 'ghosts in the nursery' analogy.

One of the most significant conceptual contributions to the theory of internal working models has been made by Mary Main and her associates. She defined the internal working model of attachment as:

> "a set of conscious and/or unconscious rules for the organisation of information relevant to attachment and for obtaining or limiting access to that information, that is, information regarding attachment-related experiences, feelings, and ideation". (Main et al, 1985).

This reconceptualization had significant implications for the future direction of empirical research in attachment, with a new emphasis on mental representation and language, and the power of internal working models to direct not only feelings and behaviour but also attention, memory, and cognition, insofar as these relate directly or indirectly to attachment. This reconceptualization also provides a bridge to the third section of this chapter, the move to the level of representation, which, in turn, is of central importance to the present study. Thus, Main's theory of mental representation will be described in some detail here.

Following Bowlby's emphasis on the importance of real experience in the formation of internal working models, Main was particularly interested in exploring the complexities of how different kinds of events lead to different internal representations, and how the child actively and continuously constructs his working model of relationships. Here, she departed radically from the idea that *real* events experienced with the caretaker are internalised as simply good or bad objects. Drawing on cognitive theories of mental schemata and scripts, and on Bretherton's (1985) formulation, Main et al. proposed that internal working models develop in the following way. A young child's knowledge of relationships is guided by a generalised representation of the events he experiences, the basic module of mental representation, which works by organising experience in terms of reactions, goal paths, attempts and outcomes:

> "Thus, the internal working model of the parent-child relationship will be formed out of a history of of the infant's actions, infant-parent interactions and the fate of the infant's 'attempts and outcomes', that is, the fate or

> outcome of the infant's efforts and intentions to regain the parent even in the parent's absence. The working model of the relationship to the attachment figure will reflect not an objective picture of 'the parent' but rather the history of the caretaker's response to the infant's actions or intended actions with/towards the attachment figure."(Main et al, 1985, p.75).

Main argued that even young infants have a working model of relationships, a position similar to Sroufe and Fleeson's (1988) described earlier. Most previous attachment theorists presumed that the infant had generalised and distinct internal working models of self and other and could integrate self and other into different types of relationships only gradually and that, moreover, infants who had differing experiences could develop different models only when they became relatively cognitively advanced. Main argued that, because knowledge of self and others is embedded in event-based relationships from the very beginning, and because a concept of the 'attachment figure', divorced from the 'event-relevant relationship' between the infant and the caretaker, does not exist, it follows that different relationships will be represented differently from the beginning of representation. In other words, the construction of a working model of a particular insecure relationship between a rejecting caretaker and an avoidant infant is possible even at a very early stage of cognitive development.

According to Main, individual differences in internal working models of relationships develop out of the inner representations of the experienced outcome of actions or intentions relevant to attachment. However, while aspects of each individual's representations are unique, she claimed that the essential differences between individual representations are finite and can be specified in terms of several central organisations. Thus, caregiver responses to the child's proximity-seeking 'intention', give rise to a finite set of organisations - the caregiver can allow access, block access or allow access only unpredictably. (These patterns correspond to the empirically derived organisations of attachment that will be described in section two of this chapter). Furthermore, because the attachment behavioural system is integrated and balanced in different ways with other systems, such as the exploratory and fear systems (Bretherton & Ainsworth, 1974), these caregiver responses result in complex and far-reaching systems of attentional and behavioural organisation.

In sum, internal working models as defined by Main et al. are (1) mental representations with cognitive and affective components actively guiding behaviour that (2) once formed, exist outside of consciousness and tend to remain stable (3) are most likely formed out of generalised attachment-relevant event representations, specifically, the outcomes of the infant's proximity-seeking to the caregiver (4) infants whose attempts to seek proximity are consistently accepted will develop different internal working models of relationships than those whose attempts are consistently blocked or accepted only unpredictably (5) In the latter two cases, *active reorganisation, restriction and redirection in attention, behaviour and emotional expression will occur* (6) some internal working models will be formed in the first few months of life and will be reflected in particular patterns of behaviour - specifically in reaction to separation from and reunion with the caregiver - at age one (7) models are formed, not just from events experienced in the caregiver's presence (eg. being rebuffed), but in the caregiver's absence as well (e.g. a prolonged absence from the caregiver may change the infant's model of that hitherto available attachment figure) and (8) provide rules and rule systems for the direction of behaviour and the felt appraisal of experience (9) for the organisation of attention and memory, rules (many of which are unconscious) that permit or limit the individual's access to certain forms of knowledge with regard to the self, the attachment figure and the relationship between them and that are reflected in the organisation of thought and language pertaining to attachment (10) in childhood, it may be possible for the models to change only in response to actual changes in experience (11) with the onset of the formal operations stage, it may be possible for the individual to think about thought itself, to examine the operation of a particular relationship from 'outside' and thus to change the internal working model of that relationship (12) although strongly tending to remain stable, internal working models are not templates, rather they are best conceived as structured processes that serve to obtain or limit access to information.

Metacognitive monitoring, and single versus multiple models of attachment

Main (1991) also significantly developed Bowlby's concept of multiple models. Drawing on her initial empirical work, comparing infant attachment behaviour with parents' representations of attachment (to be reviewed in Chapter 3), and the children's own representations of attachment-related situations at age 6 (Main et al, 1985), as well as the work of cognitive psychologists, she proposed that differences in attachment organisation in childhood are strongly linked to the quality of metacognitive knowledge, metacognitive

monitoring, and single versus multiple models of attachment.

She first distinguished between representational versus metarepresentational thought, (*thinking* versus *thinking about thought*), or, at a deeper level, possessing a mental representation of an experience versus being able to reflect on its validity, nature, and source:

> "For individuals differing in attachment organisation, I suggest that metarepresentational (metacognitive) processes may differ as strikingly as those representational processes which seem simply to reflect the infant behaviour patterns originally identifying placement in a given attachment category. The mental processes of secure individuals may then be distinguished from those of insecure individuals not only in terms of their *content,* but also in terms of their *flexibility and readiness for examination*" (Main, 1991, p.128.)

Main also suggested that young children's metacognitive difficulties with the 'appearance-reality' distinction make them vulnerable to responding to adverse attachment experiences by developing multiple or conflicting models of attachment. Because they are unable to understand the *merely* representational nature of their own or others' thought, they are unable to imagine that some propositions are without validity, that some individuals believe things which are not true, and that they themselves may have false beliefs at present, or may have harboured false beliefs in the past. Thus, they are unable to step back from the immediate reality of experience and understand that there is another world that 'underlies' or 'explains' it

According to Main, a related source of a young child's vulnerability to developing multiple models is their difficulty with 'dual coding of single entities'. Because of their stage of cognitive development, children tend to work on an assumption of mutual exclusivity, that is, that entities cannot be fitted into two categories at once. Representations involving conflicting or opposing emotions are particularly difficult for them to hold in working memory. For example, Harter and Buddin (1987) showed that the great majority of four year olds used all-or-none thinking regarding emotions and were unable to integrate sets of positive and negative emotions in general, or in respect to a particular target, thinking of them as different things and therefore incompatible.

Main argued that, although the internal working model of self is probably vulnerable to adverse experiences with the attachment figure at any age, the cognitive immaturity of young children makes them particularly vulnerable to unfavourable interaction patterns with a parent. For example, dealing with a parent who is very unpredictable with regard to mood changes and responsiveness makes the development of an organised over-view of that parent especially unlikely, and the development of multiple models correspondingly greater. This suggests, for example, that insecure-ambivalent children will be especially vulnerable. Similarly, a parent's denial or distortion of traumatic events would make children more vulnerable to the development of multiple models.

Bowlby (1973) himself had emphasised the young child's difficulty in analysing the nature and source of their own mental representations, which leaves them particularly vulnerable when they are presented with two contradictory images or memories, one directly experienced, one taken from the parent's perhaps frequently offered verbal account, distortion or denial of the experience, while being pressurised by the parent to acknowledge and remember only the latter. For example, a child who directly experiences rejection of his attachment bids by his mother may only remember her account of her devotion to him or her rationalisation of harsh treatment. Main suggested that the child's difficulty in analysing the nature and source of its own mental representations may make it particularly difficult for them to distinguish whether their knowledge came form direct observation or being told about it by others.

Main also proposed that because of their different experiences, children who are securely versus insecurely attached to their primary attachment figure will differ with respect to both metacognitive knowledge and metacognitive monitoring. The secure child does not have to devote attentional or working memory to constantly monitoring the accessibility or responsiveness of the parent. Such a child may also have more of what Main calls 'epistemic space' (Main, 1991, p.146) in which to review his/her actions or thinking processes because the thinking processes are not compartmentalised by self-deceiving or defensive manoeuvres. In contrast, the insecure child has to engage in considerable self-deceptive or defensive processes which are likely to distort, disorganise, or limit access to memories, feelings, intentions and recognition of options, since the nature of defensive processes is to separate or cut-off feeling, attention, perception and memory from each other. Thus, the insecure child will have great difficulty with metacognitive monitoring.

Or, put another way, the absence of metacognitive capacity is a key factor in making an infant vulnerable to an insecure parent.

Internal working models and communication

Following Bowlby's emphasis on the role of real experience in the formation of attachment relationships, attachment theorists have also continued, empirically and theoretically, to try to understand how early caregiver behaviour actually leads to particular patterns of attachment behaviour in children, and how a characteristic mode of interaction between a child and the caretaker comes to be represented in an internal working model of that relationship. There is a renewed interest in Bowlby's observation that what parents tell their children about early attachment experiences and related emotions is an important determinant of how internal working models develop. Bretherton (1987, 1990, 1995) and Kobak and his colleagues (Kobak & Cole, 1994; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993) have made a significant contribution towards developing a theoretical understanding of this area, as well as other attachment researchers (eg Oppenheim & Waters, 1996; Slough & Greenberg, 1990).

Bretherton (1991), notes the empirical studies that link sensitive and emotionally open communication by attachment partners *within* parent-child attachment relationships with each partner's separate capacity to talk *about* attachment issues openly. She argues that 'the crucial theory-based links are between a child's experience of sensitive open communication with parents, feelings of security, well modulated affect and coherently organised internal working models of self and attachment figures' (Bretherton, 1995. p.316). She also notes Bowlby's (1951, 1979) emphasis on the importance of parents' ability to tolerate a child's negative outbursts and opposition, so communicating to the child that they are not afraid of negative emotion and are confident it can be safely controlled, thereby helping the child to experience feelings of anxiety and guilt in a moderate and organised way. Furthermore, parents' general ability to openly acknowledge and respond to their children's emotional communications leads to the establishment of internal working models that remain flexible and open to change.

Bowlby (1973) argued that the family experience of those who grow up anxious and fearful is characterised not only by lack of parental support but often by covert yet strongly distorting parental pressures, for example, not just to act as caregiver for a parent, but to

adopt, and thereby to confirm, a parent's false models - of self, of child and of the relationship. Similarly, the family experience of those who grow up secure is characterised not only by parental support but by the frank communication by parents of working models - of themselves, of child and of others - that are not only tolerably valid but are open to be questioned and revised.

Bretherton (1995) suggests, therefore, that Bowlby saw the parental role of secure base as allowing the child to safely explore its inner, as well as its outer world. She argues that parents cannot effectively act as a secure base if they consistently ignore, disavow or misinterpret infant signals. Such misleading or absent feedback from a parent or other attachment figure may undermine an infant's ability to construct valid, well organised working models of self and others by setting in train defensive processes of distortion or dissociation. This communication perspective on attachment is based on the assumption 'that parents transmit their own patterns of relating to their children, initially through behavioural-affective interaction patterns, but later also through verbal dialogue about past, future, and hypothetical experiences. This does not, of course, imply that the child passively takes in interpretations furnished by parents and other attachment figures. Rather, children filter parental communications through their own developing system of understandings'. (Bretherton, 1995, p.317)

Other attachment theorists, such as Oppenheim and Waters (1995) have also taken this communication perspective, but emphasise the *co-construction* of personal narratives through child-parent discourse. They propose that such attachment narratives are as much a measure of children's ability to construct narratives about personal and emotional themes, and communicate those to others, as they are of internal representations. This emphasis on the interpersonal and intrapersonal contributions to the construction of attachment narratives focuses attention on the history of emotional communication and co-construction and the cognitive bases underlying the child's narrative construction. They argue that without this focus, children's attachment narratives may be viewed solely as direct reflections of their working models that they have constructed internally from their experience.

Oppenheim and Waters also emphasise interpersonal rather than intrapsychic influences, such as defensive exclusion, seeing defensive exclusion as the intrapersonal outcome of interpersonal difficulties in parent-child communication. For example, rather than parents

actively pressurising the children to exclude or distort information, parents may more commonly simply fail to provide their children with the appropriate emotional support or scaffolding that is needed to help them process and integrate a complex, negative situation. As a consequence in order to cope with confused and negative feelings, the child may resort to defensive exclusion. Bretherton (1995) takes a more complex view, contending that defensive processes originate in, and are maintained by, interpersonal interactions and should not therefore be regarded as purely intrapsychic, noting that most defensive strategies require the collaboration of others in order to operate and hence are more accurately conceived of as transpersonal.

The 'move to the level of representation' in attachment research (to be reviewed in Chapter 3) has made a major contribution to the understanding and elaboration of internal working models. Researchers working from a 'theory of mind' perspective (see Fonagy, Steele, Steele, Leigh, Kennedy, Mattoon, & Target, 1995) have further deepened that understanding.

Summary and critique

Oppenheim and Waters (1995) note that Bowlby was farsighted in his plans for attachment theory, seeking in evolutionary and control-systems theory an alternative to psychoanalytic models of motivation. The emerging field of cognitive psychology also influenced his understanding of the relationship between intrapersonal processes, cognitive processes and interpersonal communication processes. He believed all such processes were central determinants in the development of attachment across the life span, and sought a theory that integrated them. Oppenheim and Waters (1995) argue that such an integration now seems within reach, not least because attachment theory has generated over the past two decades such a rich and diverse body of empirical data.

However, a more circumspect stance may be more appropriate. A number of researchers have criticised the concept of internal working models - central to attachment theory - as too vague, too general, and not able to generate directly testable hypotheses (Dunn, 1993). Bretherton (1999) argues that such criticism may derive from the misunderstanding that representation, conceived of as the construction and operation of internal model, is specific to attachment theory. Bretherton points out that cognitive psychologists (e.g. Johnson-Laird, 1983) have also found the working model approach to representation useful and have adopted a view of representation very akin to Bowlby's - that is, as analogues of what

they represent, retaining the dynamic relational properties of what they model, so that they can be activated to make predictions in 'mental time'. To the extent that they capture important causal/relational properties of the environment and the self, they are therefore useful in allowing the individual to operate successfully in that environment. Bretherton has also shown that the working model approach is consonant with other representational theories, such as classic symbolic interactionism, attribution theory, script theory and so on (see Bretherton, 1999).

Another possible misunderstanding that may underlie the criticism that the theory of working models is not testable is that the tenets of the theory derived solely from psychoanalytic theory or clinical insights. In fact, the theory-research links in attachment theory are very close and could be said to have co-evolved. Bowlby's theory was so influenced by the empirical work of Ainsworth and her colleagues (Ainsworth et al., 1978) that Bowlby and Ainsworth are widely acknowledged in the attachment literature as the joint developers of attachment theory. Similarly, Bowlby (1988) himself acknowledged that the the empirical work of Mary Main and her colleagues (Main et al., 1985) was highly influential in his formulations about internal working models. This empirical work, (to be reviewed in Chapter 3) has shown that, in general, the findings support Bowlby's formulations.

In contrast to Dunn's criticism, others have criticised attachment research for being too empirically driven. For example, Kobak (1999) argues that much of recent attachment research suffers from a lack of theoretical perspective, with methodologies focusing on individual differences, such as the strange situation and the AAI, dominating the field. As a consequence, the study of normative development of attachment and attachment relationships has been neglected. In fact, some researchers go so far as to say that 'exploration of the ontogeny of attachment has nearly been abandoned' (Marvin & Britner, 1999, p.45). They argue that any attempt to understand adaptive or maladaptive versions of the mature form of an organism, without constant reference to structural transformations throughout ontogeny is doomed to failure.

A number of attachment researchers (eg. Kobak, 1999) have criticised the field for its over-emphasis on Bowlby's theory of working models, and its corresponding neglect of a second critical notion in his theory - that a child's sense of security is not just influenced by internal working models, but also by the quality of the on-going relationship with

caregivers. Thus, the continuing challenge for the field is to determine empirically the extent to which experience of variability in the security of an attachment relationship, and hence in the person's internal working model, is influenced by variability in the behaviour of an attachment partner.

Attachment theory has also been criticised for defining security too narrowly. Even though Ainsworth (1985) viewed security as a reflection of the way an individual balances exploration and attachment and the way his/her caregivers facilitate that balance, it has been argued that attachment theory-research has neglected exploration an an integral component of security. The prevailing view of attachment focuses too narrowly on the individual's response to attachment-related loss and distress, and not enough on security of exploration. Grossmann, Grossmann, and Zimmermann (1999) attribute this narrow view of attachment to Bowlby's (1991) notion that the crucial variable in attachment is preventing mental breakdown under conditions of adversity. These authors have proposed including the concept of 'security of exploration' in the concept of attachment, arguing that adaptation by means of exploration is the biological function of attachment. This is not a merely theoretical point. The importance of this broader framework is shown by the findings of studies that suggest that, when security of exploration as well as security of attachment is measured, the unique contribution of fathers to their children's development becomes clearer (Grossmann et al., 1999). The challenge remains for attachment theory to explain and empirically demonstrate how the individual remains secure and protected while, at the same time, engaging in developmentally appropriate exploration or other activities across the entire life-span.

Another criticism of attachment theory is that it has not given sufficient attention to how the attachment behavioural system articulates with the other behavioural systems in the individual (and in the caregiver). If the attachment behavioural system remains important throughout the life-span, as attachment theory maintains, then not just is it likely that it will undergo significant changes, but these changes probably include changes in the relationship between the attachment and other behavioural systems. For example, Bowlby (1969/1982, 1988) proposed that the the behaviour of the attachment figure is organised by a caregiving behavioural system. Until very recently, however, there has been little interest in the caregiving behavioural system or how it contributes to the parent-child relationship. Again, this lack of interest has been attributed to a number of interacting factors (Solomon & George,1999).

First, Bowlby and subsequent attachment researchers came from child-centered disciplines - psychoanalysis, developmental psychology, social work - that focus predominantly on the needs and development of the child. Second, the concept of behavioural systems was borrowed from evolutionary biology and was largely foreign to those disciplines. As a consequence, the dominant explanatory concepts of those disciplines (e.g. behaviour patterns, attribution) have overshadowed the ethological concepts of the theory. Third, the historical focus of developmental psychology has been almost exclusively on the development of children up to the end of adolescence, except for those developmental psychologists working within the life-span developmental psychology framework. Solomon and George argue that by exclusively focusing on the attachment system alone, the field has missed important insights into the parent-child relationship.

CHAPTER 2

THE DEVELOPMENT OF ATTACHMENT THEORY PART TWO: AINSWORTH'S DISCOVERY OF INDIVIDUAL DIFFERENCES IN PATTERNS OF ATTACHMENT

Introduction

Ainsworth played a major role in the development of attachment theory. Three key concepts of attachment theory, the secure-base phenomenon, individual patterns of attachment and the relevance of these concepts throughout the life span, are all closely identified with Ainsworth (Waters, Vaughan, Posada & Kondo-Ikemural, 1995). In 1939, Ainsworth completed her doctoral thesis entitled *'An Evaluation of Adjustment Based on the Concept of Security'*, under the supervision of William Blatz, who had developed security theory (Blatz, 1940). According to security theory, itself influenced by Freud's insights, infants and young children need to develop a secure dependence on parents as a prerequisite to venturing forth into unfamiliar situations and coping on their own. This secure dependence forms the basis for learning the knowledge and skills necessary to develop a secure dependence on self; although secure independence is never possible, secure dependence on parents is gradually replaced by secure dependence on peers and later a romantic partner. Blatz's theory had significant impact on Ainsworth's future contribution to attachment theory, and, as early as 1940, she was already referring to the individual's need for a 'secure base' from which to explore and develop (Bretherton, 1991).

Bretherton's (1991) history of the attachment theory describes how Bowlby and Ainsworth jointly developed attachment theory and, from the beginning of their collaboration, set up between them the close theory-research-theory links that have come to characterise attachment theory. In 1950, Ainsworth joined Bowlby's Tavistock Clinic team, working as a researcher in the area of mother-child separation and its effects on personality development. There, among others, she worked closely with James Robertson, whose naturalistic observations of children separated from their mothers (Robertson & Bowlby, 1952) strongly influenced the future direction of her own research. In 1953, she undertook an observational

study on mother-infant separation in Uganda, familiar with Bowlby's ethological theories, but as yet, unconvinced of their value for understanding infant-mother attachment.

Her study involved observing infants, ranging in age from fifteen weeks to two years, over a period of nine months. All were observed in the family home, for two-weekly visits lasting two hours each, with a focus on the occurrence of specific attachment behaviours. Upon returning to America, as a result of her renewed contact and collaboration with Bowlby and his writings, and strongly influenced by his developing ideas on the nature of attachment, she subsequently published the Ugandan study (Ainsworth, 1967). Conversely, Bowlby drew on many of Ainsworth's ideas and findings as he elaborated and refined his theory of attachment (Bowlby, 1969).

The development of the strange situation procedure

Ainsworth had a particular interest in individual differences in attachment behaviour. On the basis of her Ugandan findings, the infants were classified into three groups: securely attached infants who cried less, insecurely attached infants who cried more, and infants who were not yet attached to mother and did not show differential attachment behaviour to her (Ainsworth, 1967). Statistical analyses showed that the three classifications were significantly correlated with the interview-based ratings of maternal sensitivity to infant signals and the amount of holding provided by the mother.

Influenced by Bowlby's attachment theory, and by her own ethological observations of care giving practices and infant behaviour, Ainsworth pioneered the first research on Bowlby's first hypothesis - that individual differences in attachment arise from differential experiences and consequently differential expectations regarding the availability of caregivers. Ainsworth and her associates then initiated her Baltimore study and began a year-long observational study of 23 mother-infant dyads living in stable middle-class families. In the case of the infants, the focus was observing their exploratory and attachment-related behaviour in the home. Ainsworth also developed behaviourally anchored scales for rating caregiver qualities, including sensitivity to signals, cooperation-interference, acceptance-rejection, and availability-unavailability scales. Each mother-infant dyad was observed in the home for approximately four hours every three weeks, a total of between 66-80 hours observation per dyad.

Ainsworth and Wittig (1969) then developed a procedure - the 'strange situation' - for assessing infant security in the laboratory at the end of the first year. This procedure was heavily influenced by attachment theory, particularly the focus on the interplay between the attachment and exploratory behavioural systems, under conditions of low and high stress, that is, in the presence and absence of the mother. According to Bowlby, any changes that might signal increased threat to the infant, such as moving into an unfamiliar environment, or actual separation from the attachment figure, constitute two conditions of danger that should activate the attachment behavioural system. The strange situation, 'a miniature drama with eight episodes in which mother, infant, and a stranger participate' (Bretherton, 1991) was designed to incorporated those two 'natural clues' to danger.

This 22-minute laboratory-based observational procedure consists of eight episodes in which 12-20 month month old infants are observed responding to two very brief separations from, and reunions with, the parent, in an unfamiliar, although pleasant, toy-filled room. The eight episodes consist of the following (1) parent and infant are introduced to the room and (2) are left alone for three minutes, giving the infant the opportunity to explore the room and the toys (3) a 'friendly stranger' -usually a young woman- enters the room, and plays with infant during final minute (4) parent then leaves the room, leaving the infant alone with the stranger (5) parent then returns, after greeting the infant from the door. The stranger leaves quietly (6) parent leaves again, leaving the infant entirely alone (7) the stranger returns, interacting as necessary (8) the parent returns, greeting the infant from the door.

The mother is instructed to respond to the infant as necessary throughout the situation, but is otherwise asked not to direct his activities. Following attachment theory, it was expected that all infants, separated and reunited twice from their mothers in an unfamiliar setting, would show attachment behaviour, with mother's presence expected to provide the basis for a return to exploration and play. Unexpectedly, striking individual differences were found. The majority of infants (13 of 23) behaved as expected. They sought proximity and physical contact with the mother if they had become overtly distressed by the separation, or even if they had not, they greeted her and sought interaction with her - Group B, termed *'secure'*. Other infants (6 of 23) appeared to ignore the mother and avoided her on reunion. Their absent attachment behaviour was replaced by exploratory behaviour throughout the situation as a whole - Group A, termed *' insecure-avoidant'*. Yet other infants (4 of 23) appeared to

be completely preoccupied by the mother, and the attachment behaviour continually focused on her was interspersed with angry and resistant behaviour. Exploration was absent, and the infant failed to settle on the mother's return - Group C, termed *'insecure-resistant ' or 'insecure-ambivalent' or 'anxious-insecure'* (Ainsworth, Bell & Stayton, 1971, 1972)[1]

These findings of Ainsworth and her associates provided the first empirical corroboration of some of the central tenets of attachment theory. In particular, they appeared to demonstrate that the reunion behaviours of Group A (avoidant) and Group C (resistant) infants resembled the reunion behaviour of children who had endured longer, more stressful separations, where no alternative caregiving figure was available. Robertson and Bowlby (Robertson & Bowlby, 1952; Bowlby, 1969, 1973) had observed that toddlers separated from their parents for a long enough period entered a period of detachment, in which they appeared to be no longer concerned with their mothers. This detachment, signalled by avoidance of the mother on visits to the separation setting, was hypothesised as evidence of the onset of repression, a defensive process, resulting from the traumatic experience of separation. Even when reunited with their mothers, such children often entered a period of intense clinging and angry behaviour before settling again with parents. As Main (1995) points out, Ainsworth's work had empirically shown that behaviour bearing a phenotypic resemblance to defensive processes arising from traumatic separations could develop in infants who were reared in their own homes and had not experienced any major separations.

However, the most significant contribution of Ainsworth's research was to demonstrate the systematic and extensive correlations between the different patterns of infant behaviour that were observed in the strange situation with maternal and infant behaviour observed in the home throughout the first year of the infants' lives and to validate the laboratory-based strange situation procedure against these naturalistic occurrence of attachment behaviours. These observations revealed that maternal sensitivity to the infant's signals during feeding (Ainsworth & Bell, 1969); face-to-face play (Blehar, Lieberman, & Ainsworth, 1977); episodes of distress and crying (Bell & Ainsworth, 1972); infant greeting and following (Stayton & Ainsworth, 1973); issues of obedience (Stayton, Ainsworth, & Main, 1973) and close bodily contact (Ainsworth, Bell, & Stayton, 1971) in the course of the first three months predicted the quality of the relationship during the fourth quarter of the first year. (see Ainsworth et al., 1978 for an overview).

[1] For clarity, this group will be called 'resistant' in this thesis.

The strange situation, together with its associated behavioural criteria, enabled researchers to classify infants initially into one of three classification groups. Later, a fourth classification - *disorganised/disoriented* - was added. The original three categories discovered by Ainsworth - secure, insecure-avoidant and insecure-resistant are now referred to as the *organised* classification of an infant's attachment to a particular parent (Main, 1990). In addition, Ainsworth also developed coding systems for recording both crying and exploratory behaviour, and highly reliable scoring systems for the extent to which the infant avoided the mother, resisted the mother, sought proximity with the mother and attempted to maintain physical contact with her. Ainsworth focused on developing a classificatory system, specifically the classification of the infant-parent relationship, as observed in the strange situation procedure. She considered this a necessary first step for the organisation of complex behavioural data, although the classification systems do capture all the relevant continuous scoring systems, and the scoring systems predict group membership (Ainsworth et al., 1978).

The four strange situation classification groups

On the basis of the Baltimore and succeeding studies using the strange situation, the typical behavioural patterning throughout the procedure for infants in the four attachment classifications has been described by many scholars (e.g. Ainsworth et al., 1978 (three classifications only); Main, 1994, 1995, Main & Goldwyn, 1998b; Main & Solomon, 1990). In addition, there are subcategories for each of the three classifications. Thus, some secure infants show more or less avoidant or resistant behaviour than others; some avoidant infants show more extreme avoidance than others; and some resistant infants are mainly angry, others mainly passive. Based on the above descriptions, following is a summary account of each of the four organised classifications.[2] In addition, the infant-mother behaviour observed in the home and found to be correlated with each classification - that is, the antecedents of individual differences in attachment security - will also be described.

Group B: Secure

In the introductory episode, the infant uses the mother as a secure base for exploration. The infant plays happily, smiling and chatting to his mother. Typically, the mother is attentive

[2] For clarity, the male pronoun will be used in relation to the infant, the female for the parent.

but not directive. His response to the arrival of the 'friendly stranger' is to return to his mother, but to remain interested in the stranger. Encouraged by his mother, he starts to play with the stranger. When his mother her leaves, he shows signs of missing her by going to the door and immediately calling for her, and 'his calling is loud, communicative, and increasingly distressed' (Main, 1994. p.4). He actively greets her on reunion with a smile, vocalisation or gesture. If his is distressed he seeks contact with his mother and his distress is readily soothed. He then returns to exploration and play. When his mother leaves again, he actively tries to follow her and may try to prevent her leaving. Left entirely alone in the next episode, he cries. The immediate return of the stranger enters fails to comfort him and crying continues, although despite his distress, he continues to call for her clearly. When his mother returns, he quickly approaches her, with arms raised, and is immediately picked up. As he is comforted by her, he clings to her body. After a few moments on her lap, he returns to active play.

Main (1994, 1995) notes that what is most striking about this behavioural sequence is the immediacy with which the infant's distress is terminated, the comfort he takes in physical contact with his mother, and his readiness to return to play once his mother returns. ' The observer has witnessed what appears to be as miniature drama with a happy ending'(Main, 1995, p. 416), even though the two separations from mother may have amounted to only 45 seconds in total (Main, 1994).

Of the three major classification systems, the 'organising' principles of secure attachment are most clearly identified (Ainsworth et al, 1971;1978). The underlying feature of secure relationships is that infants and mothers seem to be in harmony with each other and interactions are characterised by effective secure-base behaviour on the part of the infant and sensitive responsiveness on the part of the mother. The infant is competent in balancing proximity-seeking with exploration and the relationship is 'coherent' (Sroufe & Fleeson, 1986) with interactions 'organised' around a flexible balance of exploration and secure-base behaviour.

Antecedents of secure infant classification

Ainsworth's Baltimore study, and many succeeding studies, have investigated the infant-mother behavioural precursors of secure attachment. Most have replicated the original finding

of Ainsworth and her associates, that is, that detailed clinical ratings of maternal sensitivity taken during the infant's first year predict infant security of attachment at one year. (Ainsworth et al., 1971; Ainsworth et al., 1978; Bates, Maslin & Frankel,1985; Belsky, Rovine & Taylor, 1984; Egeland & Farber, 1984; Grossman, Grossman, Gottfried, Spangler, Suess, & Unzer, 1985; Isabella, 1993; Pederson & Moran, 1995; Smith & Pederson, 1988).

In sum, these studies found that mothers of secure infants are sensitive to the signals of their infants during the first year of life, responding promptly to crying. They hold the infant tenderly and carefully and are rarely inept in their handling of the infant. They are 'attuned' to their infants (see Stern, 1985), their face-to-face interactions with the infant being markedly contingent on the infant's behaviour. When maternal and infant desires conflict, they are cooperative, respectful of the infant's autonomy, or try to tactfully distract the infant.

Ainsworth and her associates (Ainsworth et al., 1971) also found that at home, secure infants clearly use the mother as a secure base from which to explore the familiar home environment. Such babies seem to have found a smooth balance between attachment and exploration. They show little anxiety, do not cry in response to minor separations from mother, such as the mother moving into another room to do a household chore. They are more compliant to the mother's direction and prohibitions (Ainsworth et al., 1971). Neither do they show much angry behaviour in the home, and in fact, the less likely they are to show angry behaviour at home between 9 and 12 months (Ainsworth et al., 1978) the more quickly and actively the infant seek proximity and contact with the mother during the strange situation.

Group A: Insecure- avoidant

During the introductory episode, the infant explores readily, but with little display of affect or secure base behaviour. He responds minimally when his mother leaves, showing no overt distress. He accepts the stranger's approach and plays with her in a matter-of-fact way. When his mother leaves, he does not appear to notice, and continues playing with the stranger for the full three minutes. When his mother returns, he looks away, and actively avoids her, often focusing on a toy. He continues playing when she approaches him, and may bend away from her subtly. When she leaves again, and he is left entirely alone, he continues playing and shows no distress. On the second reunion with his mother, he again ignores and avoids her.

Picked up by her, he may stiffen slightly but his affect remains neutral, as his mother continues to talk to him, trying to get his attention. Without expression, he may lean away from her body, pointing to a toy on the floor. He immediately moves away a distance from the mother and resumes playing.

Main (1994, 1995) notes that little appears to have happened throughout the entire procedure: the infant has not once looked at his mother, or attended to her conversation, throughout the reunion episodes. While the mother of such an avoidant infant may experience some distress at her infant's apparent rejection of her, she does not express it and may brightly encourage his interest in the toys.

Antecedents of avoidant infant classification

Ainsworth and her associates (Ainsworth et al., 1971,1978) found that avoidance of the mother on reunion during the strange situation is associated with maternal insensitivity to infant signals in a variety of contexts in the first three months of life, and specifically, to maternal rejection of infant attachment behaviour. Mothers of these avoidant infants express verbal and behavioural dislike of physical contact with the infant. Observers in the home noted them actively rebuffing the infant's bids for contact. These findings were replicated by Main and her associates (Main, 1981; Main & Stadtman, 1981). Mothers of the infants who were most avoidant had a mean score of 7.3 for aversion to contact with their infants during the first three months of life, while the mothers of secure infants had a mean score of 2.28, and mothers of insecure-resistant infants had a mean score of 1.73. (Ainsworth et al., 1978). Main and Stadtman (1981) examined Ainsworth's narrative records of home visits in her original Baltimore sample, and found that aversion to close body contact between mother and infant was a stable maternal characteristic in the first year of life.

In addition, aversion shown by the mother in the first three months, before the infant could actively approach and initiate contact, was highly predictive of actual active rejection of bids for contact in the fourth quarter, such as pushing the infant away, or angrily shouting at the infant when he or she was making a bid for contact. Such mothers were observed, for example, 'holding the infant at some distance, with arms stiff and straight in front of her, as though the infant is being transported on a platter', or saying to the infant 'you know I hate to have you crawling all over me' or 'don't touch me' (Main, 1990, p.469). When they do

express physical affection, they may do so, for example, by kissing the infant on the head, often with a kind of pecking motion (Tracy & Ainsworth, 1981). Ainsworth also made extensive observations of the infant's responsiveness to cuddling during the first six months. Main and Stadtman found that such observer rating of 'cuddliness' was unrelated to mother's aversion to physical contact during any quarter of the first year of life. Thus, early infant differences in aversion to 'cuddliness', such as were reported by Schaffer & Emerson (1964) do not appear to account for the aversion noted in mothers of avoidant infants.

In addition, Grossman and Grossman (1991) found that, in free play settings, mothers of avoidant infants withdrew from the infant when the infant seemed sad. There is also a strong correlation between maternal aversion to physical contact and the infant's angry mood in the last quarter of the first year (Main & Stadtman, 1981), which in turn predicts avoidance of the mother in the strange situation, with the most avoidant infants sometimes hitting the mother in the home setting (Ainsworth et al., 1978).

As noted earlier, unlike secure infants, avoidant infants do not seem to have achieved a smooth balance between attachment and exploration. Instead, what is evident is active avoidance of the attachment figure: looking away, moving away, turning away and leaning away. Bowlby (1980) and Main (1981) have interpreted

> "the continual exploration of avoidant infants as an organised shift of attention or diversionary activity that enables the infant to minimise responsiveness to fear-eliciting conditions and thus maintain the 'deactivation or repression of attachment behaviour" (Main, 1995).

According to attachment theory, when an infant experiences alarm, the attachment behavioural system is activated. Since the function of that system is to bring the infant into closer proximity with the attachment figure, the infant inevitably seeks the attachment figure as a 'haven of safety'. When the infant is continually rebuffed physically by the mother, the infant is in a state of continual activation without termination with respect to its mother. The impossibility of approach will make it likely that the infant will experience strong anger in those circumstances. According to Main (1990) this anger, like attachment bids, cannot be safely expressed, and the physically rejected child may begin to feel fearful and angry in every situation which normally arouses love and longing.

Eventually, there must be a 'qualitative shift' which permits the attached infant to shift attention from the attention figure, and perhaps eventually from most situational cues to danger and therefore to the arousal of the attachment system. But this deactivation is not fully successful. Sroufe & Waters (1977) and Sprangler and Grossman (1993) show that apparently unconcerned avoidant infants show the same elevated heart rates during separation as do the overtly distressed secure infants. Moreover, rises in cortisol levels from before to after the strange situation are higher for avoidant than for secure infants. Thus, Main (1981, 1995) suggests that avoidance of the mother in an inherently alarming setting, such as the strange situation, may serve as a kind of 'conditional' strategy for maintaining self-organization, helping the infant to inhibit expressions of anger as well as attachment.

Cassidy (1994) and Pederson and Moran (1995), following Main, suggest that the predominant organising principle of an avoidant relationship is that of containing negative affect. An avoidant relationship will be manifest in infant-mother interactions that function primarily to maintain emotional distance, particularly in times of mild stress. Thus, mothers of avoidant infants will be relatively insensitive to infant signals. Because of their aversion to physical contact, when they do respond to infant signals, they will tend to orient the infant towards objects in the environment rather than to engage in affect-laden interactions focused on relieving distress. Instead, they will encourage the infant to be independent (Braungart & Sifter,1991). In turn, the infants try to soothe themselves when upset rather than approach the mother for comfort. By the end of the first year, when assessed in the strange situation, the infant appears to have taken on the behavioural pattern of the mother (Main, 1990).

Group C: Insecure-resistant

In the introductory episode, the infant may be fretful, and may appear distressed. The mother may look stressed. He either fails completely to play with the toys, sitting passively by his mother's feet or else may engage in some exploration with the toys, but interrupts the play frequently with fretful returns to his mother. He greets the approach of the stranger with suspicion, refusing to play with her. When the mother leaves, he immediately begins to cry, angrily resists the stranger's attempts to comfort him, struggling away from her. On reunion with the mother, he may move actively towards her, and wrap his arms around his mother's legs. Typically she does not pick him up and tries to move past him. He alternates

bids for comfort with angry rejection. Alternatively, he may appear passive or too upset too signal. In either case, he fails to find comfort in his mother. He continues holding on, crying loudly. When mother leaves again, he protests loudly, crawling after her in an incompetent way, perhaps hitting his head on the floor. When the stranger enters he throws himself backwards, crying hard and resisting her approaches. When the mother returns, he crawls to her at once, but again displays ambivalent behaviour, for example, throwing a tantrum when she tries to get him to play, but crying even harder when she tries to pick him up. He remains focused on his mother for the rest of the session and does not engage with the toys. For the passive sub-category, the pattern is somewhat different, the infant in this case seeming to be too distressed or incompetent to even raise his arms to approach his mother, or to resist her strongly, and unable to terminate his distress by the end of the session.

These infants are so distressed that the separation episodes are very quickly terminated, yet the mother's return fails to settle the infant. As Main (1995) remarks what is unsettling for the observer, is that neither the infant's distress nor his preoccupation with his mother's whereabouts is affected by the mother's actual return. The behaviour of the insecure-resistant infant is 'organised', in the sense that he is focused on the mother throughout the session and shows distress and proximity seeking on reunion, alternating with angry resistance. Like an avoidant infant, he has a 'singular attentional focus' (Main, 1990) - in his case, an insistent focus on the mother; in the case of the avoidant infant, an exclusive focus on the toys. Thus, the insecure-resistant infant could be described as the 'mirror image' of the avoidant infant (Main, 1995). In both cases, the attentional focus is not fluid, as it is with the secure infant, who distributes his attention fluidly between the mother (attachment) and the environment (exploration).

Antecedents of the insecure-resistant category

The home observations carried out by Ainsworth and her colleagues (1971,1978) showed that mothers of insecure-ambivalent infants were unpredictable, discouraging of autonomy and insensitive to infant signals and communications. They did not maltreat or frighten their infants, but were unpredictable, sometimes attentive, sometimes persistently ignoring or interfering. However, as Pederson and Moran (1995) point out, the structure of insecure-resistant relationships and their likely expression in naturalistic environments is less well understood than the structure of the secure and avoidant relationships (Cassidy & Berlin,

1994; Isabella, 1993). This may be partly because there are typically few such infants in research samples. Ainsworth et al (1971) identified only four in their sample and moreover, reported considerable heterogeneity in the characteristics of the four mothers; two were very dysfunctional, one intrusive, one unresponsive.

Unresponsiveness on the part of the mothers of such infants has also been found in other studies (Belsky, Rovine & Taylor, 1984; Cassidy & Berlin, 1994; Isabella, Belsky & von Eye, 1989; Smith & Pederson,1988). One study (Isabella, 1993) found mothers of such infants to be rejecting and inconsistent. Pederson and Moran also point out that the emotional volatility of both the insecure-resistant infants and their mothers is another source of difficulty in developing clear and consistent descriptions of their relationships. Cassidy (1994) and Crittenden (1992) suggest that the infant's displays of negative affect, in response to maternal unresponsiveness and unpredictability, may, in turn, become a way of eliciting predictable maternal response, with the mother's negative affect exacerbated by her irritation induced by the fussy, cranky infant.

Group D: Disorganised/disoriented

Main and Solomon (1990) note that as early as 1970, Ainsworth and Bell had observed children whose behaviour in the strange situation was 'unclassifiable' (see Main & Solomon, 1990, p.125). Yet, most researchers using the strange situation procedure continued to try to classify every child into the A, B or C, categories. During the 1980's however, researchers working with abusing and psychiatrically distressed parents found that using the ABC classification system, some abused infants were judged 'secure', a finding that contradicted the expected relationship between secure attachment and sensitive parental responsiveness (Egeland & Sroufe, 1981; Gaensbauer & Harmon, 1982). Researchers also found that some abused children, as well as children of psychiatrically distressed mothers, simultaneously showed characteristics of both the A and C attachment categories (Crittenden, 1985; Radke-Yarrow, Cummings, Kuczynski & Chapman, 1985; Spieker & Booth, 1985). Crittenden (1995), for example, describes the A/C type as combining the defended and coercive strategies, which she conceptualises as statelike shifts between the two extremes. Many researchers (Carlson, Cicchetti, Barnett & Braunwold, 1990; van IJzendoorn et al., 1992) consider the Crittenden A/C category to overlap with the disorganised/disoriented category, discovered around the same time by Main and her associates.

Main and Weston (1981), working with a low-risk Bay Area sample found that 13% of infants could not be classified into Ainsworth's classification directions. Main and Solomon (1986, 1990) undertook a review of 200 'unclassifiable' strange situation tapes, 100 of which were drawn from high-risk samples, and found no evidence for a new, coherent pattern of attachment. Instead, they discovered that what the 'unclassifiable' infants had in common was that they exhibited bouts or sequences of behaviour that seemed to lack an observable goal, intention or explanation, what they termed 'disorganised/disoriented' behaviour.

Main (1990) proposed that while secure, avoidant and ambivalent/resistant infants can be understood as demonstrating a 'behavioural strategy' for dealing with separation from and reunion with the parent in a strange situation, these 'disorganised/disoriented' infants were instead showing a collapse of strategy. In excess of 90% of the previously 'unclassifiable' infants were observed to show such behaviours and were assigned to a new category, called 'disorganised/disoriented'. Infants are now assigned to this category if, in the presence of their parent during the strange situation, their behaviour includes one or more of the following features (Main, 1995):

(1) Sequential display of contradictory behaviour patterns e.g. running to parent then suddenly stopping stopping and falling silent (2) Simultaneous display of contradictory behaviour patterns, the infant being neither able to respond to or approach the parent, but neither being able to shift attention away (3) Undirected, misdirected, incomplete and interrupted movements and expressions e.g. lifting arms to be picked up by the stranger at the moment of reunion with the parent (4) Stereotypies, asymmetrical movements, mistimed movements, and anomalous postures e.g. raising hands to his head when hugged by the parent (5) Freezing, stilling, and slowed movements and expressions e.g. falling prone in a huddled posture while approaching the parent (6) Direct indications of apprehension regarding the parent: e.g. looking fearful of the parent while simultaneously smiling (7) Direct indications of disorganisation or disorientation e.g. showing confusion on seeing or even hearing the parent approach.

Main (1994) describes the behaviour of disorganised infant in the strange situation in the following way:The infant's behaviour appears to lack observable goals, intentions or explanations. Introduced to the room in the opening episode by the stranger, the infant may

begin to cry and protest when the stranger leaves. The mother may appear slightly dazed. Alone with his mother, the infant wanders aimlessly around the room, neither fully focusing his attention on his mother or on the toys. He is thus unlike the secure infant who moves his attention fluidly between mother and toys; unlike the avoidant infant who focuses attention exclusively on the toys and unlike the resistant infant who focuses attention exclusively on the mother.

When the stranger returns, the infant look apprehensive but instead of approaching his mother, he instead backs against the wall. When his mother leaves, he at first plays, but then becomes distressed. On reunion, he approaches his mother, arms outstretched, but then moves past her. He remains distressed and crying but does not approach his mother, instead backing further and further away from her, turning in circles until he is in the corner furthest from her.

When the mother leaves again, he remains distressed and the stranger cannot comfort him. When his mother returns, he approaches her directly seeking contact , but on being lifted, he remains expressionless with eyes half-closed. He may strike subtly strike at her face with a toy, although he does not look angry. Neither the infant or the mother reacts in any way to the strike. He continues to back away from his mother and begins to cry. In the closing episode, when the stranger returns, he falls huddled and prone to the floor, his eyes open but blank and staring, and he remains in this posture stilled and unmoving for many seconds. He still does not approach his mother.

Main describes this last posture as manifesting what may be one of the essential characteristics of the disorganised pattern - a state of fright too overwhelming to be avoided through a shift of attention, yet one to which there is no solution, since there is no place to go for safety. The disorganised/disoriented infant is clearly distressed, but cannot 'avoid' expressing this distress, like the avoidant infant can. Neither can he approach his mother, like the secure or resistant infant. What he exhibits in his disorganised, disoriented behaviour is what Main terms a collapse in strategy - a behavioural collapse and also perhaps a collapse in attention.

It is important to note that in the example of the disorganised infant described given above, the disorganised/disoriented behaviour is very marked and prolonged. This is not always the

case with disorganised infants. Many will show only very brief episodes of disorganised/disoriented behaviour, lasting between 10-30 seconds. However, such brief bouts of disorganised behaviour are very significant. Spangler and Grossman (1993) for example, found that the disorganised infants showed the sharpest increase in heart beat during the separation episode of the strange situation, and a significantly greater rise in cortisol than secure infants throughout the duration of the whole procedure. Nonetheless, most disorganised infants will otherwise fit well to the A, B or C, classification. In fact, the infant classified as disorganised is always assigned to an alternate best-fitting A, B or C, or the 'cannot classify' category. A recent mata-analysis of 20 studies across 25 samples found that in 34% of the cases, disorganised attachment was accompanied by a secondary classification of avoidance; in 14% of cases by a secure classification, and in in 46% of the cases by a resistant classification (van IJzendoorn, Schuengel, & Bakermans-Kranenburg, in press). With most formerly 'unclassifiable' infants in low -risk samples now reclassified as disorganised, the proportion of infants assigned to the disorganised category ranges from 15-35% (Main, 1995).

Antecedents of the disorganised/disoriented category

The disorganised category, unlike the earlier ABC categories of attachment is just beginning to be validated against home behaviour (Jacobvitz, Hazan, & Riggs, 1997; Schuengel, van IJzendoorn, Bakermans-Kranenburg, & Blom, 1997; van Ijzendoorn et al., in press) and thus its aetiology and meaning is not yet fully clear. Main notes that some of the behaviour patterns characterised as disorganised are found in neurologically impaired infants and that disorganised attachment status may be influenced by heritable characteristics or constitutional difficulties in infants in normal samples, citing unpublished work by Spangler, Fremmer-Bombik and Grossman, who discovered a significant association between disorganised attachment status at one year and dysregulation during the newborn period. This finding could indicate intrauterine experience and heritable characteristics as factors.

Main argues however that there is compelling evidence to suggest that that the contribution of environment is far more significant. Recent studies have shown that infants are unlikely to be classified disorganised with more than one caregiver (Main & Solomon,1990; Steele, Steele, & Fonagy, 1996; van IJzendoorn et al., in press). Based on a meta-analysis of 12 samples, (N=1,877), van IJzendoorn and his colleagues reported a nonsignificant association between

disorganised attachment behaviour in infancy and constitutional and temperamental variables (r=.003). Similarly, individual differences in emotional reactivity, infant difficulties, or general behavioural disorganisation were not found to be associated with disorganised attachment behaviour (Barnett, Ganiban, & Cicchetti, in press). Maternal ratings of difficulties or observers' ratings of fussy behaviour at 12 or 18 months were also not found to be associated with disorganised attachment classifications at 12 or 18 months (Vondra, Hommerding, & Shaw, in press). These results suggest then that there are conditions or characteristics in a particular relationship that lead to the development of disorganised/disoriented behaviour on the part of the infant in the strange situation with that parent/caregiver.

Main has proposed that this outcome is the result of the infant being frightened by the parent, rather than the external situation (Main, 1981; Main & Weston, 1982; Main & Hesse, 1990, 1992; Hesse & Main, in press). She argues that the attached infant inevitably seeks the parent when frightened or alarmed. However, if the behaviour of the parent then directly alarms the infant, the infant is placed in an irresolvable paradox in which it can neither approach the parent (ie the strategy of the secure and resistant infant), shift its attention (the strategy of the avoidant infant) or flee (Main & Hesse, 1990, 1992). She points out that this hypothesis is consistent with the finding that the great majority of parentally abused children in high-risk samples (about 80%) are classified as disorganised, whereas only between 20-40% of non-abused children from the same population are classified disorganised (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Lyons-Ruth, Repacholi, McLeod, & Silva, 1991).

In the case of abusing parents, the parent is, of course, directly *frightening* to the child. But there is now evidence that *frightened* behaviour on the part of the parent may also alarm the infant and leave him without a strategy (Hesse & Main, in press; Main & Hesse, 1990, 1992). They argue that this is especially likely if the frightened parent withdraws from the infant as though the infant itself were the source of the alarm. It is also likely if the parent appears to be in a dissociated, trance-like state, often itself due to the parent suffering from still partially dissociated experiences of loss or abuse. Thus, disorganised/disoriented behaviour in the infant can result from fear of the parent because of the infant's direct experience of abuse at the hands of the parent or it can result as what Main calls a 'second-generation effect' (Main, 1995, p. 427) of the parent's own traumatic experiences of loss or abuse that are yet unresolved. In studies using low-risk, middle-class samples, the most striking finding is the association between infant disorganised attachment status and parental lapses in the

monitoring of discourse during attempted discussion in the context of the AAI of traumatic experiences of loss or abuse.

Main (1990) invokes the concept of indirect or 'conditional' strategies' for explaining how infants deal with mildly frightening or stressful situations in the presence of a parent who has had a history of dealing with the infant in a rejecting or unpredictably unresponsive way. In those cases, the parent is not frightening in herself. Thus, the 'conditional' strategies developed avoidant and resistant infants, although insecure and inflexible, are 'organised' and represent a 'working' behavioural and attentional strategy. In contrast, disorganised/disoriented behaviour is not organised and seems to represent a collapse in strategy, reflecting the infant's response to having been repeatedly presented with the 'irresolvable paradox' of frightening, threatening behaviour on the part of the attachment figure (the parent) who is also simultaneously the infant's haven of security in times of alarm. (Carlson et al., 1989; Main & Hesse, 1990; Lyons-Ruth et al., 1991). Thus, parental behaviour that is consistently rejecting or unpredictably responsive, if it is not frightening, will not in itself lead to infant disorganised status (Main & Hesse, 1990, 1992).

To understand the aetiology of the disorganised attachment category, it is important to understand that there is a distinction between alarming parental behaviour that originates in the external environment to which a parent responds in a comprehensible way (e.g. a parent reacting in a frightened way to dangerous dog by grabbing the child to run away to safety) and alarming behaviour that may be seen by the child as originating in the parent herself. Thus, if a parent is periodically responding in a frightened way, in the presence of the infant, to thoughts, memories, events or objects in a situation associated with her own traumatic experiences, the infant cannot understand identify the source of the alarm in relation to the on-gong events and consequently may develop unexplained fears himself, and may even identify the self as the source of the alarm (Main & Hesse, 1990, 1992: Hesse & Main, in press). Main (1995) noted that she and her researchers have informally observed parents of disorganised/disoriented infants in low-risk samples in trance-like states and also backing away from the infant as though frightened.

Thus, it appears that frightened as well as frightening behaviour may be the mechanism linking the parent's traumatised state of mind to the infant's disorganised/disoriented behaviour in stressful situations. Such parental behaviour then, in turn, creates vulnerabilities

to the development in the infant of a concept of self as inexplicably powerful, yet somehow bad or dangerous, particularly when the infant has been (inadvertently) identified as the source of the parent's alarm (Hesse & Main, in press).

Recent research findings (Jacobvitz et al., 1997; Lyons-Ruth et al., in press; Schuengel et al., in press) provide some support for these hypotheses. Jacobvitz and her colleagues found very strong association between a prenatal assessment of maternal unresolved loss on the AAI and a mother's display of frightened/frightening behaviour towards her first-born infant at 8 months. Such maternal behaviour included unusual voice patterns, invasions into vulnerable areas of the infants's personal space (e.g. hands suddenly sliding across the infant's throat); sudden looming; and entering trance-like states while interacting with the infant. However, the findings of Schuengel and his associates were more mixed.

Disorganised attachment (as well as the A/C unclassifiable pattern) has also been related to infant histories of abuse, hostile and intrusive care giving, maternal depression, prenatal alcohol and drug exposure (for review, see Carlson, 1998). In a prospective longitudinal study of 157 participants, followed from 24 months to 19 years, disorganised/disoriented attachment was significantly associated with maternal relationship and risk status, care giving quality, and infant history of maltreatment. Thus, disorganised/disoriented infants were more likely to be born to single mothers, to have experienced insensitive/intrusive care giving, as well as a variety of forms maltreatment in the first year of life. Disorganised attachment was not found to be associated with endogenous antecedents, such as a maternal history of serious medical or psychological problems, nor with infant anomalies at birth and and neonatal behavioural assessment - which might be considered (albeit imperfect) indicators of temperament. Carlson concludes that :

> 'Analyses of disorganisation outcome data suggest that the quality of the caregiving difficulties reflected in attachment disorganisation may have significant consequences for the mother-child relationship and individual socio-emotional functioning. In this study, attachment disorganisation was related to the quality of the mother-child relationship at 24 and 42 months, individual behaviour problems in preschool, elementary school, and high school, and diagnostic ratings of psychopathology at age 171/2. Such simple predictability

from infant behaviour to disturbance at age 17 is unprecedented' (Carlson, 1998, p.1122).

Over-all, the available research tend to support the validity of the disorganised classification and the desirability of including it in all current studies of the etiology, consequences, and intergenerational transmission of attachment.

The infant 'Cannot Classify' category

The fifth strange situation category, termed *'Cannot Classify'* is used for infants who cannot be classified within the A, B, C, or D classifications. Most infants formerly classified as 'cannot classify' are now classified as disorganised/disoriented and this classification is now very rarely used (Main & Goldwyn, 1989). Such infants sometimes show an incompatible mix of avoidant and resistant characteristics. They may also show some disorganised characteristics. In either case, they are always assigned a best fitting alternate A,B,C classification.

Infant attachment and later development: Concurrent and predictive validity of infant attachment patterns

The link found between specific patterns of parent-child interaction in the home and specific patterns of behaviour in the strange situation suggested that different internal structures or working models of self and others may be developing out of different patterning of dyadic regulation (Stern, 1985). Well-functioning regulatory patterns or distortions in early dyadic regulation were thought to serve as prototypes for later individual styles of maintaining emotional security (Kobak & Shaver, 1987; Main & Hesse, 1990; Sroufe, 1996; Sroufe & Waters, 1977). This in turn suggested that attachment classifications would be related to the child's functioning in other areas of psychosocial functioning (Bretherton, 1985; Main,1995). These hypotheses generated a very considerable body of research over the last three decades (for review, see Bretherton, 1985; Finnegan, Hodges, & Perry, 1996; Main, 1995; Thompson, 1999; Weinfield, Sroufe, Egeland, & Carlson, 1999).

Several studies have shown that attachment security is associated with cognitive development (see Ainsworth et al., 1978; Bretherton, Bates, Benigni, Camaioni & Volterra,

1979). Studies have found, for example, that that securely attached children have longer attention spans, greater autonomy in solving easy problems, better ability to enlist mother's help with more difficult tasks and show more positive affect in free play situations than insecurely attached children who tend to react with frustration and negativity to the problem-solving tasks (Main, 1973; Matas, Arend & Sroufe, 1978). Avoidant children do not approach their mothers for help even when confronted with tasks they could not complete and their mothers, in turn, offer little help. Bretherton (1985) notes that attention span and persistence are often viewed as trait-like or constitutionally-based qualities, but that these studies suggest that they may, in part, be a product of particular relationship patterns, that is, that confidence in the mother's physical and emotional availability and the expectation that help will be forthcoming appear to form the basis for autonomous exploration, problem solving and mastery motivation.

The work of Sroufe, Egland and their colleagues in Minnesota (see Sroufe, 1988 for review) with both low and high-risk samples, provide good evidence for the association between attachment security and later social relationships. Their studies showed that preschoolers who had been judged secure with their mothers in infancy showed greater positive affect and lower negative affect, were more empathic and compliant, showed greater concentration in play, greater social competence and ego resilience than insecurely attached children. Troy and Sroufe (1987) found that securely attached children were neither victims nor victimisers in their play with other children, whereas avoidant children tended to victimise and ambivalent/resistant children tended to be victims. Sroufe and his colleagues also found differences in the quality of children's fantasy play, with insecure children showing less flexibility and elaborateness in fantasy play, and avoidant children showing an almost total absence of fantasy themes concerning people, in sharp contrast to the play of securely attached children. In addition, secure children had fewer conflict themes in their play and when conflict was introduced they tended to find a satisfactory resolution

Teachers, blind to the children's attachment status, were also observed to become angry almost exclusively with avoidant children, to treat resistant children as needy and immature, and secure children in a matter-of-fact way, expecting high standards of maturity from them (Sroufe and Fleeson, 1986). In a follow-up study of peer competence of children in third grade, attachment history was found to account for 20% of the variance (Bergmann, Egeland & Sroufe, 1986). In a sample of German preschool children, securely attached children were

found to show better conflict-resolution skills and children secure with two, as opposed to secure with with only one parent, were found to have particularly positive outcomes (Suess, Grossmann, & Sroufe, 1992). Avoidant and resistant children were found more likely to show behaviour problems as preschoolers (Erickson, Sroufe & Egland, 1985) but this was not found in another study (Bates, Maslin & Frankel, 1985), a discrepancy perhaps explained by the fact that the former sample was higher-risk than the latter middle-class sample. The more frequent life-stresses and lack of support characteristic of the high-risk sample might predict more continuity of problems in the children.

Some attachment theorists (Belsky, 1988; Cassidy & Berlin, 1994; Kobak & Sceery, 1988; Main & Weston, 1982) have advanced what has been called a 'specific linkage hypothesis' about the relation of attachment to adjustment in other contexts. There are mixed findings on this specific-link hypothesis. Some studies have found that children with preoccupied coping strategies had low self-esteem; were helpless, fearful and easily stressed by social situations; were emotionally under-controlled and dependent with both peers and teachers; and were likely to be victimised by peers- what are called *internalising* difficulties. Children with avoidant coping styles have been found to be more aggressive, angry and non-compliant, to have more difficulty in disengaging from conflict, and to be less empathic - what have been termed *externalising* difficulties (Finnegan et al., 1996). Other studies (Lyons-Ruth, Easterbrooks, & Cibelli, 1997) have not found that pattern. In addition, the three 'organised' classifications tend not to be strongly related to later measures of maladjustment or clinical indices (Carlson, 1998; Lyons-Ruth et al., 1993).

There are relatively fewer studies on the correlates and sequalae of disorganised attachment (for review, see Carlson, 1998; Lyons-Ruth & Jacobivtz, 1999). Disorganised attachment has been found to be related to child behaviour problems, characterised by aggression, although only a minority of children with this attachment classification were highly aggressive in preschool (Lyons-Ruth, Alpern, & Repacholi, 1993). In the longitudinal study that followed children from 24 months to 19 years (Carlson, 1998), disorganised attachment status was found to be associated with child behaviour problems in preschool, elementary school and high school, and with psychopathology and dissociation in adolescence. In addition, such children were more likely to have negative experiences with mother. For example, their mothers were found to belittle, taunt, and verbally abuse them, or failed to come to their rescue when experiencing difficulties in a problem-solving exercise at 24 months. During a

series of teaching tasks at 42 months, the mothers were found to be dominating, rejecting or engaging in many conflicts with the child.

Main and Hesse (Main & Hesse, 1990, 1992; Hesse & Main, in press) hypothesised that frightened behaviour on the part of the parent may lead to increased vulnerabilities to anxieties and phobias in the child - which are associated with the parent's rather than the direct experience of the child. In some cases, the fears and phobias may be only generally related to the parent's experiences, as expressed in the child having catastrophic fantasies with no particular focus or form. In other cases, the fear or phobia may be specifically related to the parent's own traumatic experiences. Main and Goldwyn (1989) and Hesse and Main (in press) propose that the specific nature of early interactions between a traumatised parent and the infant may be a possible explanation of how many apparently inexplicable anxieties and phobias develop in children and persist into their adult life. This view has received some support from clinical case-studies (Liotti, 1993). Links have also been found between the loss of a significant person experienced by a parent within two years of a child's birth and the development of a dissociative disorder (Liotti, 1992) or schizophrenia in that child in adulthood (Walsh,1978). However, findings in such clinical studies must be treated with caution, and tested in more representative samples.

Main (1995) cautions that the apparent increased vulnerability in disorganised children to the development of anxiety, phobias and dissociative disorders is as yet, only speculative and that moreover, this association is likely to be highly asymmetric. Thus, studies may demonstrate that a significant proportion of individuals suffering from a given psychiatric disorder or psychological difficulty were classified disorganised in infancy. However, among those disorganised in infancy only a small proportion will go on to develop the given disorder. Lyons-Ruth (1996), for example, in a study of the relation between disorganised attachment status and the development of abnormal levels of aggression in 7 year olds, shows this asymmetric relation. Thus, Main (1995) concludes that disorganised infant attachment may approach the status of a necessary but not sufficient condition for the development of such disorders, and will not lead to the development of a disorder unless combined with other conditions, such as genetically biased vulnerabilities or other negative life events. In addition, the predictive power may be reduced unless the specific forms of disorganised behaviour exhibited are carefully recorded (Main & Solomon, 1990). For example, a classification of disorganised attachment status, with an alternate classification of combined avoidance and

resistance (See Crittenden, 1985; Main & Solomom, 1990) may predict an increased vulnerability to dissociative disorder (Main & Hesse, 1992).

The sequalae of attachment during the school years and in adolescence will be described in more detail in Chapter 5.

The cross-cultural distribution of the three organised attachment patterns

> "Attachment is universal. But are patterns of attachment universal, especially patterns of attachment assessed in the Ainsworth strange situation?' (Bretherton, 1985, p.231.)

According to Bowlby (1969/1982) attachment behaviour is a species-specific behaviour, an evolutionary product that becomes organised in all children reared within the range of a human environment of evolutionary adaptedness. Although the attachment behavioural system develops within the context of parent-child interactions, the universality of attachment is not understood within attachment theory to be due to child-care practices that are universal across all settings, but rather to be due to the interplay between biological tendencies and child-care experience. That is what is meant by attachment being 'universal' (Posada, Gao. Wu, Pasada, Tascon, Schoelmerich, Sagi, Kondo-Ikemura, Haaland, & Synnevaag, 1995).

The strange situation procedure has been used in cross-cultural settings in an attempt to provide an answer to the question posed by Bretherton above (e.g. Greene, Wieczorek-Deering, & Nugent, 1995; Grossman, Grossman, Spangler, Suess, & Unzer, 1985; Miyake, Chen, & Campos, 1985; Sagi, Lamb, Lewkowicz, Shoham, Dvir & Estes, 1985; Takahashi, 1990; van IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992; van IJzendoorn & Kroonenberg, 1988). The results suggest that the worldwide distribution of the three organised patterns of attachment (ie Groups A, B & C) is similar to that in Ainsworth's original sample (66.7% secure, 20.9% avoidant, and 12.4% resistant). The majority of infants in low-risk samples were classified secure, and up to 40% insecure - with a substantial minority avoidant and a small minority resistant. In a meta-analaysis of 21 samples (N=1584) of normal U.S. samples, using the three-category system, van IJzendoorn et al. (1992) found 67% of infants were classified secure, 20.5% avoidant and 12.4% resistant. Only four samples (N=306) were available using the the four-category system, where 54.9%

were classified secure, 22.9% avoidant, 7.5% resistant, and 14.7% disorganised.

This is not to say that the form and patterning of attachment across cultures are identical. In the meta-analyses conducted by van IJzendoorn & Kroonenberg (1988) of 32 samples in 8 countries, for example, the distribution of secure and insecure attachments was different in the German samples, with a higher proportion of insecure (avoidant) than secure classifications (Grossmann et al., 1981). Similarly, there were substantial intra-cultural differences in the distribution of secure and insecure attachment, compared to Ainsworth's 'standard' distribution, which they attributed to the widely varying socioeconomic status of the samples. It is interesting to note that the only study of infant attachment in Ireland (Wieczorek-Deering, Greene, Nugent, & Graham, 1991) found 80% of infants classified secure, 15% avoidant, and 5% resistant. However, van IJzendoorn and Kroonenberg (1988) argue that these variations in samples cannot be taken to reflect stable cross-national differences, or to invalidate the use of the strange situation as a measure of infant attachment in cross-cultural research, as intra-cultural variations were found be to nearly 1.5 times larger than cross-cultural differences. In this respect, it is worth noting that the proportion of secure strange situation classifications is also lower in impoverished samples living under chronic stress (Egeland & Farber, 1984; Lyons-Ruth, Connell, Grunebaum, Botein, & Zoll, 1984; Speiker & Booth, 1985). For example, one of those studies (Egeland & Farber, 1984) report 55% secure classifications compared to between the 65%-75% found in most middle-class samples (e.g. Ainsworth et al., 1978; Belsky, Rovine & Taylor, 1984).

However, the use of the strange situation procedure in cross-cultural studies has been criticised given that the precise meaning of the situation may be different for parents and infants from different cultures, or in different ecological settings or with different regimes of child -rearing. For this reason, Ainsworth (1995) has urged that cross-national attachment research should focus instead on home observations of attachment interactions and infants' negotiation of the attachment/exploration balance. Posada et al (1995) also point out that the strange situation procedure has been validated against external criteria (concurrent or predictive) in only a few socio-cultural settings, most of which represent western type societies. They point to the need for data on secure-base behaviour as seen over longer observations and in the diverse conditions of naturalistic settings in a greater diversity of cultures and social contexts.

To address these issues, these authors undertook a study to investigate the secure-base phenomenon across seven cultures of children's behaviour, mothers' preferences and experts' concepts about how the child should behave during mother-child interactions, using a version of the Attachment Q-Set (AQS; Waters, 1995). The results appear to provide support for the universality of secure-base behaviour at least in those countries. Moreover, the similarity of secure-base behaviours within countries was not markedly greater than similarities between countries, suggesting that culturally specific biases regarding the behaviour of children were unlikely to be obscuring individual differences either within or between groups. However, they did find a lot of diversity in the ways children organise their secure-base behaviours in respect of their mothers. It was also found that both mothers' and experts' notions of 'ideal' child behaviour overlap considerably with secure-base behaviour.

Bretherton (1995) emphasises the value of such observation-based studies in cross-cultural research on attachment. She points out, for example, that the Waters et al. study found that German mothers valued physical contact more than mothers of the other nationalities. This stands in stark contrast to the interpretations put upon earlier findings that avoidant attachment classifications were more common in German than in U.S. samples (Grossman et al.,1985). This finding was interpreted (without any evidence) to mean that German mothers train their infants to become independent by discouraging close bodily contact.

However, Bretheton (1995) cautions that such successful studies of the 'etic' (universal) aspects of attachment does not mean that an 'emic' (culture-specific) approach should be abandoned. On the contrary, she argues that there is a need to know much more about how specific cultures integrate parent-infant attachment into their over-all framework of social relationships and cultural beliefs. In addition, attachment researchers need to develop ecologically valid, theory-driven observational and interview measures that are tailored to specific cultures and based on deeper knowledge of parents' and children's culture-specific folk theories about family relationships and attachments.

The reliability of the strange situation procedure

Inter-rater reliability: The basic reliability of the strange situation procedure has been demonstrated in many studies. Inter-coder agreement is usually high. This is probably mainly due to the rigorous training required for coders, with coders being required to attend

certified training programmes and to meet a minimum reliability standard. Within-laboratory agreement for trained coders ranges from 100% in the original Ainsworth study, to 85-95% for those directly trained by Ainsworth (e.g. Main & Weston, 1981). Inter-laboratory agreement in one study ranged from 50% to 100% (Carlson & Sroufe, 1993). However, not all coders in that study were trained to code the disorganised group and a number of the cases that were used were chosen because of the classification difficulties they presented. Across and within-laboratory reliability for coders trained in the four-classification system ranged from 80% to 88% (Carlson, 1998).

Short-term stability: Classification stability for the three 'organised' categories is generally high, ranging from 50% to 96% when assessments are conducted 2-6 months apart (Solomon & George, 1999). The highest stability levels are generally (but not always) found in middle-class samples, and the lowest in disadvantaged samples. The ABC attachment classification of the majority of infants from low-risk middle-class samples shows about 80% stability in relation to the same parent in the time period from 12 to 18 months (Bretherton, 1985). On the other hand, low stability was found in samples with high maternal stress (Lyons-Ruth et al., 1991); infant maltreatment (Schneider-Rosen, Braunwald, Carlson, & Cicchetti, 1985); and disadvantaged mothers (Vaughn, Egeland, Sroufe, & Waters, 1979). There are mixed results with regard to the stability of the disorganised category. Some studies report that its stability over the course of the second year may be lower than that of the three 'organised' categories (Lyons-Ruth et al., 1991; Vondra et al., 1996) and a recent meta-analysis finding high stability from 2-60 months (van IJzendoorn et al., in press).

The concordance of attachment relationships

Concordance of infant-caregiver attachments across an infant's multiple attachments: According to attachment theory, the response of an infant to a parent in the strange situation reflects the history of interaction with that parent. Thus, an infant, may have a different attachment classification with each parent or major caretaker. An infant is also likely to have multiple attachments. The concordance between these different attachment relationships has been investigated in a number of studies. These studies have had mixed results. For example, some studies found no relation between the infant's attachment classification with the two parents (Belsky & Rovine; Grossmann et al., 1981; Main & Weston, 1981; Sroufe, 1985). However, other studies have found substantial evidence of concordance between an infant's

attachment relationships, particularly the infant's parents (Fox, Kimmerly & Schafer, 1991; Steele et al., 1996; van IJzendoorn & DeWolff, 1997).

The Fox et al. study involved a meta-analytic study of 11 studies, with a range of between 32-132 families in each study, and found a significant concordance between attachment classification to mother and to father. These researchers argued that the modest concordance they found could be attributed to infant characteristics, such as temperament, influencing the quality of attachment with the parents. This argument is supported by the finding that the mother influences the father's relationship with the child (Steele et al., 1995). However, other studies have found no relationship between such child characteristics as infant-risk status (very low birth weight and prematurity) and the concordance between infant-mother and infant-father attachment (Easterbrooks, 1989).

Fox et al. also argued that the concordance could be attributed to caregivers' shared child-rearing values and interactive styles. There are still very few studies that directly address this issue. One study found stronger associations between child-mother and child-caregiver attachment where mothers and caregivers shared similar childrearing values (Howes & Matheson, 1992). However, in the Steele et al. study greater concordance between the infant-mother and infant-father attachment relationships was not associated with parents with concordant AAI classifications (which might be expected to relate to attachment-related care giving). However, researchers who approach the study of attachment in the strange situation from a temperamental perspective argue that this concordance may be influenced by infant temperament, a point that will be discussed in a later section of the review.

Concordance of infant-caregiver attachments across a caregiver's multiple attachments: Most parents and caregivers establish attachments with more than one child. The concordance between the quality of attachment relationships of the caregiver's multiple infants has been examined by a number of studies (for review, see Berlin & Cassidy, 1999; Sagi, van IJzendoorn, Aviezer, Donnell, Koren-Karie, Joels & Harel, 1995). Concordance of approximately 60% in child-mother attachment has been found across high and low-risk twins (Goldberg, Perotta, Corter, & Minde, 1986); the infants of low-income mothers (Ward, Vaughn, & Robb, 1988) and the infants of middle-class mothers (Teti & Ablard, 1988).

The complexity of the issues involved in concordance in attachment relationships is perhaps

best shown in two studies in the multiple- caretaker, multiple-infant environment of Israeli kibbutzim (Sagi et al, 1985; Sagi, et al., 1995). These studies found little evidence for concordance in attachment quality among mother-child, father-child and metapelet (kibbutz caregiver)-child attachment (Sagi et al., 1995). Individual caregivers or metaplot were found to have children who had concordant attachment quality relationships with them - about 70% congruence in the attachments of each pair of two different infants with the same metapelet. This finding appears to support the the role of interactional histories in determining specific infant-caregiver attachment relationships, given that any possible genetic influences were well controlled since the infants were not biologically related either to the metapelet or to each other.

However, contrary to expectations, the study did not find that the attachments between the same child and two different metaplot were different, that is, unique to each dyad. This might be due to a number of factors peculiar to the ecological context of the kibbutz, including the likelihood that that two metaplot cooperated jointly in the raising of the child; modelled care giving behaviours for each other; and co-constructed similar representations of the child. However, it could also support the temperament hypothesis suggested by Fox and his colleagues (Fox et al., 1991), that is, that characteristics of the child elicit similar responses from different caregivers.

An interesting additional finding from the kibbutz study was that the congruence in two infants' relationships to their common caregiver was found to characterise only relationships developed in kibbutzim with family-based sleeping arrangements, as compared to those with infant-house communal sleeping arrangements. Sagi and his associates raise the intriguing possibility that the identity of the person who is there to comfort the infant during the night can have significant effects not only on the quality of the child's attachment to the daytime caregiver but also on the coherence of such relationships across different infants in the same infant-house. Bretherton (1995) also raises an interesting point - that the more extensive family and caretaker relationships enjoyed by infants with family-sleeping arrangements may give that infant a more developed capacity for relationships, in turn eliciting a more sensitive and consistent response from the professional caregiver. This suggestion indicates the need for a greater research focus on the network of attachment relationships in a child's life and the effect of one relationship on another.

Additionally, attachments between infants and metaplot were more likely to be insecure, as were attachments between infants and professional caregivers in other countries (Goosens & van Ijzendoorn, 1990; Howes et al.,1992) than those between mothers and infants (see van IJzendoorn, Goldberg et al., 1992). This over-representation of insecure dyads in infant-professional caregiver relationships may be explained by a number of factors. For example, the number of infants competing for the caregiver's attention may make it difficult for the caregiver to respond promptly and thus make the forming of a secure attachment more difficult. Alternatively, it may be that the organisation of attachment behaviours in relation to a mother and a professional caregiver may be different and these subtle differences cannot be taken into account in the coding of the strange situation.

The contribution of parent, child and contextual characteristics to the attachment system.

Many of the above studies directly and indirectly attempt to identify the different factors that may contribute to the formation and maintenance of the attachment system, namely, parent characteristics, especially maternal sensitivity; child characteristics, especially temperament, and contextual characteristics. These factors will be be discussed in more detail.

The contribution of parent characteristics

Attachment research has consistently identified maternal sensitivity as a major factor accounting for variations in the quality of infant-mother attachment as measured in the strange situation, especially in the first year of life. Ainsworth and her associates (Ainsworth et al., 1971) found that the effect of maternal sensitivity on child attachment was considerable, with a difference of about 2.5 standard deviations between ratings recorded for mothers of secure and insecure infants and concluded that the infant's experience of sensitive care by the mother during the first three months of life predicted secure-base behaviour at the end of the first year. Maternal sensitivity was defined as including alertness to infant signals, appropriate interpretation of response, promptness of response, flexibility of attention and behaviour, appropriate control and negotiation of conflicting goals (Ainsworth et al., 1978). Subsequent studies using the same rating scales report significant but much smaller differences or have failed to replicate such findings (see Pederson & Moran 1995).

In a meta-analysis of all the research on maternal sensitivity, Goldsmith & Alansky (1987) concluded that the average effect size is about a third of a standard deviation, or equivalent to correlations of .20 - .30, a difference that is considered small to moderate. However, in a meta-analysis of 66 studies, a significant relationship between parental sensitivity and quality of attachment was found (DeWolff & van IJzendoorn, 1997). In addition, in a meta-analysis of attachment status in 34 clinical samples (IJzendoorn, Goldberg, Kroonenberg & Frenkel, 1992), the contribution of maternal psychiatric problems was shown to be significant in shaping the quality of the child's attachment status, suggesting that it is maternal capacity to 'take account' of infant behaviour (ie sensitivity and responsiveness) that is disrupted in maternal problem/clinical samples. Finally, in a recent multisite (N=1,153) National Institute of Child Health and Development (NICHD, 1997) study of day-care, caregiver sensitivity was found to significantly predict individual differences in attachment.

The importance of extensive as well as multiple observations of parent-child interaction has also been stressed by researchers as crucial to the measurement of maternal sensitivity. For example, session-to-session correspondence in particular parental behaviours is typically around .40, but when multiple sessions of observation are aggregated, reliable variables can be formed, leading to higher correspondence of about .80 across time (Seifer & Schiller, 1995). Pederson and Moran (1995) also argue that the descriptive techniques used in many studies fail to capture in a meaningful way the variations in maternal interactive behaviour. Using a Q-sort measure, yielding a detailed description of maternal behaviour, as well as a summary measure of maternal sensitivity, they found that maternal sensitivity were significantly correlated with infant security. In a further study of mothers with infants at biological risk for developmental delay, they found the same substantial relation between maternal sensitivity and attachment security (Moran, Pederson, Pettit & Krupka, 1992). These studies provide evidence for the theoretically expected association between contemporaneous measures of infant security attachment and maternal sensitivity, suggesting that methodological problems may be the reason for the failure of previous studies to establish an empirical link between infant security and maternal sensitivity.

The contribution of child characteristics

The characteristic most often discussed and studied as the child's contribution to the attachment system is temperament, which can be defined in relatively circumscribed (eg as a

set of behavioural dimensions) or in broad terms (as an attribute that distinguishes different categories of children), depending on the theoretical perspective of the researchers. However, the definition of temperament usually includes behaviours that are postulated to be those that appear early in life and are relatively consistent across time and setting including activity level, approach to novelty, intensity of behavioural expression and general interactive difficulty that some researchers believe to have a biological basis and that overlap with behaviours that are characteristic of individual differences in infant attachment, such as fear, soothability, distractibility, activity levels, exploration, threshold to stimulation, persistence and emotional reactivity (see Seifer & Schiller, 1995).

Aside from the issue of temperament, infants may exert influence from the earliest stage of their development (Stern, 1985), particularly via their contribution to the mutual regulation of affect, including the regulation of arousal and the expression of clear and readable signals. In this way, they they can achieve 'interactive repairs' (Seifer & Schiller, 1995) in the interaction sequences with their parent, thus eliciting a higher quality of behaviour from the parent. Thus, the developing infant can 'teach' the parent about his or her developing competencies. The quality of such infant signalling behaviour can vary in individual infants as can the quality of the ability to self-regulate their state of arousal (Campos & Sternberg, 1981; Belsky & Isabella, 1988).

The relationship between attachment and temperament has been vigorously debated in the literature for the past two decades (for reviews, see Goldsmith & Alansky, 1987; Seifer & Schiller, 1995; Vaughn & Bost, 1999). The variety of positions taken could be summarised as follows. First, there is a 'strong' interpretation of the role of temperament as 'causing' individual differences in attachment (e.g. Calkins & Fox, 1992; Kagan, 1984) or conversely that temperament is irrelevant to attachment (e.g.Sroufe, 1985). Second, there is an intermediate argument that difficult temperament act indirectly on security by adversely affecting caretaking (e.g. Seifer & Schiller, 1995; van den Boom, 1994). Third, there is an argument that the relationship between attachment and temperament reflects interaction histories (e.g. Belsky, Fish & Isabella, 1991).

Stated in its strongest form, the contribution of the child's characteristics to the attachment system is that infants with a good temperament, that is, the ability to self-modulate arousal quickly and effectively, can 'cause' parents who are not particularly sensitive to appear

sensitive in their interactions with them. In their review of 112 published papers on attachment and temperament, Vaughn and Bost conclude that the existing data do not support a strong temperament argument. Similarly, the strong 'interaction history' argument is not supported. There is empirical evidence that some infant dispositions transcend time and setting and are relatively independent of contextual events (see Seifer, Sameroff, Barrett & Krafchuk, 1994).

The argument that difficult infant temperament affects security is supported by a number of studies. Difficult temperament (defined as negative reactivity/proneness to distress) during early infancy has been associated with insecure attachment as assessed in the strange situation (Seifer et al., 1996); van den Boom, 1994) and as measured by secure base behaviour in naturalistic settings (Seifer et al., 1996). However, these studies also showed that early difficult temperament so defined is related to avoidant rather than resistant security. These findings do not support the argument of some theorists (e.g Kagan, 1984) that differences between avoidant and resistant infants are primarily differences in temperament rather than of interaction histories, that is that resistant infants are typically reactive and avoidant infants not prone to distress. Other studies found no difference in the correlation between maternal sensitivity and infant security in the case of dyads with premature infants (potentially more difficult infants) as compared to dyads with full-term infants (Pederson & Moran, 1995).

The third argument that the history of infant-caretaker interactions accounts for individual differences in attachment and temperament is supported by a number of studies (Belsky et al., 1991; van den Boom, 1994; Washington, Minde & Goldberg, 1986). For example, maternal insensitivity in response to initially easy infants leads to greater difficulty in the relationship at a later stage, but maternal sensitivity to initially difficult infants is associated with positive change (Washington et al., 1986). Similarly, other studies have shown that patterns of reciprocity in early mother-infant interaction are important in predicting later attachment (Isabella & Belsky, 1991; Sameroff & Emdee, 1989) support the idea that interactive patterns contribute to the regulatory process.

Over-all, the literature suggests that the existing data do not support any strong conclusion, except that attachment and temperament are related to a modest degree, but that attachment cannot be considered as redundant or isomorphic with temperament. The controversy as to their respective influence, expressed in terms of extreme positions, has often obscured the

meaningful theoretical relations that do exist between temperament and attachment and fuller understanding of their relationship will depend on designing more methodologically sophisticated research.

Bretherton (1995) notes that it is difficult to argue with the claim that bidirectional, co-regulatory influences operate in the mother-infant dyad, but that maternal influences have so far been easier to document than infant effects. The evidence that infant security can be predicted from prenatal assessments of mother's representation of attachment (e.g. Fonagy, Steele & Steele, 1991) suggests that early interactions may be filtered through existing conceptions of attachments and cultural prescriptions. Nonetheless, Bretherton argues that despite the importance of maternal sensitivity, there is a need to continue to study bidirectional responsiveness and the continual renegotiation of the 'goodness of fit' of the parent-child relationship at all stages of its development.

The contribution of context

Hinde (1982) has argued that the match between characteristics of the parent-child dyad and the larger social context must be considered in attachment theory and research, citing evidence of how different strategies regarding proximity and exploration may have different survival implications depending on the dominance status in the social group. Studies of attachments across persons and contexts (e.g. Howes, 1999; Sagi et al., 1985, 1995) also point to the importance of understanding attachment within a network of other relationships and the need for attachment researchers to continue to develop ecologically valid, theory-driven measures that are tailored to specific cultural contexts.

Research work on the broader psychological and social context of attachment has also been influenced by Bronfenbrenner's (1979) ecological perspective which draws attention to the broader context of human developments beyond the confines of the mother-child relationship. Attachment researchers using such an ecological/social-contextual perspective (Belsky,1984, 1990, 1996, 1999; Belsky & Isabella, 1988; Belsky, Rosenberger, & Crnic, 1995) have found that contextual factors and processes, such as maternal personality, psychological problems, particularly depression, relationship with spouse or partner and social support influence the micro-developmental processes of mother-child interaction and the quality of the child's attachment (for review, see Belsky, 1995).

Belsky concludes that although there is ample evidence for the influence of these contextual factors on child attachment, there is also inconsistency in the evidence. For example, there is evidence that supportive spousal relationships predict infant security (Belsky, 1984), although this is not found in a some studies. For example, one study found that there was no direct relation, but that an indirect pathway of influence exists, with high spousal support predicting greater maternal sensitivity, which in turn predicted attachment security (Isabella, 1994). Another study found that high marital quality predicted infant security, but only for mothers who were classified insecure on the AAI (Das Eiden, Teti, & Corns, 1993). Similarly, while there is mixed evidence as to the role of nonspousal support in predicting infant security, an index of total community support predicted infant attachment in a sample of premature infants (Crnic, Greenberg, & Slough 1986).

Belsky (1996,1999) argues that such 'distal' psychological and contextual actors do not operate in isolation from each other and exert their influence by influencing more proximal processes of parent-child interaction. Belsky (1984, 1999) proposes that stresses and supports must be considered simultaneously, or, like other theorists (Cicchetti, 1983;Sroufe & Rutter, 1984) in terms of developmental psychopathology, risk, and protective factors. This ecological-contextual argument is supported by recent evidence that, when considered in isolation, none of the following factors - indices of maternal personality, marital support, social support, infant temperament, work stress, and socioeconomic status - distinguished between secure and insecure infant attachment to mother or father. However, when considered together, a composite of risk scores on these factors significantly predicted infant attachment(see Belsky, 1999).

The use of the strange situation in clinical samples

Attachment theory, as developed by Bowlby, originally developed as a way of explaining deviant behaviour (Bowlby, 1944, 1951). Within attachment theory, development is understood as a process of directed change, of competencies, adaptive patterns and personally emerging from the reorganisation of previous patterns (Rosenstein & Horowitz, 1996; Sroufe, 1979), thus emphasising the links between normal developmental process and pathologic development, with psychopathology viewed as a deviation from the normal developmental pathway in an effort towards adaptation (Main, 1995). However, the strange situation was devised and developed with middle-class families without clinical

characteristics, and the empirical application of attachment theory has tended to focus on the normal development of attachment. However, clinical researchers have increasingly turned to using the strange situation (see van IJzendoorn et al., 1992), since the strength of the assessment procedure is that it is theory driven and therefore has the potential to offer a developmental account of clinical phenomena.

The strange situation has been found to be sensitive to dysfunctional parenting. A meta-analysis of 34 clinical studies on attachment (van IJzendoorn et al., 1992), involving 1,624 strange situation classifications (using three categories), found that the attachment classifications of the children of mothers with clinical problems (eg psychiatric diagnosis, maltreatment) were highly divergent from the normal distributions (the baseline derived from an analysis of 21 studies with normal subjects). In studies with maltreating and, in particular, mentally ill mothers, there was a significant increase in resistant infant attachment. In two studies involving 69 high-risk teenage mothers, there was a significant increase in avoidant infant attachment. Using a four-way analysis, results showed a significant decrease in secure attachment and a significant increase in disorganised attachment in the children. The meta-analysis also showed that when the studies were grouped in terms of non-psychological child problems (eg deafness, Down's Syndrome), using a three-way analysis, there was no evidence that the distribution of infant attachment classifications significantly deviated from normal samples. Using a four-way analysis, there was a significant increase in the disorganised attachment classification in the clinical sample. However, this result may have been unduly influenced by a single study of Down Syndrome children where this pattern applied. Thus, the meta-analysis supported the idea that attachment is more influenced by maternal rather than child characteristics.

The relationship of child attachment to psychopathology in childhood has been more broadly considered by a number of researchers (for review, see Carlson & Sroufe, 1995; Cicchetti, Toth & Lynch, 1995; Greenberg, 1999; Rutter, 1997). A discussion of that literature is outside the scope of this review. However, some general conclusions will be outlined. First, atypical early attachments may themselves be considered forms of child psychopathology (Lieberman & Zeanah, 1995), although the issue of how to distinguish insecure attachment, as assessed in the strange situation, from attachment disorders remains to be resolved (see Lieberman & Pawl, 1990). Second, attachment may contribute to later disorder by increasing the risk or buffering the effects of other risk factors, and there may be multiple pathways

leading to and from disorder (Cicchetti & Rogosh, 1997; Rutter, 1985). Third, children in high -risk environments who were classified insecure in infancy are significantly more likely to show later maladaption (Sroufe, 1990; Sroufe et al., 1990; Urban et al., 1991; Vaughn et al., 1979) but not children in (albeit smaller) more stable, middle-class samples (e.g. Bates et al, 1985). Fourth, there is as yet little evidence of specific linkages between types of insecurity and later disorders (Greenberg, 1999). Fifth, attachment insecurity may constitute an important, but nonspecific risk factor for the development of childhood psychopathology, setting a pathway that, in combination with other risk factors, may result in disorder (Rutter, 1985).

Summary and critique

The strange situation procedure has dominated the empirical study of the quality of parent-infant attachment for over three decades and has generated a rich body of research. Fundamental and far-reaching qualities in the infant-parent attachment relationship, particularly the infant-mother relationship have been found. However, a disadvantage of the success of the strange situation as a research tool has been that patterns of parent-infant interaction have become defined almost solely in terms of behaviour observed during the procedure. A start has been made by a few researchers to focus the study of attachment on the investigation of the origins of distinct attachment relationships in the naturalistic domain of the home (Strayer, Verissimo, Vaughn, & Howes, 1995; Pederson & Moran, 1995).

Ainsworth herself (1995) expressed disappointment that so many researchers have used the strange situation in the study of attachment, rather than looking at what happens in the home or in other natural settings. She warned that this turning away from field work is unwise. It must be remembered that the main reason that the strange situation procedure is so effective is because Ainsworth developed it on the basis of her insights gained from extensive observational studies in the home. However, it must also be borne in mind that qualitative differences in the patterning of attachment and care giving behaviour observed by Ainsworth in the home were related to different patterns of child behaviour in the strange situation, but though conceptually related by common elements in the mother-infant interaction, the behaviour in the laboratory was not isomorphic with behaviour at home. The task of explaining these differences has yet to be undertaken by attachment researchers.

It must also be remembered that the 'organised' strange situations classifications were based on a small study of middle-class mothers and infants three decades ago. As researchers have used larger and more high-risk samples, the picture has become more complex. For example, the role of mothers and fathers has changed considerably in the intervening decades. While day-care has not been found to be significantly related to security of attachment (NICHD, 1997), nonetheless, the modern infant may be more used to the comings and goings of both parents and thus, the strange situation may be less stressful for them than infants thirty years ago. The recent low short-term stability reported in the Belsky et al. (1996) study, if replicated, would raise questions about attachment stability.

A key tenet of attachment theory is that working models are the principal mechanisms underlying the concordance of attachment quality across the infant's multiple relationships and across a caregiver's multiple infants. The strange situation was developed to assess mother-infant attachment and was validated against the infant's behaviour at home with the mother. As a consequence, the role of other family members as attachment figures may have been underestimated (Schaffer & Emerson, 1964), particularly in non-middle-class communities, or in cultures outside the U.S. In addition, the strange situation may not pick up more subtle, but potentially important, attachment-related aspects of father-infant interaction (Grossmann & Grossmann, 1991) or of caregiver-infant interaction (Sagi et al., 1985, 1995).

In addition, little is yet known about the active selection of attachment figures by the infant from the network of relationships, of the importance of social interaction in that selection process. As Main (1999) points out , there is 'an embarrassing poverty of information in what is a critical area for our field' (p. 849) apart from the pioneering work of Ainsworth (1967) in Uganda and Schaffer and Emerson (1964) in the city of Glasgow, Scotland.

The meaning of individual differences in the strange situation for concurrent and later adaptation also raises theoretical and empirical questions. For example, Bowlby (1969/1982, 1973) did not conceive of the internal working model as determining all aspects of adaptation, rather he conceived of it as a model of expectations and beliefs about self, other people, and relationships. Thus, attachment should be expected to exert its influence on later adaptation primarily in those attachment-related contexts. Similarly, he did not regard attachment to be the only dimension of parent-child interaction. Thus, not all child outcomes can be attributed

to attachment-related parent behaviour. Finally, concurrent correlates of attachment must be distinguished from predictive relations. Some of the research on later adaptation does not maintain those clear distinctions, and while that research has yielded a number of very substantive conclusions, a number of questions remain to be answered. Thompson (1999) reviewing that literature, argues that the outcomes of attachment security could be construed as more contingent and provisional than expected by attachment researchers. Furthermore, he argues that the strongest correlates of early attachment will be found in concurrent rather than predictive studies, that are focused on competence in close relationships. In addition, the evidence that life change and adversity (including changes in attachment security, family circumstances, stress, and the growth of normative capabilities) can alter the expected outcomes of infant attachment indicates that research informed by an ecological-contextual model, and more refined research designs, are required to elucidate the extent to which adaptation outcomes are multi-determined.

Finally, the predictability of attachment security from infancy to later childhood and adulthood raises important theoretical questions about the sources of developmental continuity and discontinuity, or individual coherence (Sroufe & Fleeson, 1986), and the relative effects of prior adaptation and current life circumstances on that continuity and discontinuity. Those issues will be discussed in Chapter 3 and Chapter 5.

CHAPTER 3

THE DEVELOPMENT OF ATTACHMENT THEORY PART THREE: THE MOVE TO THE LEVEL OF REPRESENTATION

Introduction

The third and most recent phase in the development of the field of attachment is the study of individual differences in attachment representational processes. This has been termed as a 'move to the level of representation' (Bretherton & Waters, 1985; Main et al., 1985; Main,1995) and has been primarily associated with the work of Main and her colleagues (Main,1985, 1990, 1991a, 1991b, 1995, 1996; Main et al., 1985); Main & Goldwyn, 1998; Main & Hesse, 1990; Main & Solomon, 1990) and the development of the Adult Attachment Interview (AAI; George et al., 1984, 1985, 1996). In particular, a major turning point in the field was Main et al.'s (1985) formulation that 'mental processes vary as distinctively as do behavioural processes' (p.78); that behavioural and representational processes are reflected in language; and the operationalisation of those concepts in a narrative, interview-based method of assessing representation of attachment in adults (the AAI). Furthermore, Main et al. (1985) found that this interview-based method of classifying a parent's 'state of mind' with respect to attachment corresponded to the infant's behaviour towards that parent in the strange situation. In addition, they found that the strange situation-based infant attachment classification predicted a particular kind of discourse between parent and child during a reunion episode when the child was aged 6; as well as the child's responses to a projective test assessing separation anxiety (Main et al., 1985).

Attachment theory is a lifespan developmental theory (Ainsworth, 1989; Bowlby, 1969/1982), Bowlby construing attachment as vital 'from the cradle to the grave' (p.208). Bowlby's working-model concept recast many of Freud's important insights about mental representation and defensive processes into the theoretical framework of cognitive and communication psychology. Thus, a central tenet of attachment theory as developed by Bowlby, is that secure-base behaviour is the developmental precursor of cognitive representations and defensive processes which, in turn, guide the interpretation and production of behaviour, and in adulthood play a role in intergenerational transmission of

attachment.

However, early research interest focused on the attachment behaviours of young children. The next task for attachment theory was to establish empirical links between secure-base behaviour and cognitive representations and defensive processes and to demonstrate empirically that representational processes are the likely mediator of differences in parental caregiving, and in turn different patterns of infant attachment. The work of Main and her colleagues was crucial in beginning this process. Much of the research in this phase has been based on the assumption that there are parallel individual differences between infant and adult patterns of attachment and attachment representation. Main reconceptualised individual differences, hitherto described as as the organisation of the infant's nonverbal *behaviour* towards a particular parent in the strange situation, as individual differences in the *mental representation* of the self in relation to attachment.

This reconceptualisation made possible the investigation of attachment organisation in older children and adults. Most importantly, it led to a further elaboration of Bowlby's concept of internal working model - with secure and insecure attachments understood as particular types of internal working models of relationships that direct not only feelings and behaviour, but also attention, memory, and cognition, in so far as these relate directly or indirectly to attachment (Main et al., 1985). Thus, individual differences in internal working models were expected to relate not just to individual differences in patterns of nonverbal behaviour, but also to patterns of language and mind. Main and her colleagues defined the internal working model of attachment as:

> 'a set of conscious and/or unconscious rules for the organisation of information relevant to attachment and for obtaining or limiting access to that information, that is, to information regarding attachment-related experiences, feelings, and ideations.' (Main et al., 1985, p.67).

Since the AAI constituted a significant development in the understanding and measurement of mental representation of attachment, and since testing its use with a new, younger population constitutes a major part of the present study, it will be described in some detail. This chapter will describe the development of the AAI; the specific relations between parental AAI and infant strange situation responses; the scoring and classifications of the AAI; its psychometric properties; and a review of empirical findings associated with the

AAI will be described, followed by a summary and critique.

Background to the development of the Adult Attachment Interview

In the mid 1980s Main and her associates began a 6-year follow-up study of the original Bay Area sample of 40 infants and their parents who had been seen in the strange situation when the infants were 12 months (with mother) and 18 months (with father). Included in the range of child and family assessments at the 6-year follow-up was an individual interview with each of the parents. The classification and scoring systems were initially constructed following a search for communalities and differences among 44 randomly selected transcripts of the parental interviews (see, Hesse, 1999; Main, 1993, 1995; Main & Cassidy, 1988 for more detailed descriptions of the development procedure). An attempt was made to develop a formal rule system to capture these communalities, which were identified primarily as *how* a parent spoke about his early childhood experiences, rather than by the content of those experiences. Originally, three major categories of interview, that is, fairly consistent response patterns across the course of the interview, were identified and termed *secure-autonomous, dismissing and preoccupied* .

After each interview was analysed, it was found that parents whose interviews were classified *secure-autonomous, dismissing, and preoccupied* had children, who as infants, had been classified *secure, avoidant and resistant,* respectively, in the strange situation (Main & Goldwyn, 1985,1998). Specifically, the parents whose infants had been judged secure with them in the strange situation produced a coherent account of their childhood experiences; valued attachment, regarding attachment experiences as influential on personality; and were objective in describing their experiences, whether positive or negative. Parents whose infants had been judged avoidant produced incoherent narratives, lacking internal consistency; described parents in very positive terms, but could not support the descriptions, often insisting on lack of memory; and dismissed or minimised attachment relationships as being of little concern, value or influence. Parents whose infants had been classified resistant also produced incoherent narratives, characterised by a lack of focus and objectivity; and appeared preoccupied by past attachment relationships and experiences (Main & Goldwn, 1998).

Following generation of the rule system for classification, this 'development' sample was discarded, and the system was then successfully applied to the remaining 66 parent

transcripts by a coder blind to the strange situation classification of the infants (Main & Goldwyn, 1984; Main et al.,, 1985; Main, 1993, 1995). A substantial match was found between parent and infant with respect to the three attachment categories, 75% for mothers and 69% for fathers (Main, 1985; Main et al., 1985; Main & Goldwyn, 1998b). These three categories - secure-autonomous, dismissing and preoccupied - were considered 'organised' forms of interview response, that is, a singular strategy of approach to the discourse task is manifested by the speakers. Thus, theoretically and empirically, they were considered equivalent to the three 'organised' patterns of infant strange situation' response (Ainsworth et al., 1978). Until relatively recently, most empirical research using the AAI used only those three organised classifications.

Later, a fourth adult attachment category was added, *unresolved-disorganised,(* Main & Hesse, 1990). The interviews of parents whose infants were reclassified in the newly discovered disorganised-disoriented category (Main & Solomon, 1990) were found to exhibit signs of mental disorganisation and disorientation during discussion of experiences of loss or abuse. In a specially selected sub-sample of 53 mothers and their infants of the original Bay Area study, designed to maximise the number of disorganised mother-infant dyads that were available, the mothers' AAI transcripts were examined by raters who were blind to the infant's attachment status.

They found that of the 15 mothers who had experienced early loss of an attachment figure, nine (60%) had disorganised/disoriented infants, whereas only eight of the remaining 38 mothers (21%) has disorganised/disoriented infants. However, the important finding was that it was not the mother's experience of loss per se that led to infant disorganised attachment status, rather it was mediated by the mother's unresolved mourning as evidenced in her discussion of loss on the AAI. Six mothers had not experienced loss and none of these had disorganised infants.

Of the remaining 47 mothers who had ever experienced the loss of an important person, 12 were judged unresolved on the AAI, 11 of whom (91%) were found to have infants who had been classified disorganised/disoriented. In contrast, of the 19 mothers who had experienced loss but showed no indications of unresolved/disorganised mental processes with regard to the loss, only three (16%) had disorganised infants (Main & Hesse, 1990). Finally, the adult attachment classification system has been expanded to include a fifth, *Cannot Classify* (CC) category (Hesse, 1996), when the interview manifests a combination

of contradictory and incompatible attachment strategies. To date, this has not been found to be associated with any particular kind of infant attachment.

The substantial correspondence between a parent's AAI classification and his/her infant strange situation discovered by Main and her associates has been replicated in many subsequent studies. This literature will be reviewed in a later section of this chapter.

The Adult Attachment Interview (AAI)

The AAI is described as assessing an individual's current 'state of mind with respect to attachment' (George et al., 1984, 1985, 1996, p.1), with each classification considered to represent a different 'state of mind with respect to attachment' (Main & Goldwyn, 1998). Attachment representation is assessed on the basis of the coherence of discourse during the interview. Over the past 15 years the structure, scoring and classification systems of the AAI have undergone a number of changes. There has also been a refinement of the continuous scales used in the classification system, enabling a quantification of the narrative distinctions in such a way that the coherence of discourse process is more fully taken into consideration (Hesse, 1999).

The structure of the AAI: The AAI is a structured, semi-clinical interview, lasting on average an hour to an hour and a half. Subjects are first asked to give general descriptions of relationships with parents during childhood and are then asked for specific memories that will support those descriptions. Specifically, they are asked for five adjectives to describe their relationship with each parent during childhood and are then asked for specific memories that support each adjective. They are asked if they felt closer to one parent rather than the other, and if so, why; what they did when upset as children; their memories of any separations from parents in childhood; whether they ever felt rejected; whether parents had been threatening or abusive; why their parents may have behaved as they did, and how all these experiences may have affected their development. They are asked about any major experiences of loss or trauma in their lives. Each such experience is systematically probed regarding reactions to the event, changes in feelings over time, and effects upon adult personality. Finally, subjects are asked about their current relationship with parents and with their child or, in the case of those who have not had children, an imagined child they might have in the future. The interview questions are asked in a set order and the probes are standardised.

The interview technique has been described as 'surprising the unconscious' (George et al., 1984,1985, 1996), with the questions providing ample opportunities for the subject to support, contradict or fail to support, earlier or succeeding statements made in the interview. The AAI is unique in a number of ways (George et al., 1984, 1985, 1996; Main, 1994). First, it combines elements of a highly structured format with a more informal clinical interview. Questions are asked in a set order with structured probes. At the same time, as in clinical interviews, the participant is at times asked to elaborate and clarify the description and evaluations of his or her experience. In addition, interviewers must be skilled enough to ensure that the timing of their questions and the nature of their own discourse must not alter or distort the participant's own response style.

Second, the protocol is deliberately arranged to highlight 'structural variations' in the presentation of life-history, as between general descriptions of the relationship with parents in childhood and specific biographical episodes. In the analysis of the interview, responses to these two sets of queries are considered jointly, in that when specific episodic memories contradict or fail to support the generalised overview, the speaker is considered to exhibit a particular form of incoherence.

Third, unlike interview or questionnaire formats that restrict focus on the content of individual responses, the analysis of the AAI relies in large part upon comparisons of content across responses. Additionally, it rests upon the study of exact linguistic form. Few participants will have previously encountered the insistent series of questions which comprise the interview. Finally, the exact words, phrases, speech errors, hesitations and silences found in the responses are central in the analysis.

Fourth, since the analysis of the interview depends upon an exacting study of the discourse properties, the transcription must include all errors in speaking, as well as all hesitations markers, and pauses which are timed (see Main, 1994).

Scoring and analysis of the AAI

Only the verbatim transcript is employed in the analysis of the interview and no reference is generally made to the non-verbal features of the participant's response. The transcript is scored using 14 nine-point scales, with every second point on the scale having a specific operational definition. Five of the scales are for inferred *experiences* with each parent

during childhood : the mother/father loving scales; the mother/father rejecting scales; the mother/father involving/role-reversing scales: the mother/father 'neglecting when present' scales; the mother/father 'pressuring to achieve' scales. Nine of the scales are for patterned or organised *'states of mind'* : the coherence of transcript scale; the idealisation of parent(s) scale; the 'insistence on lack of recall' scale; the involved/involving (preoccupying) anger scale; the passivity or vagueness of discourse scale; the fear of loss scale; the dismissing-derogation scale; the metacognitive monitoring scale; the overall coherence of transcript scale; and the overall coherence of mind scale. Two of the scales are for unresolved/disorganised *'states of mind'* : the unresolved loss and unresolved abuse scales.

The interview is analysed in several stages, using a detailed scoring and classification manual (Main & Goldwyn, 1998a). Ratings for the subject's probable experience with each parent during childhood are first assigned, followed by ratings on the 'state of mind' scales. Finally, the subject is assigned to one of the five major classifications that appears best to represent their overall state of mind with respect to attachment: *secure* (also referred to as secure-autonomous), *dismissing, preoccupied, unresolved/disorganised,* or *'cannot classify'*. A sub-classification is also assigned. The first three categories are regarded as 'organised' that is, a single organised state of mind or strategy with regard to attachment is obvious. The final assignment depends upon the patterning of ratings already assigned, compared to the patterning of ratings that are theoretically expected to fit to the various classifications and sub-classifications, as well as a match to the general category descriptors. In the case of the *unresolved* and *'cannot classify'* categories, they are not regarded as a form of mental organisation per se. Rather, the unresolved and 'cannot classify' classifications are always assigned an alternate best-fitting 'organised' classification as well. The *unresolved* classification is assigned on the basis of the scales for assessing unresolved loss and abuse. The *'cannot classify'* classification is assigned on the basis of the individual showing such a striking or unusual mixture of mental states that no single *organised* state or strategy is obvious.

The relationship of 'state of mind' scales to classification

The AAI is based on two assumptions; first that autobiographical memory is the result of an ongoing reconstruction of one's own past, in the light of new experiences; second, that idealisation of the past and particularly of negative childhood experiences can be detected by analysis of the form and content of the autobiographical narrative (van IJzendoorn,

1995). The coding of the transcripts is based not on the participants' descriptions of childhood experiences per se, but on the way in which their experiences and their effect on current functioning are reflected on and evaluated. The speaker's presentation of 'experiences' is considered relevant only as it is judged to adhere to or violate coherent discourse.

Coherence versus incoherence in narrative has been the central focus of the AAI from the beginning (Main & Goldwyn, 1984; Main, 1995). Thus, the participant's presentation of his or her 'experiences' is considered relevant primarily as it is judged to adhere to or violate the coherence of the overall narrative. Thus, the classification of adult 'state of mind with respect to attachment' rests not only on judgments as to whether the speaker is valuing of, dismissing of, or preoccupied by, early attachment relationships and experiences, but also on the analysis of discourse usage. This latter aspect of interview analysis is based on part upon the speaker's ability to produce a coherent narrative in the description of life history and to collaborate actively with the interviewer in the telling of the story. In addition, the analysis draws on the work of the linguistic philosopher Grice (1975, 1989) who identified coherent discourse as following a 'cooperative principle' and as requiring adherence to four maxims:

* quality - "be truthful and have evidence for what you say". This maxim is violated when, for example, a speaker's parent is repeatedly described in highly positive general terms, but specific biographical episodes actively contradict these positive descriptors.

* quantity - "be succinct, yet complete". This maxim is violated when, for example, the speaker repeatedly responds by saying he/she cannot remember or refuses to respond, or, in contrast, speaks at excessive length, well beyond an appropriate conversational turn.

* relation - "be relevant or perspicacious". This maxim is violated when, for example, when questions about the speaker's childhood experiences are met instead with responses of current interactions with a parent or with the speaker's children.

* manner - "be clear and orderly". This maxim is violated when, for example, speech becomes grammatically entangled, psychological jargon or excessively vague terms are used or the speaker fails to finish sentences which have been fully started.

The AAI scale for coherence of transcript remains central to determining secure versus insecure attachment status and relies directly on adherence to, or violations of, Grice's maxims. Drawing on Grice, the AAI has more recently been conceptualised as presenting the subject with two central tasks (Hesse, 1999). The first task is to produce and reflect on memories involving early relationships as well as any potentially traumatic experiences. Main (1995) points out that memory in this context is understood as an active and not necessarily veridical process of 're-categorisation' (see Edelman, 1989). The second task is that the subject, while responding, has to simultaneously maintain coherent, collaborative discourse. Thus, the speaker has to respond to each question as relevant and then return the conversational turn to the interviewer. To be judged coherent in this context, the speaker must be able to both access and evaluate memories while simultaneously remaining truthful (ie consistent) and collaborative. The simultaneous execution of these tasks appears to be difficult for the parents of insecure infants.

A recent study of five AAI samples (N=364) has demonstrated a close fit between the AAI scales and classifications (Fyffe & Waters, 1997). Two multiple discriminant functions were derived. One function distinguished between the secure and all other insecure categories (89% correct prediction) and the other distinguished between the dismissing and preoccupied categories (96% prediction). Ratings on the coherence of transcript scale correlated .96 with the security function, indicating that that the insecure/insecure classification judgment was virtually identical with the coherence judgment. In this study, those classified preoccupied were rated less coherent than those classified dismissing. However, level of coherence was not a distinguishing feature between the two insecure groups. Thus, while coherence of transcript is critical for the secure versus insecure classification, that coherence, in turn, is based on ratings on other scales and the relationship between those scales. Thus, the expectable relations between scale scores and classifications remains important to correct judgements of secure versus insecure, secure versus preoccupied, secure versus dismissing, and dismissing versus preoccupied classifications.

Scales relevant to the secure category:

Subjects classified secure receive high scores on the coherence of transcript scale (Main & Goldwyn, 1998) when they present 'a unified, yet free-flowing picture of the subject's experiences, feelings, and viewpoints within the interview (p.44), 'exhibiting a 'steady and

developing flow of ideas regarding attachment' (p.43). Although verbatim transcripts are not like written narratives, such subjects show few violations of Grice's maxim's of quantity, quality, relation, and manner. The subject is able to point to the principle and rationale behind his/her responses, seems relatively at ease in describing attachment-related experiences, and tells his/her 'story well, in a fresh voice, and is collaborative and autonomous' (Main & Goldwyn, 1998, p.44). Thus, the subject presents a 'singular' model of his/her experiences and their effects, rather than inadvertently providing 'multiple models' (see, Main, 1991). In the original Main et al. studies (Main & Goldwyn, 1984, 1998a), scores on coherence of transcript scales of the parents' AAIs were found to be the strongest correlate of their infants's security of attachment.

Subjects scoring high on the metacognitive monitoring scale are usually classified secure. What this scale measures is the subject's 'ability to monitor and report on the processes of thinking and recall which take place while the interview is in progress' (p.100), with the ability to reflect on ongoing thinking and reaction processes with respect to attachment being considered 'a marker of autonomy in itself' (p.100). Active recognition of the distinction between appearance and reality, (e.g. a recognition that experiences may not have happened they way the subject presents them); representational diversity (e.g. others may take a different view of the experiences presented); and representational change (e.g. acknowledging that he/she may have had a different view of experiences in the past, or may do so in the future) are considered to underlie metacognitive monitoring ability (see Main & Goldwyn, 1998a).

In addition, subjects classified secure score low on the following scales: Idealisation of mother/father, insistence on lack of recall, involved/involving anger scales, passivity of discourse and derogation of attachment scales. Secure subjects usually score high on the coherence of mind scale, except those secure subjects who are unresolved with regard to loss or abuse, and are therefore classified unresolved/secure. The following descriptions and examples are based on the *'Adult Attachment Scoring and Classifications Systems Handbook'* (Main & Goldwyn, 1998a).

Scales relevant to the dismissing category:

Subjects classified dismissing receive high scores on the scales measuring idealisation of mother and father. This scale assesses the discrepancy or 'lack of unity' (p. 63) between

the overall view of the parent and the autobiographical memories provided to support this picture. Since the coder has no knowledge of the subject's actual history, any discrepancies come from within the transcript itself. Thus, for example, a high score would be assigned to a subject who described his/her parent as 'excellent' or 'very loving', but whose autobiographical memories are inferred by the reader (and rated in separate loving and rejecting scales measuring probable experience in childhood) to be substantially rejecting or (from responses to specific questions) abusive. The subject seems unaware of these discrepancies.

Subjects classified dismissing usually receive high scores on the insistence on lack of memory for childhood 'especially as it is used as a block to further queries or discourse' (p.66). This scale rates almost exclusively the subject's direct references to lack of memory ('I don't remember') not statements *implying* lack of memory ('I don't know'). This scale takes into account the frequency with which the subjects says he/she does not remember; the strength of the insistence (e.g. the reply repeated and not elaborated); timing of the stated lack of memory (e.g. as the first response to a question versus used spontaneously in the middle of efforts to remember particular events); and the extent to which it is used as a block to further queries with regard to attachment-related experiences.

The derogating dismissal of attachment scale deals with the active, cool derogation of attachment relationships or experiences and their import, and characterises individuals classified dismissing (the relatively rare Ds2 sub-category). High ratings are given 'when attention to attachment-related experiences or to a particular attachment figure is foolish, laughable, or not worth the time. The speaker does not disguise her dislike of the individual or of the topic, and in keeping with the apparent intent of casting the individual or topic aside, the sentences used are often brief and the topic is quickly dropped' (p.95).

In addition, subjects classified dismissing score low on the following 'state of mind' scales: coherence of transcript, coherence of mind, involved/involving anger, and passivity of discourse. Typically, they also score low on the probable loving experience with mother and father in childhood, and moderate high to high on probable experience of rejection with parents.

Scales relevant to the preoccupied category:

High scores on the involved/involving anger towards mother or father characterise subjects classified preoccupied (the E2 angry/conflicted sub-category). 'The expression of anger being rated on this scale is of a particular nature - present, expressive of current preoccupation and involvement, while simultaneously perhaps attempting to gain an involving preoccupation on the part of the listener' (p.70) The quality of the discourse in which the anger is expressed is central to the rating. High ratings are assigned to discourse that includes, for example, run-on grammatically entangled sentences involving episodes involving the offending parent; subtle efforts to enlist interviewer agreement (e.g. exaggerative language; implying common ground with the interviewer); extensive discussions of recent (sometimes minor) parent offences; angrily addressing the parent as though the parent were present; and, in an angry context, slipping into unmarked quotations from the parent.

Subjects who score high on the scale measuring passivity or vagueness of discourse are classified preoccupied (the E1 passive sub-category). This scale measures passivity of thought processes, usually regarding an ill-defined, inchoately negative experience of childhood. High scores are given when, throughout the transcript, the subject is unable to find words, seize on a meaning, or focus upon a topic. Passive speech is characterised, for example, by the use of vague expressions (e.g. 'it was a hello kind of a thing and everything', p. 82) or nonsense words (e.g. 'then we dadadadadada', p. 86); adding vague word to an already completed sentence, particularly in an ominous context (e.g. 'He would hug me *and that.*', p.86); becoming lost from the discourse context while speaking and wandering away into other topics as though completely lost from the interview context; confusing self and parents (e.g. 'my mother was 14 when I died', p. 89). In addition, the subject may use a child's lexicon (e.g. 'I runned very fast', p. 88) or describe experiences as a child would, as though becoming absorbed in the memories or state of mind, rather than as part of a conscious dramatic retelling. Dysfluency, hesitations, 'Hullian' slips of the tongue and so on are not rated as passive speech.

In addition, subjects classified as preoccupied receive low scores on the following 'state of mind' scales: coherence of transcript and mind and insistence on lack of recall. With regard to scales of probable experience in childhood, they typically receive low scores on both loving and rejecting experiences with mother or father in childhood and high scores on the

involving/role reversing scale.

Scales relevant to the unresolved/disorganised category:

The unresolved loss scale assesses a particular index of unresolved loss - disorganisation and/or disorientation in thinking, discourse and behaviour - resulting from the death of significant figures (not just parents), 'possibly involving frightening ideation (Main & Hesse, 1990/192). This is observed when, for example, a speaker indicates a belief that the dead person is still alive in the physical sense (*disorganised* ideation) , or suddenly seems to lose track of the interview queries or context (providing evidence of *disorientation* from the discourse context)' (p.113). Indications of disbelief that the person is dead include slipping into the present tense regarding the dead person as though the dead person continues to have 'input into present-day life' (p.118) versus a 'Hullian' slip representing interference from habit (e.g. 'it's probably better that he is dead, because now he can get on with being dead and I can get on with raising a family', versus 'my father's in banking', p. 118); indications of confusion between the dead person and the self; disorientation with respect to the time of the loss or where the loss occurred (e.g. the subject names several substantially different times when an important death occurred or places the self at the scene of the loss while clearly and specifically saying they were not present - and the disparity is not noticed).

Psychologically confused statements are also rated as lapses in the monitoring of reasoning. Such statements suggest 'efforts to manipulate the mind in order to partially undo, or effectively erase a past or ongoing experience' (p.121) (e.g. speaking of the death of a parent;- 'I just put it away in a little box in my mind, and then I didn't open the box anymore, so it isn't there anymore', p.121). Such mental manipulations are attempts 'to dissociate, or to divide the mind (as opposed to shifting attention)' (p.121-122). Lapses in the monitoring of discourse *during discussions of a loss* are also rated in this scale. They include unusual attention to detail regarding the loss; eulogistic speech, suggesting ' an encapsulation or segregation of the event from normal consciousness' (p.123); prolonged silences; unsuccessful moves away from the discourse context, and invasions into other topics of information regarding the loss. Reports of extreme behavioural reactions to a loss are also rated on the scale, including an extreme displacement of grief and extreme responses at the time of the loss (e.g. hospitalisations for depression), with no clear indication that the mental disorganisation/disorientation underlying such reactions has been altered or that

the past has been integrated. A period of several months to a year of serious but not debilitating depression or grief is not considered an extreme behavioural reaction.

The unresolved abuse scale parallels the loss scale. This scale considers the subject's response to frightening/abusive experiences involving attachment figures, including physical and sexual abuse, and extreme threats, such as threats to kill the child. However, the experience must first meet one of the following criteria of abuse to qualify and to have been 'overwhelmingly frightening, and heightening of fearful attention towards prospective incidents' (p.136): being badly hit by parents, 'enough to be distinctly frightened of the physical situation at the time and/or to be in pain afterwards' (p.136); repeated and hard striking of the child in the same episode (e.g hitting with object); any striking of the child that leaves marks; frightening parental rages directed at the child; child locked in very confined space; bizarre punishments (e.g. tied up); parental suicide attempt with child nearby; frightening or bizarre parental behaviour in the child's presence; parental threats to harm child; sexual abuse.

Unsuccessful denial of the occurrence, nature or intensity of the abuse are rated on the abuse scale (e.g. repeatedly alternating clear reports of abuse with denial that it was abuse) as are reports of being causal in, and deserving of the abuse (e.g irrational ideation regarding the specific and personal way they 'caused' or 'deserved' the abuse versus dismissing its import or ascribing it to cultural norms). When such reports are accompanied by confused, irregular speech patterns, the scores are higher. Psychologically confused statements about the abuse are also rated in this scale. As in the case of similar statements with respect to loss, these statements appear to constitute the subject's 'efforts to dissociate memories surrounding these experiences' (p.139). Disoriented speech about the abuse is rated, including odd associations; words or phrases which 'seem to stand for the abuse in an odd way, as though the speaker is unable to name it' (p.140); and intrusive visual-sensory images related to the abuse. Fears of being taken over or 'possessed' by the abusive figure are also rated.

Scales measuring probable experience in childhood:

The classification assigned to a subject 'is based on the adult's current state of mind rather than her attachment history, the presumed nature of previous attachments, or presumed previous states of mind' (p.1-2). Although this, and the preceding discussion may suggest

that classification could be based simply on the 'state of mind' scales, particularly coherence, this would not be possible because the 'probable experience of childhood' scales, especially the loving and rejecting scales are necessary to establish and check coherence. High ratings on the involving/role-reversing scale are associated with the preoccupied classification. Following is a brief description of those three scales.

The scale measuring loving behaviour during childhood assesses the extent to which the subject 'had a firm sense of the emotional support and availability of the particular parent under consideration, especially in times of trouble' (p.14). Strong indices of having experienced loving behaviour from the parent in childhood include memories of the following: of physical affection and comforting (e.g being comforted when distressed by being held/hugged); of being able to go to the parent when personally upset; special and tender concern and soothing when sick; of expecting a scolding for having done something 'bad' but being cared for, and ultimately forgiven instead; of being comforted when experiencing childhood fears (e.g.nightmares). Lower ratings are assigned when there is evidence of an 'instrumental' or 'operational' type care (e.g. organising activities for the child) only. Low ratings are assigned when there is little evidence that the parent was emotionally supportive of the child, or interested in the child as an individual.

The scale measuring rejection assesses the extent to which the parent under consideration rejected and/or avoided the child's 'dependence, affection, attention, need and attachment'. What is expected is at the least an inappropriately early independence from the parent - at the extreme, the child is unwanted. The effort and the effect is usually to shift the child's attention away from the parent and from attachment' (p.21). Strong indices of having experienced parental rejection include memories of the following: overtures to the parent being criticised, rejected or ridiculed because of a sense that the parent wanted the child to 'get on with it'; of the child's illness, injury and distress being minimised; of the parent being angry when the child was hurt; of the parent laughing at child's distress or difficulties; of fear that the parent might abandon the child out of disinterest. Lower ratings are assigned when there is evidence of a parent placing early, somewhat inappropriate stress on independence.

The scale measuring involving/role-reversing assesses the extent to which the parent attempts to elicit the attention and involvement of the child, and/or seeks parenting from the child, so that the parent himself/herself becomes 'an object of the child's attention' and

the child has to assume some responsibility for the parent's care, mood and well-being. Thus, the parent becomes a source of worry for the child, preoccupying the child's attention, and using the attachment behavioural system to this end. High ratings are assigned if there is evidence that 'pleasing the parents, and readily being persuaded to act as they would wish in order to avoid a persuasive sense of guilt is stressed' (p.26).

Training Institutes

The AAI requires extensive training. The interview protocol, together with the detailed directions for adminstration of the interview, are not published, but can be obtained from the authors. Achieving competence in coding and classification of transcripts requires attendance at a 2-week Training Institute, which are conducted by Main and Hesse, and since 1997 by four other certified trainers. The Institutes are followed by a 32-case reliability check. The rationale for this training is that, unlike event coding, the AAI classification process requires matching a particular case to a multidimensional, categorical template. The manual for classification (Main & Goldwyn, 1998a) contains detailed written descriptions of those templates. However, these written descriptions cannot capture the range and nuance of discourse and context that determines assignment to a particular classification. Training Institutes provide students an opportunity to see a variety of cases and to develop the expertise, under supervision, to evaluate new cases in terms of their fit to a particular attachment category.

Other methods of scoring the AAI

Some researchers have proposed new scoring systems for the AAI, including a two-category fine-grained coding system (Grossmann, Fremmer-Bombik, Rudolf, & Grossmann, 1988) and a three-category Q-sort analysis (Kobak, 1993) as alternatives to the four-category system of the AAI. The two-category system has been found to be strongly related to infant attachment status as well as maternal sensitivity (Grossmann, et al, 1988). The three-category Q-sort system was designed to provide continuous measures of qualities of attachment organisation. The over-lap between this system and the Main and Goldwyn system described above has ranged from 79% to 61% (Borman-Spurrell, Allen, Hauser, Carter & Cole-Detke, 1995; Kobak et al, 1993). Fonagy and his associates have developed a 'reflective functioning scale' to be applied to the AAI (Fonagy, Steele, Moran, & Higgit, 1991) which has been used in studies of parent-infant attachment and in

clinical studies (Fonagy, Steele, Steele, Leigh, Kennedy, Mattoon & Target, 1995; Fonagy, Leigh, Steele, Steele, Mattoon,Target & Gerber, 1996). The Q-sort has been used in studies of parent-adolescent interaction (Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993) and in some studies with clinical populations (Cole-Detke, & Kobak, 1996). However, most of the studies to be reviewed use the Main and Goldwyn system, as does this study.

An overview of the five AAI classifications of attachment

Following are brief descriptions of the five major adult attachment categories (George et al., 1996; Main, 1994, 1995; Main & Goldwyn, 1998a) as they are now defined. The most significant finding of AAI studies to date is the correspondence between adult and infant security, that is, between the adult's 'state of mind with respect to attachment' and the infant's response to that parent in the strange situation. For example, the different patterns of balance-imbalance between intimacy and objectivity in discourse about attachments in the AAI correspond to the different patterns of balance-imbalance between attachment and exploration in infancy, as shown in the strange situation, (Main & Goldwyn, 1998b). In addition, parental AAI scale scores were found to be correlated with continuous scores for particular infant strange situation patterns (Main & Goldwyn, 1984, 1998). For example, mothers' scale scores on idealisation of mother and father and insistence on lack of recall were each found to be correlated with the infant's scores on the strange situation continuous scale for avoidance. Mothers' scores on involving anger with her own mother correlated with their infants' scores on the resistance scale. Similar patterns were found for fathers. Interestingly, infants' avoidance scores were correlated most strongly with their fathers' idealisation of own father. Thus, in the following descriptions of the adult categories, brief descriptions of the corresponding infant categories will be included. These general category descriptors are based on those supplied in the *'Adult Scoring and Classifications Systems Handbook'* (Main & Goldwyn, 1998a).

Secure-autonomous - 'F'

Individuals are classified secure (also known as secure-autonomous) when they seem autonomous with respect to attachment and free to explore their thoughts and feelings in the course of the interview. They demonstrate ease with the topic of attachment , reflected in freely flowing speech. There is an avowal of the need to depend on others; of the

importance of attachment relationships; and of missing and needing others or being missed and needed by them. They seem aware of the nature of their attachment experiences with parents and the effects of those experiences upon their present state of mind. In terms of personal history, such individuals will present a convincing picture of one or both parents serving as a secure base or haven of safety in childhood. Alternatively, if their parents did not serve as a secure base in childhood, being either rejecting, role-reversing or abusive, they are coherent, reflective and thoughtful regarding their experiences and convincingly forgiving, and are largely free of idealising or angry preoccupation with their parents. Such difficulties as they do report are contained by consciousness, that is, the individual is aware of them, and reflective and humorous about them. Such individuals take a balanced view of relationships, accepting their own part in relationship difficulties. They give the impression of a strong personal identity, of a lively and active consciousness, illustrated partly by freshness of speech, metacognitive monitoring while the interview is in progress, little jargon and few rote replies.

Adults rated as secure are likely to have secure (Group B) infants. Main (1995) notes the similarity in the fluidity and flexibility of distribution of attention between secure infants and secure adults. Secure infants keep an 'attachment-exploration' balance (Ainsworth et al., 1971, 1978), evidenced in the strange situation (and at home) in the relatively smooth alternation between moving away from, and moving back to the attachment figure. Similarly, during the AAI, the secure adult maintains a fluid and flexible balance between reflecting on memories of attachment-related experiences and the demands of the interview. In parallel to the direct and collaborative approach of the secure infant to his/her parent during the strange situation, the approach of the secure adult to the interview is also direct and collaborative, regardless of how difficult and complex the experiences are to relate. (Crowell, Fraley, & Shaver, 1999).

A sub-category classification is also assigned, the subcategories reflecting relative differences in how secure individuals use dismissing or preoccupied strategies for dealing with attachment issues. Thus, relative to those classified F3, the group exemplar, those classified F1 and F2 share with those in the dismissing category some setting aside or restricting of attachment, usually as a response to a difficult childhood. However, unlike the dismissing individuals, this setting aside is conscious, attachment is clearly valued, and attempts have been made to create new attachment relationships. Similarly, those classified F4 and F5 share with those classified preoccupied some preoccupation with early

attachment figures, or are still somewhat conflicted about their relationships with them. However, unlike those classified preoccupied, they are more aware of their difficulties and are ultimately coherent, contained, and often humorous, about their continuing difficulties.

Dismissing of attachment - 'D'

Individuals are classified dismissing when their state of mind as assessed in the interview indicates a current attempt to limit the influence of attachment relationships and experiences in thought, in feeling, or in their daily interactions. They seem to approach the topic of attachment relationships and attachment-related experiences at an abstract level, remote from memories of actual experiences. According to Main and Goldwyn (1998a), 'What dismissing adults share in common is an organisation of thought which permits attachment to remain relatively de-activated' (p.151). Such de-activation can be accomplished by imagining that the parents would be almost ideally responsive should feelings of need arise. If this notion is in strong contradiction to autobiographical experiences, then it may be possible to keep it in place by seldom turning attention to attachment-related memories, hence a strong association of idealisation of parents and insistence of lack of recall for childhood in dismissing individuals.

Thus, such individuals dismiss the effect of attachment relationships on their personal development or on the way they rear their own children. They may insist that they cannot remember early experiences. The memories they do recall often contradict or fail to support their generally idealised view of parents and childhood. There is an implicit or explicit claim to strength, normalcy and/or independence for the self. Some flaws in parenting may be described, but are usually mild and may be followed by a positive 'wrap-up' general statement. There may be an emphasis on 'fun' and even on material objects, which are cited as evidence of a favourable childhood. With regard to personal history, such individuals are usually rated by coders as having experienced a pervasive lack of closeness, love or support from their parents. Adults rated as dismissing tend to have avoidant (Group A) infants.

Again, Main (1995) points out the correspondence between the discourse of dismissing adults in the AAI and the behaviour of avoidant infants in the strange situation. Their pattern of response in the AAI can be seen as representing a type of resistance to the task presented by the interview. Dismissing adults cut themselves off from cues to attachment,

just as avoidant infants do. Thus, they often show subtle or overt dislike of the interview topic (attachment), partly by cutting the interviewer and interview short by excessively brief replies or insistence on lack of memory. This 'rejection' of the interviewer could be seen as a parallel of their rejection of their infant. In addition, like their infants, they try to appear undistressed, invulnerable and lacking in anger. Although superficially collaborative, their organisation of thought makes real collaboration impossible.

Thus, during the interview dismissing speakers simultaneously resemble the 'rejecting' parent of the avoidant infant and the avoidant infant itself. The dismissing adult, like the avoidant infant, has not achieved a smooth balance between attending to attachment cues and exploration. Paralleling Main's (1995) description of the avoidant infant strange situation - where little appears to have happened throughout the entire procedure, with the infant looking away, turning away and leaning away from the parent - the short, terse muted interviews of those classified dismissing also create the same impression.

There are three sub-categories. Those classified Ds1 are characterised by strong idealisation of at least one parent; those classified Ds3 are somewhat less idealising and therefore more coherent. Those classified Ds2 (a relatively rare classification) are primarily characterised by an active derogation of parents and attachment.

Preoccupied by early attachments - 'E'

Individuals are assigned to this category if they are confused, unobjective and preoccupied by early experiences and past relationships within the family. They may either accept this state, seeming passive, vague, fearful and overwhelmed or they may struggle against it without success by being angry, conflicted and unconvincingly analytical. In regard to personal history, and relationship with their parents in childhood, such individuals often seem to have experienced a lack of love and support from parents or their interview conveys an inchoate sense of negativity in the family. Typically (but not always), while not notably rejecting, one or both parents was involving/role-reversing. There is often an almost hallowed emphasis on the family past, or the importance of the extended family. Such individuals still seem dependent on their parents, being markedly anxious to please them or intensely angry with them. Their sense of personal identity seems weak or confused and they have difficulty seeing the role of self in relationships, or relationship difficulties.

While they may appear open in their focus on attachment relationships and experiences, ultimately this focus is neither succinct or conclusive, despite an often extensive discussion of feelings and experiences. Attempts to provide an overview may be met immediately with oscillatory tendencies - where something negative expressed with respect to the parent is immediately followed by a positive evaluation, then by a negative evaluation, and ends with a disclaimer. A personal element of struggle, ambivalence and indecisiveness is evident in such oscillations. The most striking characteristic of such interviews is the mental entanglement with parents. There may be subtle confusions between self and parent and past and present while subject is recounting events from childhood. For example, there is a repeated tendency to bring the subject's present relationship with parents into answers about the relationship in childhood, and to bring the subject's relationship with own children into discussions about own childhood relationships with parents. These confusions are most evident in the passive speech used in the interview. Their interviews are characteristically long, their answers often irrelevant. The repetitive themes and lack of fresh thinking in the interview give the impression that the subject is emotionally stifled. Adults rated as preoccupied tend to have resistant (Group C) infants.

Just as resistant infants are overwhelmed by preoccupation with the attachment figure and unable to explore in the strange situation, preoccupied adults seem overwhelmed by memories of early experience and attachment-related concerns and unable to deal with the demands of the AAI. Similarly, the passivity and/or active anger, and oscillation manifested by preoccupied subjects in the AAI are paralleled by the passive preoccupation or ambivalent anger of the resistant infant in the strange situation.

There are three sub-classifications. The interviews of those classified E1 are primarily characterised by passivity of thought processes, those classified E2 by high ratings for preoccupied/preoccupying anger with respect to at least one parent. Those classified E3 (rarely found in normal samples) are characterised by a fearful, overwhelming preoccupation with traumatic events (e.g. sexual or severe physical abuse).

Unresolved (Disorganised/Disoriented) Attachment - 'U/d'

Adults are assigned to the 'unresolved/disorganised' attachment category on the basis of a particular, distinct and identifiable state of mind with regard to loss and abuse, characterised by lapses in the monitoring of reasoning or discourse while discussing

experiences of loss or abuse, or reports of extreme behavioural reactions to these experiences. Such lapses are found in adults who otherwise fit well into any of the remaining classifications. Unlike assignment to other attachment categories, the assignment to the U/d category is solely on the basis of scores on the scales measuring lapses in reasoning and discourse and extreme behavioural reactions, and not on the basis of the interview as a whole. Like the infant 'D' category which is always assigned in conjunction with a best-fitting alternative or 'forced' A, B or C classification, the adult U/d category is always assigned in conjunction with a second best-fitting Ds, F or E category. Such individuals tend to have disorganise/disoriented infants.

'Cannot Classify' - 'CC'

Individuals are assigned to the 'Cannot Classify' classification when they do not fit the three 'organised' secure, dismissing or preoccupied adult attachment categories. They show 'such a striking or unusual mixture of mental states that no single *organised* state or strategy is obvious (Main & Goldwyn, 1998a, p.178). They either alternate between inherently incompatible preoccupied and dismissing states of mind with respect to attachment, being unable to maintain either strategy, or else they appear globally incoherent but fail to show enough indices of preoccupation or dismissal for assignment to either corresponding category. Transcripts assigned to the 'cannot classify' category are always assigned to an alternative, best-fitting 'organised' category as well. Only a small proportion of individuals are now assigned to this category, currently 7-10% of individuals in low-risk samples. The 'cannot classify' is the adult equivalent of the 'unclassifiable' infant attachment classification. As yet, there are no empirically correspondent infant behaviour patterns, although it is hypothesised that the infant is most likely to be disorganised or unclassifiable (Main & Goldwyn, 1998a; Ammaniti & Speranza, 1994).

The psychometric properties of the AAI

Inter-rater reliability: Average inter-rater reliability has been estimated at 80% (van IJzendoorn & Bakermans-Kranenburg, 1997) and at 82% (Hesse, 1999) for three-way analysis. The AAI system requires substantial formal training (see above).

Stability over time: Stability studies employing different interviewers (with coders 'blind' to the previous classification), over three categories, have found 78% stability over a 2-

month interval (Bakermans-Kranenburg & van IJzendoorn, 1993); 90% stability over a 3-months interval (Sagi et al, 1994); 86% over an 18-month interval (Crowell, Waters, Treboux, O'Connor, Colon-Downs, Feider, Golby, & Posada, 1996); 70% across a 4-year period (Ammaniti, Speranza, & Candelori, 1996); and 90% stability between mothers's pre-birth and 11-month postpartum interviews. Across all four categories, the stability is somewhat lower: 71% when mothers experiencing a new loss within the testing period were eliminated (Bakersmans-Kranenburg & Van IJzendoorn, 1993); 77% (Benoit & Parker, 1994).

Discriminant validity: AAI classifications have been found to be independent of verbal and performance IQ, autobiographical memory not related to attachment, or social desirability. Neither were interviewer effects found (Bakersmans-Kranenburg & van IJzendoorn 1993). Another study using a different set of cognitive and memory tests replicated these results (Sagi, van IJzendoorn, Scharf, Koren-Karie, Joels., & Mayseless, 1994). The discriminant validity with respect to narrative styles was established in a study that found that the discourse style of individuals discussing their job experiences in an interview format similar to the AAI and using a coding system adapted from the AAI, was not related to their discourse style during the AAI. Other studies have also demonstrated no association between the AAI classification and measures of intelligence (Rosenstein & Horowitz, 1993; Sagi et al, 1994; Ward, Botyanski, Plunket & Carlson, 1991). Only weak associations were found between the AAI and retrospective measures of parenting-styles (van IJzendoorn, Kranenburg, Zwart-Woudstra, van Busschbach & Lambermon, 1991; Waters at al, 1993; Zeanah et al., 1993). It has also been found to be independent of a general personality measure (Zeanah et al., 1993).

Given the central role that coherence plays in determining adult attachment status these findings are important in demonstrating the independence of the AAI from general intelligence, verbal fluency, and general memory. Thus, adults classified secure who are coherent in their descriptions and evaluations of childhood experiences do not score higher on tests of intelligence, memory or verbal fluency than insecure adults. Similarly, dismissing adults, despite their insistence on lack of recall for childhood experiences fare no worse on tests on tests of general memory and memory for non-attachment related childhood events than other subjects (Bakersmans-Kranenburg & van IJzendoorn 1993).

The distribution of AAI classifications

In a recent meta-analysis focusing on establishing normative data for the AAI, van IJzendoorn and Bakermans-Kranenburg (1996) analysed 33 studies involving more than 2,000 AAI classifications, including samples of non-clinical mothers, nonclinical fathers, adolescents and young adults. Using a three-way analysis, in the combined sample of 584 nonclinical mothers, 24% were classified as dismissing, 58% as secure, and 18% as preoccupied. The separate samples from different countries were quite homogeneously distributed (except for kibbutz mothers who showed significantly less dismissing and significantly more secure and preoccupied classifications). Thus, compared to the distribution of strange situation classification in non-clinical samples of infant-mother attachment of 21% avoidant, 67% secure and 12% resistant (van IJzendoorn et al., 1992). These distributions are significantly different, with about 10% fewer secure mothers than secure infants.

Using a four -way analysis, in the combined distribution of 487 non-clinical mothers, 16% were classified as dismissing, 55% as secure, 9% as preoccupied and 19% as unresolved. This compares to the strange situation four-way classification of nonclinical infant-mother attachment of 23% avoidant, 55% secure, 8% resistant and 15% disorganised/disoriented. These distributions did not differ from each other significantly (van IJzendoorn et al., 1992). It is noteworthy that there is such a high percentage of non-clinical mothers who are classified as unresolved with regard to loss or trauma - nearly a fifth. It is also interesting that the discrepancy between the percentage of secure infants and mothers disappears when the unresolved (adult) and disorganised (infant) categories are added. Van IJzendoorn and Bakermans-Kranenburg suggest that a nonclinical population might be less 'healthy' than expected.

With regard to non-clinical fathers, the combined distribution of classifications was very close to that of nonclinical mothers: 22% were classified as dismissing, 62% as secure, and 16% as preoccupied. The finding that the dismissing classification was not more prevalent among men runs appears to run counter to the suggestion that men tend to have a generally less involved attitude towards intimate relationships - at least as measured by the AAI (Radojevic,1994; Gilligan, 1982). The four-way analysis was also very similar to that of the nonclinical mothers: 15% dismissing, 57% secure, 11% preoccupied and 17% unresolved/disorganised.

In a meta-analysis of a sub-set of studies which included wives' and husbands' attachment classifications, involving 226 couples, using a three-way analysis, the 50-60% correspondence between them was modest but significant. This was mainly accounted for by the secure-secure pairings. Thus, women and men classified as secure appear to marry each other more often than expected by chance. For a smaller sub-set of 152 couples, where a four-way analysis could be performed, there was a significant correspondence between them, in particular, women and men classified as unresolved/disorganised appear to marry each other more often than might be expected by chance. However, because the association between security of husbands and wives is modest, it is clear that many insecure people marry secure partners, offering the possibility to the family of breaking out of the cycle of the intergenerational transmission of insecurity.

In the meta-analysis of samples involving adolescents and young adults (first and second year college students and young adults originally recruited in high school) the three-way distribution of classifications of 27% dismissing, 56% secure, and 17% preoccupied, was not significantly different from the non-clinical mother distribution or from the combined non-clinical mother and father distribution. Neither was the four-way distribution significantly different. Thus, while it might be expected that that adolescents, having had less time to work through their childhood attachment experiences and might still find themselves in a struggle for independence, they do not show less secure/autonomous representations than adults.

With regard to samples with very low socioeconomic backgrounds, using a three-way and a four-way analysis, the distribution of classifications was significantly different from the nonclinical mothers. In particular, the unresolved/disorganised and dismissing categories were over-represented and the secure under-represented in the low SES sample. This might be explained by the likelihood that harsh environments may make traumatic events more common than in average environments, and that they may leave individuals with little opportunity for reflection on attachment-related experiences. To date, there has been been no investigation of the possible role of other factors that may distinguish high and low SES groups and might account for these findings. This parallels the finding that the proportion of secure strange situation classifications is also lower in impoverished samples living under chronic stress (Egeland & Farber, 1984; Lyons-Ruth et al., 1984; Speiker & Booth, 1985) - a finding that has been attributed to multiple and interacting stressors operating in such families (see Belsky, 1999).

The meta-analysis of samples from a wide variety of countries (Canada, the UK, the Netherlands, Israel and the USA) also showed that the AAI classifications are relatively independent of cross-cultural variations. But we will have to await studies in non-western countries to demonstrate that the AAI is not culture-bound. Furthermore, the crucial test for the cross-cultural validity of the AAI is its predicted association with children's attachment and parental responsiveness and, in very different child-rearing circumstances, there may be contextual/cultural constraints to the intergenerational transmission of attachment (Aviezer, van IJzendoorn, Sagi & Schuengel, 1994).

The predictive validity of the AAI: Predicting child attachment from parental AAI classifications

The bulk of this literature concerns the capacity of parental AAI to predict infant attachment as measured by the AAI. Main et al.'s (1985) original findings were first replicated by Ainsworth and Eichberg (1991) who found an 80% three-category match between infant strange situation classifications and maternal attachment assessed by the AAI 2-6 months later. An 89% correspondence was found between unresolved maternal attachment and disorganised infant attachment. In a meta-analytic study of the 14 replication studies then available van IJzendoorn (1995), involving 854 dyads, the combined correspondence for the secure-insecure split was 75%, or expressed in terms of effect size (d= 1.06, equivalent to r = .47)[1]. van IJzendoorn notes that this strong association would take 1,087 studies with null results to reduce the association to insignificance (Rosenthal, 1991). Over the three organised categories, the correspondence was 70% correspondence between the three organised categories of adult and infant attachment. Across the four categories (9 samples, 548 dyads), the match was 63% - a strong finding given the complexity and difficulty of coding the fourth unresolved/disorganised category. The degree of correspondence between the unresolved adult category and the disorganised infant category was positively related to the amount of training the judges had in coding this category.

Maternal attachment tended to be more strongly related to infant attachment than was paternal attachment. One explanation may be that mothers may determine the children's attachment relationship to the father through their influence on the infant's attachment

[1] It is important to bear in mind that the studies of correspondence between parental and infant attachment that the coding of both the AAI and the strange situation are each conducted by independent and 'blind' coders.

relationship to themselves (Fox, Kimmerly, & Schafer, 1991). However, Steele and her associates (1996) found that there was no indication that the security status of either parent affected the infant's relationship with the other parent. Two further explanations have been advanced by van IJzendoorn (1995). First, the strange situation procedure was developed and validated in infant-mother samples and may not tap the essential features of the infant-father attachment relationship. Second, the traditional division of caretaking responsibilities in families may mean that fathers have less frequent and less intense involvement with their infants, and therefore weaker influence on their infants' attachment relationships with them. However he points out that this latter explanation is not supported by his finding that fathers's AAI classifications tend to be somewhat more strongly related to sensitive responsiveness than mother classifications.

The weakest association was found between the adult preoccupied category and the resistant infant category. Moreover, when the unresolved/disorganised categories were added, the association is still weaker. This may be due to the small number in those categories. In normal populations, the percentage of children classified resistant is around 12% for the three-category system. Using the four-way classification, the percentage is only 8% (van IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992). In the meta-analysis the percentage across the samples was only 5%. Furthermore, a disproportionate number of unresolved adults seem to be recruited from the preoccupied category - partly explaining the number of preoccupied parents who have disorganised infants. Additional AAI studies with a specific focus on preoccupied adults will be needed to find out why the preoccupied category seem more vulnerable to being unresolved with regard to loss or trauma and why they seem to be under-represented in normal populations in comparison to other insecure categories.

Nonetheless, it could still be argued that in concurrent and retrospective research designs, it is the *existing* infant-parent attachment relationship that is influencing the parent's current attachment representation, a number of studies using a prospective design - ie the AAI administered to parents before the birth of their first infant - have become available (Benoit & Parker, 1994; Fonagy, Steele, & Steele, 1991; Radojevic, 1992; Steele et al.,1996; Ward & Carlson 1995).

The first such study was conducted by Fonagy and his associates on a sample of 96 white, middle class first-time mothers and their infants. The mother's AAI, administered three

months prior to the birth of the infant, predicted the infant's subsequent strange-situation classification at 12 months, with an over-all secure-insecure match of 75%, and a three-way match of 66%. Subsequent studies have replicated these findings in relation to fathers. Radojevic (1994) found a 77% secure-insecure match between fathers' pre-birth AAIs and subsequent infant classification at 15 months, and Steele et al. (1996) found a 71% match.

The design of the studies of Fonagy and his associates, which measured both mothers' and fathers' pre-birth attachment classifications was also able to demonstrate that the correspondence between parent and child attachment status was parent-specific. For example, if a mother's pre-birth AAI was secure and a father's dismissing, in the subsequent strange situation, the infant would be found secure with mother and avoidant with father. In addition, none of the wide range of control measures used in the study, including personality, verbal fluency, marital satisfaction, and psychopathology screening measures, achieved spastically significant levels of prediction from pregnancy to infant attachment.

Using a similar design, but in a high-risk sample of 74 single, inner-city, African-American and Hispanic adolescent mothers, Ward and Carlson (1995) found a 78% three-category and 68% four-category correspondence between the mothers' pre-birth AAI classifications and infant classification at 15 moths. Main (1995) notes that the mother-infant attachment match in that sample was directly comparable to the middle class sample, despite the harsh lives, low educational levels and slightly different speech patterns of many of these adolescent mothers. To date, only one study has completed a three-generation study (Benoit & Parker, 1994), which found a 81% three-way and 68% four-way correspondence between mothers' pre-birth AAI attachment and their infants strange situation classification; and a 75% three-way correspondence between the mothers and their own mothers, with the highest correspondence (88%) between secure mothers and secure daughters; and grandmothers' attachment significantly related to that of their grandchildren. However, only a 49% four-category correspondence was found between the mothers' and their own mothers' attachment, which the authors attributed to the relative instability of the unresolved classification among mothers and the higher proportion of grandmothers who were classified unresolved. They argued that the grandmothers, by virtue of their age, had experienced more losses, and that the occurrence of those losses in respect to which they became unresolved, were unlikely to be transmitted to the adult daughters.

While attachment concordance between mothers and adolescents was found in one study to be modest (Zimermann, Fremmer-Bombik, Spangler, & Grossmann, 1995), another study (Rosenstein & Horowitz, 1996) found concordance of over 80% between psychiatrically-disturbed adolescents and their mothers, suggesting that higher than average mother-adolescent concordance may be found under some extreme conditions. Higher concordance has also been found for adolescents living with both biological parents than for adolescents living in other family structures (Allen, Kuperminc, & Moore, 1997). However, lower mother-adolescent concordance has been found in the case of older compared to younger adolescents (Allen, Land, Liebman, Bell, & Jodl, 1997), suggesting that adolescent attachment organisation may be disrupted, at least temporarily, by the stresses of early adolescence (Allen & Land, 1999).

In his meta-analysis of the AAI, van IJzendoorn found that in the case of the prospective, pre-birth studies, comprising 389 dyads, there was a 69% correspondence for the three-way classifications between parental and infant attachment classifications, that is, equivalent to the correspondence shown in studies with concurrent and retrospective designs. Main (1995) argues that this association between the state of mind of an adult with respect to attachment, assessed through *language use* in the parent or prospective parent, with the *non-verbal behavioural infant responses* to separation from and reunion with that parent in a laboratory situation, is exceptionally strong for the behavioural sciences.

With regard to the capacity of parental AAI to predict child attachment, rather than infant attachment, a recent study of 32 middle-class 6-year old children and their mothers found an 82% four-category concurrent correspondence between maternal AAI attachment and child attachment based on the Main and Cassidy (1988) child attachment classification system (George & Solomon, 1996). In a similar study, a 95% secure-insecure match was found between mothers and their 6-year old children (Ammanti, Sperenza, & Candelori , 1996).

Concurrent validity: Predicting parent-child relationships from parental AAI classifications

Given the strong relationship found between maternal sensitivity and responsiveness to infant signals and infant attachment by Ainsworth and her associates (1978) and in

subsequent studies (reviewed earlier), studies investigating the relationship between parental attachment classification and caregiving have focused on sensitivity and responsiveness. Mothers classified secure on the AAI have been found to be more sensitive, responsive, and attuned to their infants in the first year of life (Grossmann, Fremmer-Bombick, Rudolf, & Grossmann, 1988; Haft & Slade, 1989; Ward & Carlson, 1995; Zeanah et al., 1993). Similarly, compared to insecure mothers, mothers classified secure provided more help, support and structure to their preschool children during observed tasks (Cohn, Cowan, Cowan, & Pearson, 1992; Crowell & Feldman, 1988; Das Eiden, Teti, & Corns, 1995). Secure mothers were also more responsive to their preschool children before and after separations, and prepared their preschoolers more effectively for separation (Crowell & Feldman, 1991). Secure mothers of school-age children, observed interacting with their children, were found to be warmer, more supportive, and smoother in moving on to new activities than insecure mothers (Crowell, O'Connor, Wollmers, Sprafkin, & Rao, 1991).

In a meta-analytic investigation of the then 10 available studies (N=389) comparing secure versus insecure parental attachment on the AAI with observations of parental sensitivity, warmth and supportiveness in interactions with infants/preschool children, van IJzendoorn found a combined effect size across these studies of .72 (r=.34). The predictability of sensitive, responsive caretaking from parental AAI classifications was greater for fathers than for mothers.

Looked at from the perspective of child and adolescent behaviour, children of insecure parents had the highest ratings of problem behaviour and child distress (ratings completed by parents, teachers and the children themselves (Cowan, Cohn, Cowan, & Pearson, 1996; Crowell et al., 1991). In another study, children suffering from both developmental delay and clinical problems all had insecure mothers (Crowell & Feldman, 1988); and the great majority of mothers of conduct disordered and disruptive children were insecure (Crowelll & Feldman, 1991) as were the mothers of psychiatrically hospitalised adolescents (Rosenstein & Horowitz, 1996).

Looked at from the perspective of the adolescent's AAI attachment classification, adolescents, classified secure in young adulthood, had been observed to show more autonomy and relatedness in interactions with their parents at age 14 (Allen & Hauser, 1991).

Prospective longitudinal studies of attachment status

A small number of studies have investigated the continuity of attachment from infancy to young adult (Hamilton, 1995; Main, 1997; Waters, Merrick, Albersheim, & Treboux, 1995; Waters, Merrick, Treboux, Crowell, & Albersheim, (in press); Weinfield, Sroufe, & Egland (in press); Zimmerman, Fremmer-Bombik, Spangler, & Grossmann, (1995). The results of these studies are mixed. Five studies compared the concordance between strange situation attachment in infancy with AAI attachment in adolescence and young adulthood. Waters et al (1995) found in their sample of 50, a 64% three-way (ie in terms of the three organised categories) concordance, and a 72% two-way (ie secure versus insecure) concordance between attachment in infancy and at age 21. In her sample of 30, Hamilton found a 63% three-way and a 77% two -way concordance between attachment in infancy and at age 17-19. Main & Hesse (1998) also found high concordance between infant strange situation and AAI security at age 19.

Weinfield et al (in press) in their sample of 57 18-19 year olds, and Zimmermann et al. (1998) in their sample of 16 year olds, found no significant concordance between attachment in infancy and in adolescence/young adulthood. A further study (Lewis, 1997), using a Q-Sort version of the AAI (Kobak, 1993) and a modified version of the strange situation also found no concordance between attachment in infancy and in adolescence.

Interestingly, Waters et al (1995) found that for those individuals who had experienced major life events (e.g death or life-threatening illness in parent, parental divorce, physical or sexual abuse, parental psychiatric disorder) the concordance between attachment in infancy and young adulthood was only 44% and nonsignificant. When these subjects were excluded from the analysis, the association between current and infant classification (secure versus insecure) was 78%. Similarly, the Weinfield et al (in press) study involved a sample who had experienced many negative life events, including maternal depression, child maltreatment and family adversity.

Similarly, the Hamilton (in press) study found that negative life events were associated with maintenance of an insecure attachment. In the Weinfield et al. (in press) study of a high risk poverty sample, only 39% of the sample were classified insecure in infancy, but this rose to 68% at age 18-19, 60% of whom were classified dismissing. In the Weinfield et

al. study, child maltreatment, maternal depression and other family problems were identified as sources of lawful discontinuity.

Over-all, the mixed results of these infancy-adolescence/young adult longitudinal studies echo the findings with regard to more short-term continuity of attachment in infancy and early childhood, that is, that continuity is very high in stable middle-class samples (Easterbrooks & Goldberg, 1990) and less evident in economically deprived samples, characterised by single-parent families or unstable family relationships (Vaughn, Egeland, Sroufe, & Waters, 1979; van IJzendoorn, 1995).

Only one of the longitudinal studies used the four-category system (Main & Hesse, 1998) which found strong predictability from attachment in infancy to age 19. None of the 12 infants classified disorganised in infancy was classified secure at age 19. Finally, one longitudinal study found a significant link between naturalistic observations of maternal sensitivity with 86 premature infants at 1, 8 and 24 months, and the AAI classifications of those children when they were aged 18. The mothers of those classified dismissing at age 18 were found to have consistently received the lowest sensitivity scores in interactions with them as infants (Beckwith, Cohen, & Hamilton, in press).

The intergenerational transmission of attachment

Studies relating to the predictive and concurrent validity of the AAI, explicitly or implicitly, attempt to provide an explanation of the inter-generational transmission of attachment from parent to child. The way attachment theorists have tended to conceptualise this transmission process has been summarised in the following way by Fonagy and his associates (Fonagy et al., 1995): the parent's attachment-related experiences in childhood are embodied within a working model (Bowlby, 1973, 1980; Bretherton, 1985); this model is thought to affect the development of the mental representation of the child in the caregiver's mind (see Bretherton et al., 1989); which, in turn, determines parenting functions underlying sensitive caregiving behaviour (Bowlby, 1969); which then constitutes the primary determinant of the child's quality of attachment to the parent (Ainsworth et al., 1978).

Thus, the best candidate for a process through which parental mental representations influence the infant's behaviour in stressful situations has been widely regarded as the

sensitive responsiveness of the caregiver (Bowlby, 1973). Other theorists have hypothesised that parental defensive processes may play a key role (Fonagy et al., 1995; Main, 1991, 1995). Still others have taken the view that the links between parental representational of attachment and child attachment, as well as the links between infant attachment and later developmental outcomes, including attachment security, are likely to be complex, multidetermined and mediated by interactional-contextual factors (Belsky, 1999; Isabella, 1994; Rutter, 1995; Thompson,1998, 1999). In the case of the transmission of unresolved/disorganised organisation, or what Main and Hesse (1990, 1991) term the second-generation effect of unresolved loss of attachment figures, specific mechanisms of transmission have been proposed. The different intergenerational mechanisms of transmission -parental sensitivity, defensive processes, interactional-contextual factors and specific mechanisms in the case of the unresolved/disorganised category will each be considered in turn.

Parental sensitivity:

Parental sensitivity has been found to predict caretaking and infant/child attachment. However, van IJzendoorn (1995) points out that while his meta-analytic study yielded an overall effect size in the predicted direction, it suggests that the largest part of parental influence on infant attachment would appear to operate through mechanisms other than sensitive responsiveness. Thus, he identified a marked 'transmission gap' in our understanding of how parental attachment representations influence infant security. He proposes four other possible mechanisms. First, temperament may account for some more of the variance, in that infant temperament is thought to explain at least some of the variations in infant attachment behaviour (Vaughn et al., 1989). Second, parents may genetically transmit basic temperament to their infants and therefore indirectly shape their attachment security (van IJzendoorn,1992). However, Belsky's (1995) review of this literature does not support genetics and temperament as convincing explanations. Third, current measures of sensitive responding may not adequately capture all aspects of communication between parents, for example, parental facial expressions are not usually coded and only a few studies have used observations in a natural setting. Fourth, a combination of those factors might explain the 'transmission gap' between parental and infant attachment via sensitive responding.

Other theorists (Seifer & Schiller, 1995) have pointed to the need for establishing greater

specificity in determining more precisely the components of parental behaviour that are essential for promoting secure-base behaviour; the aspects of infant behaviour that 'teach' parents sensitivity to the infant; the aspects of infant temperament that affect the attachment system; the point in development at which parenting sensitivity and infant temperament are most influential on attachment. Finally, it has been argued that parental sensitivity may be most influential in the very early months of life, and may 'launch' an infant on a path towards a particular attachment organisation, with the infant then shaping, and in some cases, changing parental responsiveness (van IJzendoorn, 1995). Hesse (1990) points out that the finding that observations of maternal sensitivity made earlier rather than later in the first year more strongly predict infant security at 12 months (see Grossmann et al., 1985; Sroufe et al., 1990) lends some support to that hypothesis.

The role of defensive processes

Some attachment theorists argue that *observable* maternal sensitivity and caregiving are not necessarily reliable predictors of the quality of the parent-child relationship and the transmission of attachment and point to Main's compelling model for the transmission of secure attachment that has moved the field beyond a simple view of caregiver sensitivity' (Fonagy et al.,1995). Main (1991, 1995) has attempted to construct a theory that links the origins and role of defensive processes in the maintenance and transmission of attachment. Referring to Spence's (1987) call for a 'grammer' of early development, that is, a clearly defined system by which early experience could be understood to be transformed into later behaviour, she has advanced a theory which attempts to construct such a 'grammer'.

According to Main, and as earlier suggested by Emde (1989), the early parent-infant relationship may conceivably alter early motivational structures in a unique way. The essence of her theory is that the insecure infant develops a defensive, conditional strategy for maintenance of proximity and/or self organisation in response to restrictions the parent has placed on proximity-seeking or on autonomous exploration. This conditional strategy on the part of the infant then helps the insecure parent to maintain a particular state of mind with respect to attachment to own parents. Thus, dismissing and preoccupied adults may actively attempt to maintain what she calls a steady representational/attentional state in respect to their own parents, through discourse violations which are held in place by anxiety and transmitted to the infant. Thus, she argues that the role of defensive processes in the stability and intergenerational transmission of insecure attachment is central.

Building on her theory that insecure infants and their parents may be using conditional behavioural strategies to meet with their particular circumstances, specifically, for maintaining proximity and or self-organisation under conditions of maternal rejection or unpredictable responsiveness (Main, 1981,1990), she proposes that the maintenance of these behavioural strategies in infancy may rely on the alteration or limiting of attentional patterning (Main, 1993).

Thus, the infant of a rejecting mother shifts attention away from the mother and threatening conditions, and in that way keeps the naturally occurring behavioural output of the attachment behavioural system (proximity seeking) at a minimum. The infant of the unpredictably responsive mother, on the other hand has to be hyper-vigilant about even the most minimally threatening conditions, thus keeping he behavioural output to a maximum. Both these less flexible forms of attentional patterning have the ultimate effect of controlling the infant's behaviour and permit the maintenance of proximity and self-organisation under conditions of maternal rejection or unpredictable unresponsiveness.

Main conceives of these conditional behavioural strategies (avoidance or preoccupation) as imposed on the still-active primary attachment behavioural system (ie proximity seeking in response to threat and terminating proximity-seeking in conditions of safety) which is continually active and context-sensitive (Bowlby, 1969; Bretherton, 1985). According to Main:

> 'Maintenance of a 'minimising' (avoidant) or 'maximising' (resistant) behavioural strategy is therefore likely eventually not only to become dependent on the control and manipulation of attention but also eventually to necessitate overriding or altering aspects of memory, emotion, and awareness of surrounding conditions' (Main, 1995. p.451)

Main (1995) conceives of the insecure patterns of attachment (avoidant and resistant) as being held in place by the maintenance of a steady attentional/representational state. Situations which force shifts of attention towards threatening conditions and attachment figures for avoidant/dismissing individuals or force attention away from attachment figure in resistant/preoccupied individuals constitute challenges to, or violations of these states and may eventually themselves create feelings of anxiety. Maintenance of these states may

therefore be subjectively experienced as a kind of 'secondary felt security' which originates in the conditional behavioural strategy or compromise that the individual has had to use to maintain proximity and self-organisation when interacting with an insecure parent.

The dual need of an infant for attachment and exploration may constitute a serious challenge to the representational states of mind of insecure parents. For example, in the case of a dismissing parent, active proximity-seeking on the part of the infant may threaten the idealised view of their own parent, or their insistence on lack of recall for childhood by provoking memories of their own experiences of parental rejection. In an effort to maintain their state of mind, the parent may *fail to perceive, misinterpret* or *fail to respond* to the infant's desire for closeness. In response to what Main terms 'these selective insensitivities' on the part of the parent, the infant then develops a defensive, conditional behavioural strategy (in this case avoidance of the parent when distressed) so as to maintain proximity to the parent and self-organisation. This infant response in turn helps the parent to maintain the defensive state of mind in relation to own parents. Main concludes that this is the mechanism that explains the likely continuation of insecure attachment from infancy to adulthood and from parent to infant in the majority of cases. However, she cautions, later favourable experiences with a new attachment figure, favourable constitutional characteristics, and the absence of intervening adversity may permit many insecure infants to become secure adults, just as later adversity or deterioration in the parent-child relationship may result in secure infants become insecure adults.

Main's conceptualisation of these conditional behavioural strategies as defensive processes, although related to attachment rather than, as in classic psychoanalytic theory, to sexuality or aggression, is compatible with existing theories of defence. Attachment theorists coming from a psycho-analytic and 'theory of mind' perspective have also advanced a theory of how defensive processes affect the transmission of attachment (Fonagy et al., 1995). They argue that the extent to which parents are defensive about their own negative emotional experiences is a crucial indicator of their caregiving sensitivity. Their theory is informed by the work of psychoanalyst Wilfred Bion (1962) who emphasised the mother's capacity to mentally 'contain' the infant and to respond in a way that modulates the infant's potentially unmanageable feelings and acknowledge the infant's 'intentional stance'. They consider that the central aspect of the containment concept is that the mother can not only 'reflect' back to the infant her understanding of the *cause* and the *nature* of the infant's

distress, but can also reflect her own adult *capacity not to be overwhelmed* by it. Thus the sensitive mother's response communicates two normally incompatible feelings: the empathic mirroring of distress with the mastery of the distress.

In this formulation, secure attachment is the outcome of successful containment, while insecure attachment (avoidant or resistant) is a defensive compromise (Fonagy et al., 1992; Holmes, 1993) whereby the infant sacrifices intimacy or autonomy, so that proximity can be maintained to a parent incapable of containing the infant's affect. The infant then develops defensive behaviours that serve to restrict contact with, or distract the caregiver. These behaviours may be specific to the caregiver and frequently appear to be 'borrowed' from that caregiver, or in psychoanalytic terms, adopted by a process of identification/internalisation. Fonagy and his associates (1992, 1995) note the striking convergence between the parent's and the infant's mode of defence in the context of the strange situation and the AAI, with the parent very often unconsciously forcing the child into the adaptive strategy which he or she finds reassuring. They point out that this observation is consistent with the theories of infant-mother psychotherapists, such as Fraiberg (1982) and others, that is, 'that pathological features of the infant's mental representational of relationships derive from the internalisation of enactments of maternal conflicts observable in microscopic aspects of the infant-caregiver exchange' (Fonagy et al., p. 246, 1995).

Fonagy and his associates conceptualise the intergenerational transmission of habitual modes of defence as crucially dependent on the mother's capacity to accurately perceive and respond to the source of the child's distress; to combine empathic affect and mastery in her response; and to respond empathically to the emerging intentional stance of the infant in relation to individuation and independence. Fonagy and his associates believe the latter element, the mother's intuitive understanding of the infant's intentional stance, that may be most important in the development of the infant's secure attachment.

Their theory was also based on the extensive 'theory of mind' literature. In their formulation, the assumption is that the psychological process variously termed 'metacognitive monitoring' (Main, 1991) or 'mentalisation' (Fonagy, 1989, 1991a) or 'theory of mind' (for review see Fonagy et al., 1995) or 'reflective self-function' (Fonagy, Moran, and Target, 1993) 'is an intrapsychic and interpersonal developmental achievement that emerges *full* only in the context of a secure attachment relationship' (Fonagy et al.,

1995. p.251). Like other high-level cognitive process it can be adversely affected by anxiety, conflict and consequent defensive processes.

I

Fonagy and his associates have devised a 'reflective-self scale', coded from the AAI, which assesses the speaker's tendency to acknowledge the mental states of others as well as their own (Fonagy et al., 1991b, 1995) arguing that the reflective-self process has the potential to contribute to filling the 'transmission gap'. A re-analysis of their sample found that 'self-reflective' function in the parent was a good predictor of the security of the infant (Fonagy et al., 1991). However, significant numbers of parents had secure children, despite having low self-reflective capacity, but only a small number of parents with high capacity had insecure children. Fonagy and his associates explained this finding in terms of a vulnerability and resilience model (Fonagy et al.,1995).

For example, following Main's (1991) proposal that metacognitive capacity may be particularly important when the child is exposed to adverse interaction patterns with the parent, they divided their sample into those families who had reported significant experiences of social stress and deprivation, and those who had not. Results showed that all 10 of the mothers in the highly stressed environment who had high self-reflective capacity had securely attached children, whereas only one out of the 17 highly stressed mothers with poor self-reflective capacity did so. For the non-stressed group of families, reflective-self functioning seemed to be a far less important predictor.

Interactional-contextual factors:

A few studies have examined the interactional-ecological contexts in which the correspondence between adult and infant attachment is embedded. The findings with regard to the role of infant temperament; maternal welfare, stress and personality; spousal and general support; and socioeconomic adversity in determining infant security were reviewed in the preceding chapter. Sagi et al. (1997) study pointed to the 'contextual constraints' on intergenerational transmission in Israeli kibbutzim, depending on whether the infants had communal or home-based sleeping arrangements. van IJzendoorn's (1995) meta-analysis also raises the possibility that there may be contextual constraints on the predictive validity of the AAI, in that studies using US samples and middle class families showed stronger association between adult and infant attachment than studies conducted in other countries and with lower socioeconomic class samples.

The mechanisms linking parental unresolved attachment with child disorganised attachment

The original findings showing that a parent's unresolved adult attachment status predicted disorganised/disoriented attachment status in his/her infant (Main, 1991; Main & Hesse, 1990) were replicated by other studies (eg Ainsworth & Eichberg, 1991; Lyons-Ruth & Block, 1996; Lyons-Ruth et al., 1991). Main and Hesse (1990, 1991) in considering both the immediate cause of the behaviour characteristic of disorganised infants, and the more general, ontogenetic cause, (i.e. the experiences of interaction with the parent which have led the infant to develop this behaviour), have hypothesised that frightened and/or frightening parental behaviour may provide the link between the parent's experience of unresolved loss or abuse and the infant's disorganised/disoriented behaviour in the strange situation. Furthermore, since disorganised/disoriented behaviour is characterised by the contradiction or inhibition of attachment-related action while it is being undertaken, as well as by more direct markers of fear (e.g. fearful expressions and gestures), they proposed that infant fear may play a causal role in inhibiting or contradicting movements of approach to the attachment figure, and in the development of disorganised/disoriented behaviour.

Studies showing the strong association between parental maltreatment and disorganised infant status in infancy lend support to this hypothesis. About 80% of maltreated infants are classified as disorganised (Carlson et al, 1989). Radke-Yarrow, Cummings, Kuczynski, & Chapman (1985) also found that many infants of parents suffering from psychotic episodes were unclassifiable within the traditional 'organised' classification system. However, in the case of parents where the source of fear originates in the parent's personal history of loss and abuse, rather than the direct interaction with the parent, Main and Hesse hypothesise that such unresolved parents are still *frightened* by their experiences, perhaps because of the circumstances surrounding or following a loss, or because of frightening ideas regarding the relationship with the lost figure. Similarly, unresolved responses to abuse by the attachment figure may originate in the experiences of intense fear, terror or helplessness that surround the abuse, or in frightening ideas about the relationship with the abusing person.

Such unresolved/disorganised adults may enter a particular, compartmentalised state of mind, involving intrusions from frightening, dissociated memories of loss or abuse, which may result in frightened or frightening behaviour while interacting with the infant. Because

the cue to the parent's fear is itself attachment-related, the infant may become confused in the parent's mind with the parent herself, or with the attachment figure whose death or behaviour produced the original trauma. In some cases this may lead to the parent indicating to the infant that it is the infant itself that is the source of the alarm. Since fear produces a tendency to flight, the parent may then indicate a desire to get away from the infant, or may subtly try to flee to the infant as a haven of safety-behaviour that would greatly intensify the infant's fear . The frightened child, who would normally seek out the adult attachment figure as the 'solution' to the experience of fear, is now put in a paradoxical situation, with the attachment figure simultaneously the *source* of and the *solution* to its alarm, leading to the child demonstrating the disorganised/disoriented behaviour. Main and Hesse conclude that:

> 'the traumatised adult's continuing state of fear together with its interactional/behavioural concomitants (frightened and /or frightening behaviour) is the mechanism linking unresolved trauma to the infant's display of disorganised/disoriented behaviour' (Main & Hesse, 1990, p.163).

Two recent studies have lent further support to their hypothesis by demonstrating the links between unresolved attachment status of mothers on the AAI and actual frightened/frightening behaviour observed as the mother interacted with her infant in the home (Jacobvitz, Hazen & Riggs, 1997; Schuengel, van IJzendoorn, Bakersmans-Kranenburg & Blom, 1997). However, little is yet known about the precise frightened/ frightening behaviour on the part of the parent that might lead to infant disorganised/disoriented behaviour.

The use of the Adult Attachment Interview in clinical samples

A number of studies have attempted to understand the link between the 'state of mind with respect to attachment' as measured in the AAI and adult psychopathology. In a meta-analysis of clinical samples (including samples of parents of failure-to-thrive infants, parents of conduct-disorded and sleep-disordered children, abusing parents, depressive and borderline personality adults) the distribution of AAI attachment classifications was found to substantially deviate from that of normal sample, with a strong over-representation of insecure attachment classifications over three and four categories. Only 14% of parents

were classified secure, whereas 41% were classified dismissing and 45% preoccupied. In contrast, the distribution of AAI attachment classifications of mothers of children hospitalised for acute or chronic physical illness (Benoit et al., 1989) did not diverge from the normal sample. This echoes the finding that the distribution of attachment in children with physical impairments is not skewed (van IJzendoorn et al., 1992). Thus, children's physical illnesses do not appear to be related to the mothers' state of mind with respect to attachment, whereas their socioemotional and behavioural disorders are strongly related to maternal insecure attachment representations. However, there was no discernible relationship between type of adult insecurity and specific child clinical disorder.

The AAI has also been used in a number of clinical studies. Fonagy and his associates (Fonagy et al.,1995; Fonagy, Leigh, Steele, Steele, Mattoon,Target and Gerber, 1996) have established an association between borderline personality disorder (BPD) and preoccupied attachment classification, with a 75% of those with BPD classified preoccupied, half of whom fell into the fearfully-preoccupied sub-category (E3) rarely found in normal samples. Using the four-category system, 89% were classified unresolved. These finding were replicated in another study (Patrick, Hobson, Castle, Howard, & Maughan, 1994). In addition, the Fonagy et al. studies found that a combination of unresolved abuse with low self-reflective functioning was highly predictive of BPD.

With regard to anxiety, a link has also been found with preoccupied AAI classification (Fonagy et al., 1996; Rosenstein & Horowitz, 1996). However, the findings with regard to depression are mixed, with some studies finding depression associated with preoccupied AAI classification classification (Cole-Detke & Kobak, 1996; Fonagy et al., 1996; Rosenstein & Horowitz, 1996) and some with dismissing classification (Patrick et al., 1994). However, depression was defined somewhat differently in each of these studies, making comparisons difficult. For example, four studies of adolescent clinical populations (Adam, Sheldon Keller and West ,1995, 1996; Allen, Hauser, & Borman-Spurrell, 1996; Kobak & Sceery, 1988; and Rosenstein & Horowitz, 1996) suggest some systematic association between attachment classifications and specific clinical diagnoses. Similarly, the results with regard to eating disorders are mixed, with one study finding a link with preoccupied AAI classification (Fonagy et al., 1996) and another finding that link only for women who suffered from eating disorders and depression (Cole-Detke & Kobak, 1996). Finally, in those individuals diagnosed with schizophrenia, 89% were classified dismissing in the three-category system and 44% unresolved in the four category system (Tyrell &

Dozier, 1997).

The association between clinical symptoms and AAI attachment was also investigated in a community high-risk, poverty sample of first-time mothers (Pianta, Egeland, & Adam, 1996). This study found that those classified as dismissing reported comparatively little psychiatric distress, emphasised independence and scored lowest on self-reported anxiety. Those classified as preoccupied reported the highest levels of subjective distress and relationship problems. Those classified as secure ranged between the other two groups on most measures of self-reported symptoms and distress. A related study on the association between attachment strategies and symptom reporting among college women (Cole-Detke & Kobak, 1996) found that, using a Q-sort rating system on the AAI, hyperactivating attachment strategies (ie preoccupied) were related to depression while deactivating strategies (ie dismissing) were related to eating disorders. In the case of women with eating disorders and depression, a link was found with preoccupied strategies.

A number of studies have investigated the relationship between adolescent AAI classification and psychopathology (Adam et al., 1996; Allen, Hauser, & Borman-Spurrell, 1996;Rosenstein & Horowitz (1996). Allen and his associates (1996) investigated the long-term sequelae of severe adolescent psychopathology on the adult attachment status of 66 upper-middle class adolescents, who were psychiatrically hospitalised at age 14 for problems other than thought or organic disorders. The comparison group was 76 non-hospitalised high school students from the same socioeconomic background. At age 25, virtually all of the previously hospitalised group were classified as insecurely attached on the AAI (only 8% were classified secure), while the former high-school group showed the more typical distribution of attachment security and insecurity. Unresolved states of mind, particularly in relation to abuse by parents, were strongly associated with the previously hospitalised group.

Rosenstein and Horowitz (1996) examined the association between attachment classification, psychopathology, and personality traits in a group of 60 psychiatrically hospitalised adolescents. They found that those classified as dismissing, that is, who rely on an attachment strategy that *minimises* distress, were more likely to have conduct or substance-abuse disorder and narcissistic or anti-social personality disorders in which distress tends to be minimised, but expressed in action. In contrast, adolescents classified as preoccupied, who rely on an attachment strategy which *maximises* the use of distress signals, were more likely to have an affective disorder, obsessive-compulsive, histrionic or

borderline personality disorder - disorders where there are high levels of subjective distress. Kobak and Sceery (1988) found that among adolescents, dismissing AAI classification was associated with denial of distress or symptoms, low support from parents and perception of others as hostile. Preoccupied attachment was associated with self-report of distress.

Adam and his associates (1996) found that, comparing a sample of 69 adolescents with histories of suicidal behaviour or severe suicidal ideation, with a sample of 64 adolescents who were non-suicidal but in psychiatric treatment, 85% of the suicidal adolescents and 78% of the comparison group had experienced attachment-related trauma. However, lapses in the monitoring of reasoning or discourse while attempting to discuss these traumatic events occurred in 73% of the suicidal group and in only 44% of the non-suicidal group, suggesting that cognitive disorganisation may be an important variable mediating traumatic experience and suicidal behaviour. Preoccupied attachment status, in combination with unresolved attachment, was associated with the suicidal group - with 77% of adolescents so classified falling into the suicidal group. This study also found a low prevalence (16%) of secure attachment - compared to 56% in normative, nonclinical adolescents (van IJzendoorn & Bakermans-Kranenburg, 1996), confirming that security of attachment is strongly related to nonclinical status.

Finally, among severely psychiatrically disturbed adults, the ability to profit from psychotherapy is much lower in those who are classified as insecurely attached (Dozier, Stevenson, Lee and Velligan, 1991). However, Fonagy and his associates (1996) found some preliminary results that suggest that patients classified as dismissing were more likely to show improvement in psychotherapy than those with other classifications.

The findings with regard to the relationship of attachment representation to adolescent and adult psychopathology are still relatively few. Nonetheless, they do suggest the usefulness of integrating a developmental perspective into the understanding of clinical disorders (del Carmen & Huffman, 1996). Attachment theory, particularly the move to the level of representation, has provided a robust, theory-driven and clinically relevant body of research findings that can provide a multidisciplinary basis for the understanding of socio-emotional dysfunction (Cicchetti et al., 1994). The discovery of the disorganised/disoriented category in infancy and the unresolved/disorganised category in adulthood has provided a strong theoretical and empirical link between the developmental and clinical fields (Zeanah, Toth, & Lynch, 1991). These findings 'begin to provide a link

to a descriptive diagnostic classification system and to lay a research foundation for the understanding of the developmental etiology of psychopathology' (Jones, 1996. p.6). However, despite the many promising studies, major gaps continue to exist between basic research on attachment and clinical classification and treatment of mental disorders throughout the life span, and this will require more integrative research strategies (del Carmen & Huffman, 1996).

Summary and critique

The 'move to the level of representation', particularly the development of the AAI by Main and her associates (George et al.,1984,1985, 1996; Main & Goldwyn, 1998a,1998b; Main et al., 1985) has been described as 'a simple but revolutionary shift in attention from the objective description of childhood experiences to the current mental representation of these experiences and from the contents of autobiographical memories to the form in which this autobiography is presented' (van IJzendoorn, 1995, p. 387-388). In particular, Main's discovery that coherence of mind, as reflected in coherent discourse, appears to be the adult analogue to infant security has been hailed as 'one of the most important contributions to attachment theory since Ainsworth's pioneering studies' (Hazan & Shaver, 1993, p.25). The unique strength of the AAI is that, because it was developed against the criterion of infant security of attachment, as measured by the strange situation, it made it possible to identify security in adulthood in terms of the participant's empirically demonstrated ability to impart security to an infant (Main,1995).

Overall, the strength of the association between the attachment classification of the parent on the AAI and the attachment classification of the infant is strong. If, as Cohen (1988) suggests, that in terms of effect size, d = .20 should be considered a small effect size; d = .50 a medium effect size; and d = .80 a large effect size, the observed overall effect size of d = 1.06 in the expected direction for infant and adult security is strong. The predictive validity findings are striking given that the measures of parental attachment security and infant security are very different. - the former a semi-structured interview involving coding of discourse narrative, and the latter a structured laboratory procedure involving the coding of infant behavioural responses to separations from and reunion with the parent. van IJzendoorn (1992) argues that as reliability is increased by increased standardisation of training of coders, the 'true' degree of concordance between adult and infant attachment classifications may be even stronger. The 75% concordance between parent and infant

attachment is matched by a similar high correspondence between adult women and their own mothers.

However, research with the AAI has been criticised by some researchers as being overly focused on internal working models to the exclusion of investigation of the ongoing operation of the attachment system as it functions in relationships (Kobak, 1999). Other researchers have drawn attention to the need to contextualise the micro-processes of attachment within the broader framework of maternal psychological resources; child temperament; the marital relationship; family functioning; and the wider socioeconomic environment (Belsky,1999). The recent findings with regard to 'contextual constraints' on the intergenerational transmission of attachment, including child sleeping arrangements (Sagi et al., 1997); the pressures of adolescence (Allen & Land, 1999; Allen at al., 1997) support this view. Other studies also support the social-ecological model. For example, studies show that negative stress affects parent-child interaction; contemporaneous child security (Belsky, 1996, 1999); short-term stability (Lyons-Ruth et al., 1991) and long-term stability of attachment (see Waters et al., 1988; Weinfield et al., in press); the maintenance of insecure attachment from infancy to adulthood (Hamilton, in press). Similarly the maintenance of short-term attachment security has been found mainly in stable, middle-class samples (Easterbrooks & Goldberg, 1990; Main et al., 1985).

These findings raise questions as to whether, and to what extent, high parent-child concordance of attachment, or high continuity of attachment from infancy onwards is reflecting enduring internal working models of attachment, or stability in life circumstances and family functioning (Thompson, 1998). van IJzendoorn (1996) argues that this issue cannot be resolved until more attention is paid to the contextual dimension of developmental trajectories, a perspective that has generally been de-emphasised in attachment research. Attachment theory has always assumed that both continuity and change in adaptation are possible (Ainsworth, 1990; Bowlby, 1969/1982). Determining the lawful sources of continuity and discontinuity remains an important research endeavour, as an over-emphasis on stability, continuity and prediction from infancy could lead to the legitimate concern that the theory is deterministic. But, to date, most research using the AAI has not focused on the discontinuities in the development of attachment representations across the life span, nor on which factors, under what conditions, disrupt the link between early attachment experiences and adult attachment representations. Hence, the study of secure parents who have insecure infants and the converse will

continue to be important for generating hypotheses about the mechanisms of transmission and the limitations of the adult attachment paradigm.

There are other unresolved issues. For example, little is yet known about how a child integrates his/her multiple attachments into a single 'state of mind with respect to attachment'. In other words, it is yet to be empirically determined when attachment organisation become the property of the individual and not just a reflection of the qualities of ongoing parent-child attachment relationships. Similarly, the apparent stronger influence of early attachment to mother, rather than father, on later attachment and psychosocial development (Main et al., 1985) requires further theoretical and empirical elaboration.

Nonetheless, although much remains to be done, attachment theory, particularly the 'move to the level of representation' has made significant progress in making complex psychoanalytic and clinical concepts of defence amenable to empirical research; in further explicating the mechanisms through which attachments are formed, maintained, and most importantly, transmitted to the next generation.

CHAPTER 4

ATTACHMENT THEORY: SOCIAL/PSYCHOLOGICAL, AND PERSONALITY THEORY PERSPECTIVES

Introduction

> 'Many of the most intense emotions arise during the formation, the maintenance, the disruption and the renewal of attachment relationships. The formation of a bond is described as falling in love, maintaining a bond as loving someone, and losing a partner as grieving over someone..Because such emotions are usually a reflection of the state of a person's affectional bonds, the psychology and psychopathology of emotion is found to be in large part the psychology and psychopathology of affectional bonds'.(Bowlby, 1977, p.203).

Based on Bowlby's conceptualisation of attachment as an affectional bond, in 1987 a programme of research was initiated by Cindy Hazan and Philip Shaver, two personality/social psychologists, to investigate patterns of attachment in adulthood using self-report measures to gauge perceptions of current relationship experiences with peers or romantic partners (Hazan & Shaver, 1987). This body of research is quite distinct from the body of attachment research reviewed in Chapters 1, 2, and 3. According to Bartholomew and Shaver (1998), each 'tradition' derives from different disciplinary subcultures. The Bowlby-Ainsworth-Main 'tradition' (henceforth called the 'developmental tradition') is based on child, clinical and developmental psychology; with a psychodynamic orientation; a focus on parent-child relationships; a preference for interview and behavioural observation measures; and the use of relatively small groups of subjects. The other 'tradition' (henceforth called the 'social-psychological tradition') is based on personality/social psychology; with an orientation towards personality traits and social interactions; a preference for simple questionnaire measures; the use of relatively large samples of normal subject populations; and a focus on adult social relationships, including

friendships, dating relationships, and marriages. They conclude:

> 'Not surprisingly, the members of these two research subcultures tend to speak past each other, or to concentrate their energies on activities within their own subdiscipline without paying much attention to activities and developments within the other subdiscipline' (Bartholomew & Shaver, 1998, p.27).

However, it might be more accurate to say that the latter 'tradition' tend to refer far more frequently to the former 'tradition' than vice-versa.

Romantic love conceptualised as an attachment process

Much of the research in adult attachment, in both traditions, has been based on the assumption that there are parallel individual differences between infant and adult patterns of attachment (Hazan & Shaver, 1987; Main et al., 1985). Hazan & Shaver (1987) constructed a simple self-report measure to assess individual differences in adult attachment relationships by 'translating' Ainsworth et al.'s (1978) three attachment patterns into three primary styles of adult romantic attachment. The measure was in the form of three vignettes which describe secure, avoidant, and anxious-ambivalent attachment styles in romantic relationships. The description of the secure style emphasises trust and comfort with closeness; the avoidant style emphasises reluctance to trust and a preference for maintaining emotional distance; and the anxious-ambivalent style emphasises lack of confidence in the availability of the partner and a strong, unsatisfied desire for emotional closeness. Respondents were asked to choose the description that best describes how they feel in romantic relationships. Of the 620 respondents, 56% classified themselves as *secure*,[1] 25% as *avoidant* and 19% *anxious-ambivalent.* These findings generally parallel the proportions of children in low risk samples classified as secure (55%-65%), avoidant (20%-30%), and ambivalent (5%-15%) on the basis of the strange situation (van IJzendoorn & Kroonenberg, 1988). They also found that self-reported experiences in romantic relationships, as well as retrospective accounts of childhood relationships with parents, were associated in theoretically meaningful ways with the three attachment styles. This study generated a very substantial series of replications, extensions, criticisms and

[1] For clarity, in this and subsequent chapters, the names of the self-reported attachment styles will begin with a lower-case letter. AAI classifications will begin with an upper- case letter

questions such that:

> 'In the last decade, no single area of research in personality/social psychology has attracted more interest than the application of attachment theory to the study of adult relationships' (Simpson & Rholes, 1998, p.3).

Hazan and Shaver conceptualised the three attachment styles as discrete categories. However, the use of categorical measures rather than continuously distributed scales proved to be problematic for conceptual, logistical, and data-analytic reasons. Conceptually, there was reason to assume that, at a latent level, attachment styles were discrete categories, independent of each other. Logistically, categorical measures do not indicate the degree to which each style is characteristic of an individual. From the point of view of data-analysis, it limited researchers to using analysis of variance statistical techniques, and did not allow a precise estimate of measurement error (Fraley & Waller, 1998).

To address these issues, Levy and Davis (1988) adapted the Hazan and Shaver three attachment styles categorical measure, by asking respondents to rate the degree to which each style was characteristic of their relationship experiences and feelings. Collins and Read (1990) and Simpson (1990) deconstructed the three styles into multiple items that could be individually rated. Bartholomew (1990) and her associates (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994) developed scales to assess dimensions of attachment. On the basis of two continuously distributed dimensions - views of self in relationship (positive vs negative) and views of significant others (positive vs negative), Bartholomew defined four rather than three principal styles of attachment, dividing the avoidance type into *fearful-avoidant* and *dismissing -avoidant.* Bartholomew's two-dimensional model remains one of the most important theoretical advances in adult attachment (Simpson & Rholes, 1998) and will be described in more detail below. Other researchers have also developed scales to assess attachment dimensions (Brennan & Shaver, 1995; Feeney, Noller, & Hanrahan, 1994). Simpson, Rholes, and Nelligan (1992) used videotaped social interaction in a stressful situation between dating partners to assess attachment behaviour. Bartholomew and Horowitz (1991) also developed an interview measure of contemporary relationships with friends and /or romantic partners. More recently, studies employing self-reported attachment styles have also utilised behavioural observations, psychophysiological measures, peer reports, projective tests, diary

techniques and experimental cognitive research methodologies (see, Crowell et al., 1995). However, most research in the social/psychological, personality tradition relies on self-reports.

Bartholomew's two-dimensional four category model

In 1990, Bartholomew reviewed the research on adult attachment done by both the AAI and social-psychological researchers, with a particular focus on the Dismissing (AAI)/avoidant (self-report) category. She noted that Dismissing individuals dismissed the importance of attachment and denied experiencing subjective distress. However, avoidant individuals as identified on the Hazan and Shaver's self-report measures, reported relatively high levels of subjective distress and fear of becoming close to others. Thus, in her view, in self-report measures, avoidant adults resembled those classified as Preoccupied on the AAI, in that they perceived themselves as self-doubting, jealous, and subject to emotional extremes in their romantic relationships. She proposed that two distinct forms of adult avoidance were evident, one pattern motivated by a defensive maintenance of self-sufficiency, which she called 'dismissing-avoidant', and the other motivated by a conscious fear of anticipated rejection by others, which she called 'fearful-avoidant'.

Returning to Bowlby's (1973) observation that the working model of attachment is likely to turn on models of self and other (ie the model of the attachment figure as responsive or not, and the model of the self as likely to be responded to by the attachment figure or not), Bartholomew proposed an expanded model of adult attachment, based on models of self and others in current relationships with peers (including friends and romantic partners). She thus defined individual differences in attachment

> 'in terms of the intersections of two dimensions - positivity of the self model and positivity of models of hypothetical others. Dichotomising each dimension as positive or negative then leads to four prototypical attachment patterns' (Griffin & Bartholomew, 1994, p. 24).

To assess this model empirically she used a revised version of the Hazan and Shaver self-report measure, the Relationship Questionnaire (RQ), as well as two interviews, one focused on childhood experiences (using AAI-type questions) and the other focusing on peer relationships (Bartholomew & Horowitz, 1991). Findings confirmed that the four

attachment prototypes (secure, preoccupied, dismissing, and fearful) can be reliably measured; that the two-dimesional structure underlies the four patterns; and that the different methods of assessment converge as expected (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994). In addition, in a study of 840 college students, in which individuals placed themselves into one of the Hazan-Shaver three categories, and rated how self-descriptive each of the three prototypes was, and then did the same with Bartholomew's four categories, the classifications obtained from the two systems were significantly related (Brennan, Shaver, & Tobey, 1991). However, the authors concluded that the lack of a fearful category in Hazan & Shaver three-category model may be forcing fearful individuals to self-classify as anxious-ambivalent. More importantly, they concluded that categorical attachment measures are vulnerable to small fluctuations in scores at the category boundaries, where most subjects fall and therefore it is preferable to analyse data in terms of dimensions rather than categories.

The metaphysics of measurement

In an important theoretical paper, Griffin and Bartholomew (1994) argued the choice of a measurement procedure carries with it implicit theoretical assumptions about the nature of the underlying construct. For example, it is a fundamentally different view of human nature to postulate different *types* of people (the categorical approach), than it is to think of people varying along underlying *dimensions*. Therefore, choosing an approach to measuring adult attachment is a central theoretical decision:

> 'First, is the underlying construct best characterised as a set of types or categories, or as continuous dimensions? If a categorical approach is chosen, are people to be placed into discrete groups or fuzzy sets? In the field of adult attachment, researchers have operationalized 'attachment patterns' in all three ways. Adult attachment has been measured by (and thus implicitly theorised to be) two and three continuous dimensions (e.g., Collins & Read, 1990; Simpson, Rholes, & Nelligan, 1992); three or four discrete categories (e.g., Hazan & Shaver, 1987; Main et al., 1985); and continuous ratings of four prototypical attachment patterns' (Bartholomew & Horowitz, 1991, p. 19-20).

Comparing the typological/categorical, prototype, and dimensional approaches in a more

general way, they argue that typological and prototype approaches are explicitly person-centered, and that by nature people are 'type theorists rather than trait theorists' (Bem, 1983, p.569). However, the disadvantage of the typological approach is that people are divided into groups on the basis of more or less arbitrary procedures, such as median splits, and therefore, valuable within-group differences are lost and stereotyping may result. The dimensional approach, on the other hand, is variable-centered and focuses on the relations among variables, thus preventing the loss of within-group information. A compromise between the typological and the dimensional approach is the use of finer sub-group differences within the major group (Ainsworth et al., 1979; Main & Goldwyn, 1998) but the disadvantage here is that the sub-groups are often too small to be useful for data analysis. Another disadvantage of the dimensional approach is that any 'emergent properties' that arise from combinations of the dimensions are lost. The advantage of the prototype approach is that categories are construed as 'fuzzy sets' that may overlap with one another, and that contain members with varying degrees of typicality. This allows for complex patterns of individual differences that may define 'types' of persons, while also recognising that not every member of the group is an equally good exemplar of the 'type'.

They then compare the three approaches in a more empirical way, by reviewing the use of Bartholomew's (1990; Bartholomew & Horowitz, 1991) four-category-model of adult attachment, which explicitly uses a prototype approach, but can also be expressed in terms of all three forms of measurement. With regard to the categorical approach, they found, for example, that individuals can be easily categorised within the four-category model, but most display elements of two or more attachment patterns. For example, individuals with the same group membership, but who show considerable within-group variation with regard to two attachment dimensions, have quite different interpersonal problems and that, therefore, the prototype approach has better predictive power over and above that given by group membership.

With regard to the dimensional approach, they found that Bartholomew's dimensions of self-model and other -model showed convergent validity across assessment methods (self-report, peer-report, partner report, and expert rater judgments) and were highly related to theoretically relevant outcome variable. Thus, the self-model was highly related to positivity of self-concept, whereas the other-model was highly related to positivity of interpersonal orientation.

They found, however, that the prototype measures still added predictive and interpretational power to the dimensions. In other words, the four categories of attachment seemed to have 'emergent properties' not predictable from the underlying dimensions. Thus, knowing how well people corresponded to all four attachment prototypes explained their behaviour in intimate relationships, over and above the predictive value of the attachment dimensions. For example, the tendency to be be cold and distant with others, as measured by the Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988) was unrelated to the self-model dimension and highly negatively related to the other-model dimension. It was, however, primarily associated with a good fit to the dismissing prototype, and, to a lesser extent, with a poor fit to the secure prototype. In addition, an individual's degree of fit to a given category was also vitally important in understanding their interpersonal functioning. Six of the eight interpersonal problem sub-scales of the IIP were significantly related to the four prototypes, and three of the sub-scales were significantly related to the level of the self-model and the level of other-model.

Griffin and Bartholomew conclude that their evidence supports the prototype approach to measuring adult attachment. Although the dimensions of self-model and other-model were highly related to relevant outcome variables, the prototype measures still added interpretational and predictive power to the dimensions. Furthermore, although the four categories of attachment seemed to have emergent properties not predictable from the underlying dimensions, the person's degree of fit to a given prototype was vitally important in understanding their interpersonal functioning. They argue that it is still too early to pick a 'winner' among the different approaches, and that attachment research is best served by a variety of approaches.

An overview of adult attachment research from the 'social-psychological tradition'

This literature has been comprehensively reviewed by a number of authors (e.g. Brennan, Clark, & Shaver, 1998; Crowell et al., 1999; Hazan & Shaver, 1994; Shaver & Hazan, 1993; Shaver, Collins, & Clark, 1995). Studies have replicated the distribution of the three attachment style in countries other than the US; have found that attachment styles are not gender linked; are reflected in mental representations of relationships and observable social behaviour; are associated with patterns of exploration and caregiving in adulthood; and are linked with various indicators of personal coping and adaptation. Adult attachment style

has been found be to be key factor in determining success or failure in adaptation to a wide range of stressful experiences, including the prospect of death, war-related stress, interpersonal loss, personal failures, parenthood, and chronic pain (Mikulincer & Florian, 1998). Using Bartholomew's four-category model, however, Brennan et al. (1992) found significant gender differences for all four categories, especially in the dismissing category. There were proportionately more secure females than males, although the differences were not large. However, males were almost four times more likely than females to classify themselves as dismissing, and females more than one-and-a-half times more likely than males to be in the fearful category. This suggests that either Bartholomew's measure may be tapping into contemporary sex-role theories and stereotypes, or that the Hazan & Shaver three-category model may be unintentionally masking gender effects. These gender differences were not found in another study that used the four-category model (O'Hearn & Davis, 1992).

Attachment styles are also linked in theoretical meaningful ways with the Costa and McCrae's (1985) so-called 'Big Five' personality traits (neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness), but are not redundant with those traits. In addition, scales measuring the 'Big Five' traits were generally not as powerful as the attachment styles in predicting romantic relationship outcomes (Shaver & Brennan, 1992). The evidence on the stability of attachment style over time is mixed, some studies (e.g. Scharfe & Bartholomew, 1994) finding that attachment style remains fairly stable over several months, others finding instability (e.g. Baldwin & Fehr, 1992). In a factor analysis of all self-report attachment measures, two bipolar dimensions, security-anxiety and closeness-avoidance, were found to underlie all the measures and best capture the gist of the self-classifications (Brennan et al., 1998). As Bretherton (1999) points out, these dimensions resemble those underlying the strange situation classifications (Ainsworth et al., 1978).

Following Hazan and Shaver (1994) and Shaver & Hazan (1993), the findings of the above studies in relation to the different types of adult attachment will be briefly summarised:

Secure

Secure adults are highly invested in relationships, which tend to be enduring and stable, and characterised by trust and friendship. They describe their parents in a favourable but

balanced way and enjoy good relationships with them. They have relatively high self-esteem and high regard for others and feel well liked by fellow workers. They look for social support when stressed, and are themselves supportive when their romantic partner is under stress. They seek integrative, mutually satisfactory resolutions to conflict; self-disclose appropriately and like others who self-disclose. They tend to adopt the religious views of their parents, and to imagine God to be a warm, trustworthy, attachment figure. They are relatively unafraid of death, both consciously and unconsciously.

Avoidant

Studies based on a three-category model find avoidant adults to be relatively uninvested in romantic relationships, to have a higher break-up rate than secure adults, and to grieve less following the break-up, although they often feel lonely. They prefer to work alone and use work as an excuse for avoiding close relationships. They describe their parents as rejecting and somewhat cold, and report having poor relationships with them. They are more likely to have a parent who abuses alcohol than secure or anxious-ambivalent adults. They tend to withdraw from, rather than support, their romantic partner when the partner is experiencing stress, and themselves tend to cope with stress by ignoring or denying it, but may later exhibit psychosomatic symptoms. They tend to feel bored and distant during social interactions; do not like to share intimate knowledge about themselves, and disapprove of those who do. They are somewhat pessimistic and cynical about long-term relationships. They claim not to be consciously afraid of death, but reveal unconscious anxiety in projective tests.

Studies based on Bartholomew's four-category model (which distinguish between dismissing-avoidant and fearfully- avoidant adults) find dismissing individuals to be cold, competitive, and introverted, but to have high self-esteem. They do not appear to be anxious, dependent, or depressed, but instead are defensively autonomous, preferring not to rely on others for emotional support. Individuals who are fearful are found to be introverted and unassertive, and tend to feel exploited in relationships. They are self-conscious and lack self-confidence, and, on the whole, feel more negative than positive about themselves. Compared to the three other attachment groups, they are anxious, depressed, hostile and self-defeating. They report a large number of physical illnesses, and are more likely to exhibit indicators of borderline personality. Fearful avoidance has also been associated with reports of severe punishment and abuse during childhood, and with

dominating, isolating, and emotionally abusing the spouse in adulthood.

Anxious-ambivalent

Anxious-ambivalent adults (also referred to as preoccupied) are found to be obsessed with romantic partners and suffer from extreme jealousy. They report a high break-up rate, but then often get back with their partner again. They are excited about leaving home to go to college but become socially dissatisfied and lonely after the first semester. They have relatively low, and perhaps unstable self-esteem. They prefer to work with others, but feel unappreciated and misunderstood at work, and tend to daydream about success and reduce effort after praise. They become very emotional under stress and use emotion-focused coping strategies. They describe their parents as intrusive and unfair. They worry about rejection from others, disclose too much about themselves too soon, and approve of others who self-disclose freely. They tend to be argumentative, intrusive, and overcontrolling. They often assert their own feelings and needs without adequate regard for their romantic partner. They are both consciously and unconsciously afraid of death, which they conceptualise as 'the ultimate separation'.

The convergence of different methods of assessing adult attachment

Research on adult attachment from the developmental perspective, using the AAI, and research from the social-psychological tradition, using mainly self-report measures, has proceeded quite independently. Yet, both perspectives are theoretically grounded in attachment theory, both focus on individual differences and classify people into categories that parallel Ainsworth's strange situation categories. The convergence of both kinds of assessments has been investigated by a number of studies (see, Bartholomew & Shaver, 1998). Results from such studies (e.g. Borman & Cole, 1993; Crowell & Treboux, 1995; Crowell, Treboux, & Waters, 1999) generally indicate little convergence between self-report and AAI measures of adult attachment. Most of those studies are conducted by researchers from the AAI tradition who interpret the lack of convergence by arguing that self-report measures are especially prone to measurement error; that there are aspects of attachment that are inaccessible to conscious awareness, and therefore they cannot be assessed by self-report measures.

Researchers from the social-psychological tradition (Bartholomew & Shaver (1998);

Crowell et al., 1999) interpret the lack of convergence in a somewhat different way. They point out, for example, that most of the existing comparisons involve cross-tabulations of AAI attachment categories and Hazan-Shaver attachment categories, a strategy that assumes that the two measures are assessing parallel attachment classifications. Thus, the AAI dismissing category is conflated with the Hazan-Shaver avoidant category, when Bartholomew's (1990) distinction between the two kinds of avoidance (dismissing and fearful) would suggest that they are not the same. They argue that the lack of convergence is also explained by method variance (self-report versus interview) and by what they call 'domain differences', with the AAI focusing on

> 'retrospective descriptions of parent-child relationships and the other on more recent experiences in adult love relationships, and that the equivalence of representations in the two domains should not be assumed, but rather was a question for empirical study. The AAI focuses on dynamics of internal working models that are revealed indirectly by the way a person talks about childhood relationships; the measure is not based on the assumption that people are conscious of these dynamics. In contrast, the self-report measure focuses on feelings and behaviours in close relationships of which a person is aware and which the person can describe fairly accurately' (Bartholomew & Shaver, 1998, p.27-28).

It should be noted here that, although they do acknowledge that the AAI classifications are primarily indexed by the degree of coherence and emotional openess with which adults can discuss their early attachment experiences, Bartholomew and Shaver repeat an error which is common in the social-psychological tradition literature, that is, that the AAI is based on 'retrospective' accounts of childhood, when in fact, it is a measure of 'current state of mind with respect to attachment'.

Some efforts have been made to bridge the two 'traditions'. Bartholomew has constructed two semi-structured interview measures, based on the AAI-type format and scoring (the Peer Attachment Interview and the Family Attachment Interview (Bartholomew & Horowitz, 1991) on the basis of which trained coders assess the participant's fit with the four attachment patterns, as well as in terms of the anxiety and avoidance dimensions. Bartholomew has attempted to assess the degree of correspondence between attachment styles assessed in her interview format with self-reported attachment styles, as well as

with attachment classifications assessed on the AAI. First, in relation to the correspondence with self-report measures, she has developed two self-report methods to assess her four-category model. The Relationship Questionnaire (RQ: Bartholomew & Horowitz, 1991), consisting of four short paragraphs describing the four attachment prototypes. Participants are asked to choose the description that best fits their attachment style, or to rate on a 7-point scale how well they correspond to each prototype. The Relationship Scales Questionnaire (RSQ:Griffin & Bartholomew, 1994), consists of 30 phrases drawn from the RQ, as well as other self-report measures (Collins & Read, 1990; Hazan & Shaver, 1987). Participants rate on a five-point scale how well each item fits their characteristic style in close relationships. These measures can be worded to focus on close relationships with peers; close relationships in general; or on specific relationships, including parent-child or with a specific romantic partner (Bartholomew, personal communication, 1994).

The convergence of the self-report and interview measures was tested in two studies involving 69 college students (Bartholomew & Horowitz, 1991) and 134 young adults (Scharfe & Bartholomew, 1994). The evidence from these and other comparative studies was reviewed by Bartholomew and Shaver (1998). Over-all, they conclude that there is evidence for convergence across various measures of adult attachment (Bartholomew & Shaver, 1998; Owens et al., 1995) but an individual's domain- specific, or relationship-specific, attachment patterns may be substantially different from each other (Bartholomew & Shaver, 1998; Owens et al., 1995). On the other hand, a study of the correspondence between self-reported attachment in two different domains - in general relationships and in romantic relationships found a significant 64% correspondence between them, although a higher proportion of individuals self-classified as preoccupied and fewer self-classified as secure in romantic relationships than in general relationship (O'Hearn & Davis,1992).

The highest convergence is found when similar assessment measures are used within the same domain, for example, using two self-report measures in the peer domain (Bartholomew & Horowitz, 1991; Brennan et al., 1991; Scharfe & Bartholomew, 1994) or when the same domain is examined with two conceptually parallel methods, for example, interview and self-report measures of attachment to peers, although associations are stronger and less variable in the peer domain than in the family domain (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998; Scharfe & Bartholomew, 1994).

The weakest convergence occurs when different measures over different domains are compared, for example, when both the method (interview vs. self-report) and the content domain (early family vs. current close relationships) differed, (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998; Crowell & Treboux, 1995; Scharfe & Bartholomew, 1994). For both self-report measures (RQ and RSQ), the convergent validity for the secure pattern is lowest of the four patterns, suggesting that security of attachment may be especially susceptible to self-report biases. On the other hand, there is quite good convergence with regard to the dismissing pattern across all methods, including self-report and interview, despite the fact that Hazan and Shaver (1987) had suggested that this defensive style was inherently difficult to assess with self-report measures Overall, however, the convergence between interview and self-report measures was only modest, suggesting that these methods of measurement are quite different.

A more direct bridging of the gap between the two traditions was attempted by a study that compared the AAI and Bartholomew's interview coding system (Bartholomew & Shaver, 1998). The clinical interviews of a sample of 30 bereaved women, focusing on their relationship with the deceased and their reaction to the loss, were coded by independent sets of coders, one trained in the AAI, and the other in the Bartholomew coding system. Findings showed that the classifications from the two systems, across three AAI categories (Secure, Dismissing, Preoccupied) and four Bartholomew categories (secure, preoccupied, dismissing, fearful) were significantly related. When the group classified as fearful were omitted from the Bartholomew classification, the association was again significant, and the proportion of agreement was .78. The main differences arose with regard to the secure classification, with the AAI coders more readily assigning people to the secure category. The seven people who were classified as fearful in Bartholomew's system, which has no parallel in the AAI, were classified as follows on the AAI: four were Preoccupied, one Dismissing, two Secure.

Bartholomew and Shaver conclude that, given the small sample size, and the fact that many of the participants were still upset about their loss, that the degree of correspondence between the two classifications was impressive. However, the fact that the clinical interview was not 'highly similar to either the AAI or Bartholomew's interview' (Bartholomew & Shaver, 1998. p.36) must raise some doubts about the AAI coding at least, given the importance of following the exact interview format for the AAI coding system. In addition, the Unresolved classification was not used. Thus, it is difficult to to

know what to make of the findings, and more convincing evidence of concordance (to the extent that the coding systems are parallel) will have to await a study of a larger, more representative sample based on appropriate attachment interviews.

An effort has also been made to assess the correspondence between individual style of responding on the AAI and on the Current Relationship Interview (CRI) which assesses the representation of attachment within a current adult intimate partnership. The CRI was designed to parallel the structure, content, and coding of the AAI as closely as possible. In a sample of 124 couples about to be married, the correspondence between the AAI and the CRI (three-category system only) was 55% for men and 62% for women. After 18 months of marriage, the correspondence was 62% for men and 71% for women (Owens, Crowell, Pan, Treboux, O'Connor, & Waters, 1995). The over-all secure-insecure correspondence was statistically significant, and coherence in discussing relationships was more consistent across instruments than evaluations on the 'content' of relationships with parents or partners as loving or rejecting. Bretherton (1995), commenting on the study, points out that it is surprising that several individual classified Secure on the AAI, who also had partners classified Secure on the AAI, were classified insecure on the CRI, and vice versa, and argues that this pattern of findings

> 'do not suggest that the the AAI/CRI classifications assess a trait-like ability to talk about attachments in a particular manner. Instead, they suggest that openness or defensiveness in communicating about attachment relationships (and presumably within them) is more relationship specific than some earlier findings had led me to believe' (Bretherton, 1995, p.323).

Owens et al. conclude that their study shows that representations of early relationships had only a modest effect on conceptualisations of current relationships, and that however constrained or biased by early experience, an adult's mental model of their romantic relationships is clearly open to ongoing experiences within that relationship, and that romantic partners may in fact co-construct their conceptualisations of their shared relationship.

Summary and critique

Because the AAI is expensive and difficult to administer and score, researchers continue to

try to develop self-report measures that capture the same information as the AAI. Main, Hesse, and van IJzendoorn (Hesse, 1999) found no association between the AAI and a self-report measure they designed. However, Crowell et al. (1999) argue that there are at least three reasons why self-report measures are appropriate for investigating individual differences in adult attachment style. First, adults are able to provide valuable information about their attachment-related emotional experiences and behaviour. Second, adults can provide valuable information about how they and their partners behave in close relationships. Third, conscious and unconscious processes typically operate in the same direction to achieve a goal (Bowlby, 1980). Self-report measures, unlike the AAI, do not investigate the dynamics of attachment and defence. However, they can elucidate the kind of conscious beliefs that defensive people hold about themselves.

However, comparing the two kinds of measures remains a challenge. At a fundamental level, the validity of the self-report measures rests on their ability to empirically reproduce the network of covariates postulated by attachment theory. In contrast, the 'gold standard' for the validity of the AAI is the classifications of the strange situation, which are themselves based on naturalistic observation of infant's secure-behaviour (Crowell et al., 1999, p.453). At an empirical level, there is the problem of choosing which measure is appropriate for investigation of different domains (e.g. parent-child, peer, couple relationship).

In one of the thoughtful contributions to this issue, Simpson and Rholes (1998) propose that although most attachment measures have direct ties to attachment theory, the different methods should be relevant to different components of individuals' internal working models at different levels of consciousness. The AAI, for example, is designed to 'surprise the unconscious', to bypass defences that could bias self-report measures, and to 'activate' the attachment system by asking participants to remember and evaluate attachment-related events. It was developed to predict the strange situation behaviour of respondents's children, hence it should tap working models relevant to parenting and caregiving more directly than working models relevant to romantic or peer relationships (Owens et al, 1995).

Self-report measures, on the other hand, focus on contemporary perceptions of peer and romantic attachment styles, and measure the explicit content of the perceptions that individuals have about themselves and others in close relationships. Thus, self-report

measures:

> 'reflect the nature and operation of internal working models that are more conscious, "accessible", and open to direct inspection (and) are better suited to assess working models that guide social behaviour in peer and romantic relationships, but poorer at indexing working models that govern parenting and caregiving. In all likelihood, the two traditions assess different components of working models that are embedded in large, complex, and interrelated mental networks. Different components may represent different types of relationships (e.g., parent-child, romantic, friendship), with components formed earlier in development (i.e., those concerning one's parents and caregiving) possibly affecting components formed later (ie those relevant to peers or romantic partners) (Simpson & Rholes, 1998, p.7).

Bartholomew and Shaver (1998), reviewing the different measures of adult attachment, propose that they can be systematically arrayed along a hypothetical continuum that takes into account the conceptual systems, different domains and different measures used. At one end they place the AAI, followed by Bartholomew's Family Attachment Interview, Bartholomew's Peer Attachment Interview, Bartholomew's self-report measures, ending with the Hazan-Shaver self-report measures. Other measures of attachment, such the Q-sort system for the AAI (Kobak et al., 1993); the CRI (Owens et al. 1995); as well as multi-item self-report measures (e.g. Collins & Read, 1990; Simpson et al.,1992), can be mapped on to this hypothetical continuum. In addition, they predict that the measures that lie near each other on the continuum will relate to each other more strongly than those that lie further apart.

Bartholomew and Shaver, following Griffin and Bartholomew (1994), conclude that:

> there may be a single representational system or set of core relational tendencies underlying responses to the various attachment measures and an individual's domain - specific attachment patterns can be substantially different' (Bartholomew & Shaver, 1998, p.41).

This conclusion is compatible with Bowlby's (1988) concept of developmental pathways, along which individuals travel, being moved towards and from security of attachment by

life events, such as loss of an attachment figure, psychotherapy, or a supportive marital relationship. Thus, it is possible and expectable that internal working models of relationships in different domains will diverge. Thus, the AAI and the self-report measures together may provide unique information about an individual's attachment history in different kinds of relationships experienced at different points of development (Kirkpatrick, 1998).

CHAPTER 5

THE TRANSITION FROM CHILDHOOD TO ADOLESCENCE

Introduction

> 'The transition from childhood to adolescence has long been regarded as developmentally unique because during no other period of life except infancy do as many biological changes occur in as short a period of time. Many theorists and clinicians believe that puberty profoundly alters children's self-concepts, psychological functioning, and interpersonal relations' (Montemayor, Adams & Gullotta, 1990, p.9).

Developmentally, between the ages of approximately 10 and 20, young people make the transition from childhood to adulthood. At least five criteria are used to delineate the end of childhood and the beginning of adolescence (Montemayor, 1986; Montemayor et al., 1990). These include chronological age - (generally age 13) and the onset of puberty, which typically begins sometime between age 9 and 16, with hormonal changes generally occurring at least a year before the appearance of the overt signs of puberty (Hingham, 1980; Malina, 1990). Pubertal changes becomes noticeable in boys at about 12.5 years, and in girls at 11.5 years, with the average girl reaching menarche at about age twelve and a half and the average boy first ejaculating at age 13 (Thornburg & Aras, 1986). Other criteria include the appearance of new cognitive abilities (e.g formal operational thought); the appearance of new psychological characteristics (e.g. a more differentiated and integrated self-concept, a concern with identity); a legal definition of adolescence, as a proxy measure for competence; and the occurrence of social experiences and life events generally considered by society to signal the end of childhood (e.g. finishing primary school, dating, getting a part-time job).

Generally, children between the ages of 11 and 18 are categorised as adolescents by most of the commonly recognised criteria, but those aged 11, for example, will differ in physical and cognitive characteristics and elicit different expectations from others, than those aged 15, who in turn will differ from those aged 18 (Collins, 1997). For the purposes of this study,

which involves children aged 11-12, that period encompassing the end of childhood and the beginning of adolescence will be called 'transition to adolescence' (Montemayor, Adams & Gullotta, 1990) and will be reviewed from the psychoanalytic, developmental and attachment theory perspective.

The psychoanalytic perspective

In psychoanalytic theory, the transition to adolescence is encompassed by three phases: latency, preadolescence and early adolescence, although Blos (1962) emphasises that any division of phases remains an abstraction, there being no such neat compartmentalisation in actual development. However, the value of this kind of formulation is that it focuses attention on orderly developmental sequences. From the psychoanalytic perspective, the latency period, that is, the years between early childhood and adolescence, is crucially important to later development in adolescence. Latency is characterised mainly by the growing control of the ego and super-ego over the instinctual life (Fenichel, 1945). The child develops new competencies and increased tension tolerance, allowing for more stable, and less ambivalent object relations and more reliable mechanisms for the maintenance of self-esteem. The child's growing inner resourcefulness now joins the parent as the regulator of self-esteem. Similarly, significant ego activities, such as perception, learning, memory, and thinking become more firmly consolidated in the conflict-free sphere of the ego. The child makes more stable identifications with the parent, which replace the more unstable and ambivalent object relations of early childhood (Freud, 1924). Language develops, and is used more and more to 'veil' feeling and intention, as evidenced by the use of allegory, comparison and simile, in contrast to the young child who expresses feeling without circumlocution. Erikson (1963) also conceived of the latency period as one characterised by a turning towards the world outside the family. By mastering the skills valued in the culture, the child develops a sense of self as either competent or incompetent, or, in Erikson's terms, deals with the phase-specific crisis of industry versus inferiority.

In psychoanalytic terms, in the preadolescence phase, that is, before puberty, there is a quantitative increase in instinctual pressure, bringing the latency period to an end. The 'child becomes more difficult to reach, to teach, and to control' (Blos, 1962. p.58). Peer group affiliation becomes more important, as boys and girls have to resolve the bisexual identifications of childhood, and make the decisive turn towards masculinity and femininity respectively. However, the psychological development of boys and girls takes quite a

different course. Because of the strength of her tie to her mother, the girl defend herself against the regressive pull by a forceful and decisive turn towards heterosexuality. However, the demands of prepuberty often 'brings her back to her mother for a period marked by heightened and more infantile love demands' (Deutsch, 1944), reflected in the many conflicts between mother and daughter during this period (Blos, 1962). The boy has to more decisively renounce his passivity strivings in relation to his mother and his attraction to, and fear of females in general (Blos, 1962). Thus, the castration anxiety that brought the Oedipal phase of the boy to its decline reappears with the onset of puberty.

Blos argued that the early adolescence phase is characterised by a state of mind and body which has a distinctively different quality from the preadolescent phase, characterised by a richer emotional life, a more goal-directed orientation to growing-up, and a relentless attempt at self-definition. Erikson (1963) considered the search for identity as the primary task and crisis of adolescence, a crisis in which the adolescent struggles to reconcile a conscious struggle for a unique identity with an unconscious striving for a continuity of experience, as well as solidarity with the peer group's ideals.

Object relations move to the foreground as a central theme in early adolescence and in adolescence proper, with repeated attempts at separation from primary love objects. A profound reorganisation of emotional life takes place with the pivotal problem residing what Blos calls a series of predicaments over object relations:

> "The solution of the problem depends on the many variations this theme undergoes over the years; these ultimately determine the genuine or spurious attainment of adulthood. Some of the variations hark back to childhood. We have only to remember that the child's need to be loved fuses only gradually with the need to love; the need to receive only slowly arouses its counterpart, the need to give; and the need to be 'done to' is more or less forcefully reversed into the need to 'do to others'. The passive role of being controlled is gradually and partially replaced by the child's urge for active control of the outside world. This polarity of active and passive aims reemerges as a crucial issue during adolescence' (Blos, 1962, p. 73).

Before a reconciliation and mature balance is reached, the extreme positions of all active or

all passive, or more often an oscillation between both, marks adolescent behaviour for some time, particularly in early adolescence, manifested in polarities such as submission and rebellion, intense attachments and indifference. These oscillating patterns of behaviour reflect psychological changes which progress neither in a straight line nor at an even pace. Early adolescence and adolescence proper must accomplish the renunciation of the parents, the primary love objects, as sexual objects, and, with the drive turning towards genitality, the young person has to start the search for new love objects:

> 'these processes reverberate in the ego to produce cathectic shifts which influence both the existing object representations and self-representations. Consequently the sense of self or sense of identity acquires a heretofore unknown lability' (Blos, 1962. p. 75).

Carol Gilligan (1982; Gilligan, Ward, & Taylor,1988: Gilligan, Lyons, & Hanmer, 1990) has significantly reworked the classic psychoanalytic formulation of adolescence, particularly in relation to girls. Rejecting the psychoanalytic focus on autonomy and separation as the goal of development, she proposes that problems in girls' adolescent development are problems of connection rather than problems of separation. In particular, she pinpoints age 12. ' the crossroads between childhood and adolescence, the meeting place between girls and women' (Gilligan et al., 1990. p.13) as a crucial turning point for girls. It is then, she argues, that girls are most acutely aware of the problems of connection and disconnection in relationships and in their inner psychic world. As they become more independent in adolescence, it is this awareness that is in danger of becoming repressed and suppressed as they struggle to maintain connection in significant relationships.

Research by Gilligan and her associates reveals that adolescent girls focus on the importance of connection, closeness and communication, even more than they focus on separation, individuation and concerns about autonomy and freedom. Gilligan argued for a re-examination and re-conceptualisation of the concept of psychological development, such that a focus on attachment and connection would not be construed as 'regression' but rather as another 'voice'. Thus, rather than autonomy being construed as a 'step-up' from attachment, in a developmental progression toward adult maturity, Gilligan proposes that concerns with attachment and separation should be conceived as a 'contrapuntal theme, woven into the cycle of life and recurring in varying forms in people's judgments, fantasies and thoughts' (Gilligan, 1982. p.1)

The developmental perspective

The developmental perspective has been defined by Collins (1997) as being based on two key premises. First, relationships play a primary role in the development of both social and cognitive competence throughout childhood and adolescence, and thus relationship experiences are central to normative development. Second, the changing capacities of individuals as relationship partners affect the properties of relationships. A comprehensive discussion of the extensive literature on cognitive and socio-emotional developmental leading up to, during, and immediately succeeding the transition to adolescence is beyond the scope of this review, encompassing as it does, theory and research on personality, gender roles, social competence, emotion, prosocial and antisocial behaviour, social cognition, moral development and social learning from a variety of perspectives. The focus here will be on cognitive development, and relationships with parents and peers.

Cognitive development

The emphasis here will be on what is called social-cognitive development that is, how children reason about their social world, and how this reasoning develops from middle childhood to adolescence (for review, see Berger, 1988; Lapsley, 1990). The thinking of the average 11 year old is considered radically different from that of the average seven year old because they have attained what Piaget called concrete operational thought (Inhelder & Piaget, 1958). They have come to understand logical principles, have become increasingly able to decentre, to take another person's perspective and thus to think more objectively. Simultaneously, there has been a decline in egocentricism and an increase in the ability to hold in mind various characteristics of objects, persons or situations. Language development during the years six to 11 is also remarkable, leading to more rapid intellectual processing.

At about age 10, children reach the end of the concrete operational stage and begin the stage of formal operational thought, which, in Piagetian theory is a characteristic of adolescent reasoning. According to Lapsley (1990), Piaget indicated in his earlier work that the onset and consolidation of formal thought is completed by early adolescence (age 12 to 15) but in a later account, he suggests that it is not achieved until late adolescence (age 15 to 20). The ability to reason about the possible, impossible, and hypothetical, as opposed to the real,

and the ability to reflect on one's own thoughts, are the hallmarks of formal operations. Thus, children at the transition to adolescence are beginning to be able to think in terms of possibility rather than merely concrete reality, to be able to speculate, hypothesise, and fantasise much more readily and on a grander scale than children who are still at the stage of concrete operational thinking. They are also beginning to be able to understand and create general principles to explain human experiences. By age 11, for example, they are able to suspend their knowledge of reality and think playfully about possibilities, they can argue against their personal belief system and self-interest, and modify their own position by perceiving the merits of somebody else's. In other words, they can engage what Flavell (1985) called the 'game of thinking'.

Another aspect of adolescent thought patterns is what is called 'adolescent egocentrism (Elkind, 1978). This is a tendency to subjectivise reality evidenced in difficulties in differentiating between the unique and the universal; thinking of themselves as much more unique and central on the social stage than they actually are; and creating an imaginary audience for their every public act. This egocentricism generally peaks at about age 13. Formal thought has also been invoked to explain to explain the emergence of skeptical doubt and 'Cartesian' anxiety (Chandler, 1987). According to Chandler, young adolescents come to doubt that there could be any good grounds for objective knowledge, which comes to be seen as a manufactured mental product that is person-relative. As a consequence, adolescents are gripped by skepticism and a type of 'epistemological loneliness' and experience a collapse of absolute conviction. In sum, the cognitive developmental hypothesis suggests that the onset of formal operations yields a characteristic pattern of social reasoning that in turn underlies other social cognitive developmental domains, such as certain attribution processes, interpersonal understanding, and moral development.

There is now considerable evidence that the self-concept changes with age, with self-descriptions shifting from the individual's behavioural and social exterior to his or her psychological interior. For example, Rosenberg (1979) showed that, during middle childhood, descriptions of self are conceptual and trait-like, focusing on character or ability. With increasing age, there is a greater emphasis on interpersonal traits, emphasising personality characteristics. With adolescence comes the emergence of the individual's psychological interior, with the self-reflective gaze turned inwards towards internal, private attributes of the self, couched in the language of abstractions (e.g. sensitive, moody, affectionate). Thus, there would appear to be critical qualitative changes in the nature of

the self-concept as the individual makes the transition to adolescence. These developmental differences are believed to be intimately linked to the emergence of cognitive abilities across childhood and adolescence.

Developmental differences in perspective taking and self-awareness are also implicated in the qualitative self-concept changes. For example, across childhood and adolescence, there is increasing reliance on the opinion that significant others hold towards the self, with the adolescent, somewhere between the ages of 10 and 15, coming to internalise the standards by which significant others are judging the self (for review, see Harter, 1990). These changes constitute cognitive-developmental advances, but according to Harter, they also introduce potential vulnerability. For example, the ability to incorporate the opinion of others into the self-concept, represents a liability for those children who do not have the positive regard of significant others. Similarly, the ability to conceptualise the self in more abstract terms can represent a potential vulnerability, because as they become further removed from concrete behaviours, there is greater potential for distortion, with the self concept becoming more difficult to verify and therefore less realistic.

There is also increasing differentiation of the self into different domains and roles, as the child enters adolescence. For example, different and often seemingly contradictory attributes are generated for one's self with mother, father, and other close relationships, as well as self in different roles. The adolescent is then faced with the developmental task of integrating these multiple self-concepts into a coherent, unified, consistent theory of self. Epstein (1973) has argued that the theory of self is threatened by evidence that is inconsistent with the image constructed of the self, or by postulates within the theory that appear to be contradictory. However, the evidence seems to suggest that between age 11-13, adolescents detect only a few opposing attributes in their self-portraits, and these rarely cause them conflict. It is not until mid adolescence (age 14-16) that there is a dramatic peak in the number of contradictions identified, and these generate considerable internal conflict and distress.

Adolescents also develop increasing ability to construct actual versus ideal selves, as well as true versus false selves. This poses another developmental challenge to integrate these selves into a coherent, unified whole. Harter and Lee (1989) found that children aged between nine and ten had little insight into the distinction between the concept of true versus false self. By age 12-13, virtually all found the distinction quite compelling. True

selves were identified with the more positive core attributes that define who one is as a person. False selves were represented as negative personae who display less desirable attributes. Thus, adolescents locate their true and false selves within the context of their social interactions with others. Again, Harter (1990) points out that the etiological factors, that clinicians such as Winnicot (1965) have identified as leading to a pathological 'false self,' must be distinguished from the stage-appropriate, developmental experiments of an adolescent with different personae in search of the real self.

As a result of all those cognitive-developmental processes, as well as social interactions, it is hardly surprising that the self-concept is particularly volatile during adolescence (Harter, 1990; Rosenberg, 1986), and that adolescence brings about a dramatic shift towards introspection (A. Freud, 1965). Increased introspection is not only implicated in the process of self-construction, but also in the process of self-evaluation, as evidenced by the fact that self-esteem undergoes considerable changes during adolescence. Longitudinal studies show gradual and significant improvements in self-esteem over the eight-year span from grades 7-12 - corresponding approximately to age 11-18 (see Harter, 1990). However, other studies show that self-esteem begins to decline at age 11 and reaches its low point between the ages of 12 and 13 (see Rosenberg, 1986) - a decline which may be masked by studies that track self-esteem over longer periods. This drop has been attributed to the transition to secondary school and the timing of puberty, which, when they occur close together, have a greater effect on adolescent behaviour (Simmons & Blythe, 1987). Many developmentalists view the advent of formal operations thought as a prerequisite for such self-reflection and a major task of early adolescence is the mastery of thought, of self and others (Elkind, 1967).

However, other theorists place less emphasis on the role of cognitive development. For example, Lapsley (1990) argues that formal thought is itself a poor candidate for signalling the onset of adolescence, since almost 50% of adults never reach the formal operations stage (see Kohlberg & Gilligan, 1971). Furthermore, formal thought may not be relevant for the social reasoning that preoccupies adolescents. Rather, he argues, concrete operational thinking and a rich and varied social life may be enough to allow the adolescent to imagine 'possibilities' and to reflect on issues such as as personal motivation, desire, and will. Similarly, the reflective thinking characteristic of formal thought may not be especially relevant in solving problems of self or interpersonal understanding, as thinking about thoughts is not the same as thinking about the self.

Lapsley, reviewing the evidence on perspective-taking and interpersonal understanding, concludes that there is little evidence of dramatic developments in either at the onset of adolescence, but rather, points to the persistence of middle-childhood patterns well into middle adolescence. He concludes that 'a shift in focus towards investigating the relationship among developmental processes and constructs would be better suited for explicating the developmental importance of adolescence' (Lapsley, 1990, p.198). Citing object relations theory on adolescence (Blos, 1962), he shows how imaginary audience and personal fable cognitive ideations are implicated in the separation-individuation project of adolescent ego development. Using this integrated model, his own research shows that significantly higher scores in imaginary audience and personal fable ideations as well as more engagement with the concerns of separation-individuation were achieved by high-self monitors (the operationalisation of the self-observing ego) than by low self-monitors. These findings are consistent with Main's (1991) theory about the reciprocal relationship between attachment security and capacity for metacognitive monitoring.

Parent-child relationships

Collins (1990) reviewing development in the social context of family interactions in adolescence, points out that a major shift has occurred in the premises of this research over the last two decades. Formerly, the emphasis was on the disruptive, disjunctive effect of the developmental changes of adolescence on attachment to parents. Now, changes are viewed as part of a process of adaptation, through which families adjust to the changes in one of its members, a process best captured by terms such as transformations and realignment, and the focus in on the processes that account for transformations in the parent-child relationship.

He summarises such research as showing that while there may be more conflict and less closeness between parents and children in this period, such perturbations are hypothesised to be temporary and relatively benign in the context of their long-term relationships with each other. Furthermore, for the majority of families, warm and pleasant relationships in which parents continue to influence their children's development are the norm. For the minority of families who experience difficulties in this period, many already had a history of problems prior to the child's entry into adolescence. A brief summary of the patterns of changes in interactions, affect, and perceptions in parent-child relationships follows.

Variations in pubertal status have been associated with variability in emotional expression and experience in the parent-child relationship. Hill (1988) found that girls aged 11-12 who had experienced menarche within six months of the study showed higher and more sustained levels of reciprocal disagreement and less positive affect with parents, especially mothers, than did girls whose menarche either had not yet occurred or had occurred less recently. Similarly, mothers perceived the lowest levels of engagement in joint activities for sons who were at the apex of pubertal change Other studies showed no correlation between puberty and conflict (see, Laursen & Collins, 1994). Steinberg (1988) found that parents' report less closeness with their children, especially between mothers and daughters, with the onset for puberty. However, Montemayor and Flannery (1990), cite studies that show that pubertal changes starts much earlier than previously thought, is a long-term gradual process, and accounts for a relatively small proportion of the variance in early adolescent behaviour, and thus it is unlikely that puberty alone is responsible for changes in parent-child relationships.

Many researchers now believe that the functional significance of parent-child conflict in adolescence cannot be understood without also assessing the closeness in the relationship. In other words, it is relationship properties that determine whether conflicts are detrimental in adolescent development (Collins,1997). Relationships in which parents are responsive to adolescents' expression of disagreement are associated with a sense of identity among the adolescents. In particular, qualities of parent-child relationships at age 14 that encouraged autonomy and relatedness were highly correlated with the degree of change in adolescent's ego development and change self esteem two years later (Allen, Hauser, Bell, & O'Connor, 1994).

Interactions with parents become less frequent as school-age children spend more time away from home (Collins, 1984; Csikszentmihalyi & Larson, 1984; Larson & Richards, 1991). But there is also considerable continuity in parent-child relationships over time, with the majority of adolescents and their parents perceiving their relationship as warm and pleasant (Collins, 1990; Rutter, Graham, Chadwick, & Yule, 1976). However, adolescents report lower feelings of acceptance by parents and less satisfaction with family life, less frequent expressions of positive emotions, less feelings of closeness, and more frequent expression of negative emotions between them (see Collins & Russell, 1991). Parental well-being and life satisfaction also decline when parents of early adolescent children perceive them as 'detaching' from them (Silverberg & Steinberg, 1990).

There is evidence of increasing distance in the adolescent child - parent relationship and increasing closeness to peers and extra-familial adults (Collins & Repinski, 1994). By age 11, children can reliably differentiate between family, peer and teacher relationships as sources of instrumental help, conflict, intimacy, companionship, and nurture. Perceptions of primary social support shifts from primarily parents at around age 9, to same-sex friends in early and middle adolescence, to same-sex friends and romantic partners at college age (Furman & Buhrmester, 1992).

Yet, despite the greater physical and apparently greater psychological lack of closeness, the child's perceptions of self and others increasingly converge with parents' perceptions during the transition to adolescence (Alessandri & Wozniak, 1987). Similarly, other studies have shown that despite the greater intimacy with peers, adolescents continue to perceive considerable intimacy with their parents, especially their mothers (Hunter & Youniss, 1982). Thus, intimacy in adolescent relationships seems less a shift from parents to peer relationships, and more a matter of changes in the meaning and functions of particular relationships, with increasing intimacy with friends reflecting a general increase in capacity or desire for intimacy, and an expansion in the relationships in which intimacy is attempted and experienced (Collins & Russell, 1991). The complementary roles of the different types of relationships is further reinforced by the findings that properties of trust, communication, and conflict resolution in relationships with parents are associated with adolescents' intimacy and communication with peers (Collins & Repinski, 1994). Collins (1997) argues that the changes in the relationship between adolescents and their parents are best characterised as transformations rather than disruptions, and that transformations are 'necessary developmental processes that enable individuals to negotiate transitions towards age-appropriate levels of autonomy and interdependence while maintaining earlier relationships (Collins, 1997, p. 8). This view is consistent with the complex patterns of research findings reviewed above.

Researchers in the personality/social psychology area who use an attachment theory perspective have thrown an interesting light on the age-related changes in the target of attachment behaviours. Hazan & Zeifman (1993) argue that peer relationships are best characterised as affiliative relationships, which are functionally different from attachment relationships (providing stimulation and pleasure as opposed to the comfort and security of attachment relationships) and are believed to be regulated by a different behavioural system. However, they propose that in terms of the four components of attachment -

proximity seeking, separation protest, safe haven, and secure base (Ainsworth et al., 1978; Bowlby, 1988) - some components of attachment are evident in peer relationships during childhood and adolescence and that some components of attachment get shifted from parents to peers between childhood and adolescence.

Based on an interview measure of the four components of attachment, in a sample of over 100 children and adolescents ranging in age from 6 to 17, they found that with regard to the proximity seeking component, all preferred to spend time in the company of peers rather than parents. With regard to the safe haven component, a marked shift occurs between the ages of 8 and 14, with peers coming to be preferred over parents as sources of comfort and support. But, with regard to the secure base component, parents continue to serve as the secure base and as targets of separation protest until late adolescence. Only in the 15-17 year group was there evidence of attachment relationships with peers that contained all four components. Of the minority (41%) who considered a peer to be their primary attachment figure, the overwhelming majority (83%) named a romantic partner.

Individual differences in attachment style were also assessed with a modified version of a self-report attachment measure (Hazan & Shaver, 1987). Although slightly less than half (48%) of the subjects were classified as insecurely attached (avoidant or ambivalent), they constituted the majority (71%) of adolescents who had formed romantic attachments. Of the small minority of subjects who said they had nobody to whom they could turn for comfort or on whom they they depend for support, over two-thirds were classified as avoidantly attached. One interpretation of these findings is that insecure attachments to parents encourage early (perhaps premature) peer and romantic attachments. Another interpretation is that peer attachments are 'explored' from the parental base of security.

This type of study constitutes an important bridge between the more general developmental and attachment perspectives. For example, Collins proposes that the key themes in theory and research on relationships and change in adolescence are as follows: changes in *distance* from, and *connectedness* to, different categories of relationship partners; the co-existence of *continuity* and *change* in relationships over time; and increasing *differentiation* and *interrelation* of relationships in the widening social network that characterises social development during adolescence. This formulation is consistent with the basic tenets of attachment theory and points to the importance of attachment-related research on the transition to adolescence.

The attachment perspective

Attachment theory views development as a series of reorganisations (Sroufe, 1979), a 'process of directed change, of competencies, adaptive patterns and personality emerging from the reorganisation of previous patterns, structures and competencies' (Rosenstein & Horowitz, 1996). Thus, from a developmental pathways perspective, the quality of attachment plays an important role in determining how an individual will cope with the developmental demands of puberty and transition to adolescence. According to Bowlby (1973), working models of attachment are gradually constructed out of experiences throughout infancy, childhood, and adolescence. Only then do they become relatively resistant, but still not impervious to change. Thus, the continuity and discontinuity of attachment representations, and their fate at the end of childhood and at the transition to adolescence becomes an important issue.

Internal working models of attachment in middle childhood

Some attachment theorists (Bretherton, 1990) have attempted to apply the insights with regard to cognitive development to the understanding of how internal working models of attachment might change with age. Bretherton proposes that improvements in meta-representation in middle childhood 'should lead to enormous improvements in a child's capacity to interpret the motivations and intentions of attachment figures and to forecast, explain, and influence their behaviour' (Bretherton, 1988, p.93). For example, Bretherton notes that, from about age seven, there are improvements in children's ability to think not just about what the other believes or thinks, but also about what the other many be thinking about them; in understanding others' deceptive intentions; in realising that others, as well as the self, may be deliberately fooled about what the self feels; in understanding that negative feelings can spill over on to innocent others; that similar outcomes (success or failure) will be evaluated quite differently depending on the the psychological causes attributed to them. However, only adolescents are able to weave contradictory information about another into a coherent picture, using the concept of intentionality to create a plausible integration of negative and positive traits. Although little is yet known about the reciprocal effect that social cognitive developments and attachment qualities have on each other, Bretherton concludes that:

'working models seems to develop from very simple hierarchical

> structures during the preschool period into considerably more complex, multilayered, differentiated, multiply connected hierarchies at adolescence. This suggests that working models should become more difficult to reorganise and reconstruct after adolescence, an issue that needs to be resolved by research' (Bretherton, 1988, p. 96-97)

However, the theoretical and empirical accounts of how cognitive development affect internal working models is much more elaborated for infancy and early childhood, and to a lesser extent for late adolescence, than it is for the period of late latency/transition to adolescence. To understand the timing and process of change in internal working models at this crucial juncture of childhood and adolescence will be an important advance in attachment theory and research.

The goal-corrected partnership in middle childhood

Waters and his associates (1990) have attempted to incorporate traditional learning theory and cognitive theories of self into attachment theory, placing greater emphasis on the parent's contribution to the organisation of attachment behaviour throughout childhood and on the role of self-awareness, self-observation, and self-consistency in the development of attachment after infancy. In particular, they argue that developing the interface between the 'goal- corrected partnership' (Bowlby's fourth phase of attachment) and adult 'mature' attachment patterns is one of the critical tasks of attachment theory. Otherwise, they argue 'the Bowlby/Ainsworth perspective will remain vulnerable to the criticism that it is a theory of infant attachment, a theory of adult attachment, and a great deal in between left to the imagination' (Waters et al., 1990. p. 227).

They attempt to develop that phase of 'goal-corrected partnership' in the context of related behavioural and cognitive developments in middle childhood. They propose that a partnership of sorts develops between parent and child around the task of maintaining communication and supervision once the child begins to be independent. With the move to representational thought, the secure base of early childhood acquires a cognitive representation, enabling more extended exploration. Peremptory proximity seeking is replaced by communication and direct coping. Beginning in middle childhood, the child can enter into a wide range of contracts with adults, within and outside the family. Within families, many socialisation practices entail exchange type agreement between parents and

child, allowing both child and adult to meet their differing needs and goals, but these exchanges are not directly linked to attachment.

They argue that one important exception is a supervision partnership designed to span the transition from family socialisation to independence in a particular family, community, or culture. The child's time with the peer group or in other activities is viewed as continuous with exploration and training begun earlier rather than detachment or independence. This entails a common goal of maintaining a degree of supervision and contact when the child is away from direct parental supervision and the balance of responsibility is more evenly balanced than in infancy. They also suggest that secure base behaviour takes much longer to become organised and is much more dependent on supportive parental behaviour than Bowlby suggested. Parental behaviour provides a matrix that continues to help organise it in middle childhood.

Waters et al.'s proposal of the supervisory partnership as a secure base analogue in middle childhood and early adolescence may be useful as a way of bridging the attachment and socialisation paradigms. However, establishing the mechanisms that underlie continuity or discontinuity in attachment across generations and across different phases of development will also require assessments of representations of attachment as well as assessments of current parent-child functioning.

Research on attachment in childhood

A major focus of attachment research has been the development of appropriate measures to assess attachment beyond infancy. The dominant approach has involved parent-child reunion procedures modelled on the strange situation (Cassidy & Marvin, 1992; Crittenden, 1992; Greenberg, Cicchetti, & Cummings, 1980; Main & Cassidy, 1988; Stevenson-Hinde & Shouldice,1995). Other approaches have used symbolic representation measures, including picture-story tests (e.g. Kaplan, 1987); doll play (Bretherton, Ridgeway, & Cassidy, 1990); drawings of family (Main, Kaplan, & Cassidy, 1985; Fury, Carlson, & Sroufe, 1997; Grossmann & Grossmann, 1991; Rosenberg, 1984); analysis of parent-child discourse (Strage & Main, 1985; Main et al., 1985); and child self-interview (Cassidy, 1988). The studies that have used these measures of attachment are largely concentrated on the early childhood period and could be grouped under three main headings. The first two involve longitudinal studies in which children with known

attachment histories in infancy were followed up and their representation of attachment or adjustment assessed in childhood. The third type involves investigating how child attachment assessed in childhood correlates with child behaviour, parent-child interaction, maternal stress and other family variables.

Child attachment representation: Relationship to infant attachment

Main et al. (1985) were the first to assess children's attachment representations using narratives and parent-child discourse. Since then, a number of researchers have used similar approaches (for review, Oppenheim & Waters, 1995). The Main et al. sample consisted of 40 mothers, fathers and their 6-year old children, who had been assessed 5 years earlier in the strange situation. Attachment -related behaviour and representation was assessed by multiple methods: verbatim transcripts of parent-child discourse after one hour's separation from each other; quality of observed free play; responses to pictures depicting parent-child separations (Klagsburn-Bowlby, 1976); response to a photograph of the child's own family. Each part of the assessment was conducted by researchers 'blind' to the child's attachment in infancy, or response to the other measures. The child's responses on each of the the different measures were found to be significantly related to the strange situation response to mother in infancy (correspondence ranging from 68% to 88%). Only reunion behaviour and discourse were significantly related to attachment classification with father at 18 months.

Of particular interest is the method develop by Strage and Main (1985) to analyse discourse between parent and child on reunion. The dimensions assessed included: *Fluidity* - discourse was regarded as fluid if both partners answered one another directly and without difficulty in accessing or expressing information. Pauses occurred between, not within, bouts of conversation; *Dyadic balance*: - discourse was regarded as balanced if neither partner exclusively led or followed the other and both addressed the other in a manner that invited further conversation; *Breadth of focus* - three types of focus were distinguished: focus on objects, focus on activities with objects, and focus on relationships. The prediction of the characteristics of parent-child discourse following reunion from infant attachment classification was above 80% for both parents. Following Main (1995), a summary of the findings is separately presented for children who had been classified secure (N=14), avoidant (N=11), resistant (N=3) and disorganised (N=12) with mother in infancy, together with those of other related studies (Fury et al., 1997; Grossmann &

Grossmann, 1991; Rosenberg, 1984).

Group B: Secure

Children secure with a parent in infancy were found at age six to approach that parent during the reunion episode with confidence and pleasure. They initiated conversation and interacted with ease, some making physical contact in a subtle way (Main & Cassidy, 1988; Wartner et al., 1994[1]). When presented with the parent-child pictures, they tended to describe the depicted children as feeling sad or angry, but were able to suggest imaginative, constructive and active solutions to the children's dilemmas (Grossman & Grossman,1991; Kaplan,1987; Main et al.,1985; Oppenheim,1990; Shouldice & Stevenson-Hinde, 1992; Slough & Greenberg, 1990). Kaplan termed these children *secure-resourceful.* In doll-play, they tended to invent what were called classic 'fairy tales', that is, narratives where there was a crisis provoked by the separation, followed by a happy ending. (Bretherton, Ridgeway & Cassidy,1990); Solomon & George, 1991; Solomon, George & DeJong, in press; Rosenberg, 1984). Main (1995) notes that such classic narrative structures produced by secure children reflect their behaviour in the strange situation, in that distressing experiences were acknowledged, described, or invented and then brought to resolution.

Their family drawings were characterised by well-individuated, well-grounded family members with open arms, often including real-world items like a house, bicycle or car (Fury et al., 1997; 1993; Grossmann & Grossmann, 1991; Kaplan & Main, 1986). Their conversation with the parent on reunion was found to be fluid. Parent and child addressed each other directly and communicated without difficulty, both led the dialogue in a balanced way, and discussed a wide range of topics. Strage was able not just to identify from the discourse what attachment classification the child had been assigned in infancy, but also what subclass, identifying particular subclass linguistic styles. For example, there was a tendency in dyads where the child had been classified as B4 in infancy, that is, mildly preoccupied with the parent, for both parent and child at age six to seek extra affirmation for what they were saying from the other.

[1] References in parentheses include research published by Main and her associates and studies by other researchers that replicated the particular findings.

Group A: Avoidant

Children who had been avoidant of a parent in infancy tended to avoid the parent again during reunion at age six (Main & Cassidy, 1988; Wartner et al., 1994) but in a more subtle way, for example, by responding minimally to the parent's return or moving away from the parent, apparently to seek a toy. Kaplan (1987) termed such children as *insecure-inactive* in their responses to separation anxiety test. Contrary to expectations, they described the depicted children as probably sad at the separation and unsure as to whether the parents would ever come back. However, when asked what the child could do, their responses were characterised 'inactive' - that is, responding with 'I don't know' or with silence. In doll-play, they invented no crisis and expressed no concerns about separation issues (Solomon & George, 1991; Solomon & George, in press; Rosenberg 1984). Cassidy (1988) found that avoidant children tended to describe themselves as perfect and to draw stereotypically smiling, non-individuated, non-grounded family members, sometimes floating in the air, distant from one another and often armless (Fury et al., 1997; Grossmann & Grossmann, 1991; Kaplan & Main, 1986), although the same children could draw fully complete teddy bear figures (Kaplan & Main, unpublished data, 1986).

Presented with the family photograph, they typically turned away from it, refused to accept it, turned it backwards or casually dropped it. Their discourse with the parent was characterised as restricted, not fluent, with frequent short pauses between child and adult conversational turns, minimal answers, with the parent often asking rhetorical questions where a yes/no answer or no answer was expected or required. Topics were restricted to impersonal themes, such as objects, and were not elaborated. In two cases the parent did not address the child at all throughout the reunion episode, talking instead to the examiner (Strage & Main, 1985).

Group C: Resistant

Children resistant with mother in fancy, during the age-6 reunion, showed behaviour that exaggerated their relatedness to the parent (e.g. putting arms around parent and looking toward the camera, speaking in a babylike voice, sitting on the parent's lap, while simultaneously wriggling away angrily (Main & Cassidy, 1988; Wartner et al., 1994). They responded to the depicted separations on the separation anxiety test with aggressive or ambivalent responses (e.g. the depicted child could attack or simultaneously placate and

annoy the departing parents) (Main et al.,1985; Kaplan, 1987; Rosenberg,1984). In another study (Solomon et al.,1995), resistant children responded to depicted separations by stories that were characterised by 'busy' activity and caregiving, with negative feelings displaced from self onto others. Reunions between the parent and child in the stories were characterised by delay and distraction. Moreover, the narrative structure was digressive, full of interruptions and irrelevant details that broke up the storyline, a pattern that resembles the adult discourse of preoccupied adults in the AAI. Their drawings of family members were characterised by very large or very small family figures, crowded together in a corner of the page, sometimes emphasising vulnerable or intimate parts of the body, such as round, soft bellies with belly buttons (Fury et al., 1997; Kaplan & Main, 1986).

Group D: Disorganised/disoriented

Children who were disorganised/disoriented with mother in infancy, during the reunion episode at age six, showed controlling, role-reversing behaviour in relation to the parent. Their behaviour was termed either *controlling-punitive* (e.g. ordering the parent to sit down and keep their eyes closed in a peremptory way) or *controlling-caregiving* (e.g. questioning the parent as to how he/she was feeling and inviting the parent to play in a reassuring way)(Main & Cassidy, 1988; Wartner et al., 1994). Main and Cassidy (1988) suggested that these children had attempted to 'solve' the 'irresolvable paradox' presented by a frightening /frightened parent by themselves becoming caregivers. Their responses to the separation anxiety test (Kaplan, 1987; Jacobsen, Ziegenhain, Muller, Rottmann, Hofmann, & Edelstein, 1992; Solomon & George, 1991; Solomon et al., 1995) were characterised by fear, especially by catastrophic fantasies with no solution (e.g. fear that the departing parent would be killed or seriously injured). Their stories tended to have an eerie quality, with things happening mysteriously, that is, without an agent. Kaplan described the children as 'inexplicably afraid' and unable to do anything about it. When children disorganised/disoriented in infancy were followed up into adolescence, their separation anxiety test responses were found to predict marked difficulties in verbal deductive reasoning tasks (Jacobsen, Edelstein & 1994). Main (1995) suggests that these narratives indicate experiences of fright that could not be resolved, echoing the disorganised/disoriented behaviour such children had shown in infancy.

Their family drawings were disorganised, with parts of the drawing scratched out, or abandoned; with ominous (e.g dismembered body parts or skeletons) or overly-bright

details (Kaplan & Main, 1986). Their response to the family photograph was to become silent and depressed, or otherwise absorbed. Their discourse with parents during reunion was dysfluent, marked by stumbling and false starts, with the child, rather than the parent, taking the conversational lead.

The studies of children's representation of attachment, reviewed above, were conceptually derived from and validated against the strange situation procedure. The results demonstrate links between responsive and sensitive caretaking and emotionally open and coherent communication about attachment -related issues (Bretherton, 1995). They provide a rich source of information and hypothesis generation. However, while there appears to be a degree of overlap between the different measures (e.g. open and direct communication of affect, persistent and unambivalent expressions of attachment) there are few stability studies or systematic cross-validation of those measures. Thus, apart from the reunion parent-child discourse procedure (Main & Cassidy, 1988) which has been well validated (Solomon & George, 1999), other measures may be best regarded as correlates of, rather than measures of attachment (Main, 1995).

Child adjustment:Relationship to infant attachment

A number of longitudinal studies have found that secure attachments in infancy have generally been associated with greater social competence and self-regulatory ability in school settings, with insecure children rated higher in aggressive or anxious,withdrawn behaviour (e.g. Egeland & Sroufe, 1991; Elicker, Englund, & Sroufe, 1992; Grossman & Grossman,1991; Lyons-Ruth, Alpern, & Repacholi, 1993; Main, 1991; Sroufe, Egeland & Kreutzer, 1990). Among insecure children, the disorganised group display more behaviour problems, particularly of an aggressive nature (for review, see Lyons-Ruth, 1996). However, most studies followed children only to preschool or early school age period. Only a few studies followed children beyond age 10 and these will be described in more detail.

Sroufe and his associates (Sroufe, Egeland & Kreutzer, 1990) followed most of their large poverty sample up to age eight only. However, a sub-set of the children (n=47), representative of the total sample in terms of attachment history, were observed and rated by four trained counsellors at a four -week summer day-camp at age 10-11. The composite ratings on 'social skills with peers' and 'self confidence' were significantly correlated with

attachment 12-18 months as measured by the strange situation.

Grossman and Grossman (1991) as part of their longitudinal study, followed up 43 families when the children were aged 10. The children were interviewed on a wide variety of topics and the interviews were analysed with regard to the children's perceived support from parents, strategies for stressful situations and report of negative feelings, peer relationships and their response style to the interview. No relationship was found between early attachment quality to mother or father and perceived parental support at age 10. The authors argued, however, that since perceived parental support was estimated from recent events, and strongly correlated with the parent's own report of that support, that a recency effect may have overridden a more general mental representation. With regard to their strategies in stressful situations, only those relating to how the children dealt with negative interaction with parents, or in response to feelings of fear, anger and sadness in less specific situations, were related to early attachment quality. Dealing with stressful situations in school was not related. Children secure in infancy more readily admitted negative feelings and more often reported relationship-oriented strategies, like going to someone for help and comfort. Children who were avoidant in infancy more often reported staying alone and and trying to work the problem out without anybody's help.

The strongest relation found was between peer integration and early attachment, with a clear rank order from secure, to avoidant to resistant. Those secure in infancy were more likely to have at least one good friend who was trustworthy and reliable. Those avoidant in infancy, and even more so those resistant in infancy, either had no good friends or reported many friends without being able to name one. They were also more likely to report problems like being exploited, ridiculed, or excluded from group activities by peers. Reports of peer relationships by the children and by their parents were highly concordant.

In semi-structured interviews with the children, a measure of coherence, based on the work of Main and her associates (1985) was not found to be related to early attachment. However, a tendency to give short or monosyballic answers was associated with insecure attachment in infancy. In addition, the children's social behaviour towards the interviewer was significantly related to early attachment. Children who had been classified insecure in infancy tended to ignore the interviewer, sometimes to the point of impoliteness or else were overly close, inappropriately intimate, sometimes seeking close bodily contact with the interviewer. Observable sibling rivalry, but not observable child-parent conflicts, were

also significantly related to early attachment. The authors concluded that early attachment seems to be reflected at age 10 in a general confidence in self, in friends and in potential supporters in times of stress. It must also be noted that those variables that were found to be related to early attachment applied to infant-mother attachment only.

Correlates of attachment assessed in childhood

Most of these studies are based on assessments of attachment using parent-child reunion procedures, especially the Main-Cassidy (1988) system for kindergarten/age 6 children (1988) and Cassidy-Marvin (1992) system for preschool/age 4-5 children. These systems of classification yield a secure classification and a number of insecure classifications that differ slightly from each other (see Solomon & George, 1999). The insecure classifications include avoidant, ambivalent, and controlling, which are thought to correspond to the avoidant, resistant and disorganised strange situation classifications respectively. Attachment classifications based on those measures have been found to be related to a wide variety of child adjustment indices, including self-esteem, anti-social behaviour, peer rejection, association with deviant peers, and academic performance and coping styles (e.g. Armsden & Greenberg, 1987; Brown, Mounts, Lamborn & Steinberg, 1993; Dishion, Patterson, Stoolmiller, & Skinner, 1991; Finnegan, Hodges, & Perry, 1996; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Park & Hazan, 1990; Patterson, Kupersmidt, & Griesler, 1990; Steinberg, Elmen, & Mounts, 1989) and also related to family variables such as maternal depression and maternal stress (Moss, Rousseau, Parent, St-Laurent, & Saintonge, 1998). A few representative studies will be described in more detail.

In a longitudinal study of 58 children from infancy to age 8, (Booth, Rubin, & Rose-Krasnor, 1998) early attachment status, measured at age 4 by the Reunion Rating Scale (Booth & Perman, 1989), predicted perceived maternal support in middle childhood better than the mother's actual behaviour at that time. Secure children were no more likely than insecure children to include their best friend as part of their emotional support network. In fact, among insecurely attached children, the more reliance they put on their best friend for emotional support, the more likely they were to exhibit externalising problems with friends, such as disruptiveness and aggression. Another study also found that securely and insecurely attached preadolescents did not differ significantly in the extent to which they reported, or were observed to have, a close friendship. (Shulman, Elicker, & Sroufe, 1994). Both these studies showed the greater reliance on family members, rather than friends, for

emotional support in middle childhood, suggesting that rather than competing with, or being replaced by, emerging behavioural systems such as peer affiliation, the attachment behavioural system seems to operate in coordination with them. Only when direct coping fails, or in the face of extreme threats, does it reassert the priority among behavioural systems that it enjoyed in early infancy (Waters, Kondo-Ikemura, Posada, & Richters, 1990).

Moss and her associates (1998) assessed security of attachment in a sample of 121 school age (5-7 year old) children, using a separation-reunion procedure, that was coded using criteria from both the Cassidy and Marvin (1992) and Main and Cassidy (1988) systems. Maternal reported stress and mother-child interactions were assessed concurrently to the attachment measure, and child behaviour problems were assessed both at ages 5-7 and again at 7-9 years. Attachment classifications significantly predicted the likelihood of teacher - reported behaviour problems across both age periods. Children classified insecure-controlling (corresponding to the strange situation disorganised classification) were found to be most at risk for both externalising and internalising problems across both age periods to Main's disorganised/disoriented classification. This finding extends to middle childhood, and to a nonclinical sample, the previously established associations between the disorganised attachment pattern and problem behaviour, particularly aggressive behaviour, found in the preschool and early school period, and also reported in clinical samples (Lyons-Ruth et al., 1993).

Cassidy (1988) developed the Child Self Interview as a measure of attachment at age 6 in a a sample of 52 children. The interview consisted of a set of 20 questions, including asking the children what they liked and did not like about themselves; whether they thought they were special; how they could be better; what five words they would use to describe themselves; and how they would like to be described to somebody. The interview was transcribed verbatim and coded by a coder blind to other information about the child. A second coder independently coded 20 randomly elected transcripts. Intercoder agreement was 90%. Interview responses were classified into one of four types (1) *open-flexible* - the child described the self in a positive way, yet was able to recognise and admit less than perfect aspects of the self; (2) *avoidant-perfect* - the child described the self as perfect, and relationships were neither acknowledged nor used as relevant descriptors of the self; (3) *negative* - the child made many negative and few positive statements about the self; and (4) *body-preoccupied* - the child made pervasive references to his/her body to the point of

excluding references to other components of the self. Interview responses were significantly related to attachment classifications based on the Main-Cassidy (1988) reunion system. The responses of children classified secure tended to fall into the open-flexible category (67% of secure children fell into this category versus 13% of avoidant children); and the responses of those classified avoidant in the avoidant-perfect category. The responses of children classified as controlling and ambivalent fell evenly across categories. However, the only three interviews characterised by body-preoccupied responses were obtained from children classified ambivalent.

Studies of attachment in adolescence

In recent years, there is a steadily increasing body of research on attachment in adolescence (Adam, Sheldon-Keller & West, 1996; Allen et al., 1996; Allen & Land, in press; Allen, Moore, Kuperminc, & Bell, 1998; Becker-Stoll & Fremmer-Bombik,1997; Kobak & Sceery, 1988; Kobak et al., 1993; Rosenstein & Horowitz, 1996; Sroufe, Carlson, & Shulman, 1993; van IJzendoorn & Bakersmans-Kranenburg, 1996; Waters, Merrick, Albersheim & Treboux, 1995). In the meta-analysis of 4 samples (N=277) involving older adolescents and young adults, the distribution of classifications resembled that of nonclinical mothers and fathers (van IJzendoorn & Bakersmans-Kranenburg, 1996).

Over-all, this body of research shows that, despite the developmental pressures to become autonomous, adolescent autonomy is established not at the expense of attachment relationships with parents, but within the framework of secure attachments with parents that are likely to endure into adulthood. For example, observed qualities of adolescent autonomy and relatedness have been linked to attachment organisation before and after adolescence; and secure adolescent-parent dyads tend to engage in more productive, problem-solving discussions that balance the need for autonomy with the desire to preserve closeness than insecure dyads (Allen & Hauser, 1996; Becker-Stoll & Fremmer-Bombik,1997; Kobak et al., 1993). Studies have also found adolescent attachment organisation is integrally related to many aspects of psycho-social functioning both because it reflects core aspects of the way adolescents process affect in social relationships and also because it is likely to be associated with qualities of ongoing relationships with parents (Allen et al., 1998). For example, avoidant adolescents were found to display the most dysfunctional anger during discussions with their mothers (Kobak et al.,1993) and to be rated as most hostile by their peers (Kobak & Sceery, 1988). Preoccupied adolescents are

found to report high levels of personal distress, to perceive themselves as socially incompetent, and to be perceived by peers as highly anxious (Kobak & Sceery, 1988).

With regard to mother-adolescent attachment concordance, there are mixed findings. Some studies report concordance to be fairly modest over-all (Zimmermann et al., 1995), but much higher for adolescents living with both biological parents than for adolescents living in other family structures (Allen et al., 1997). Other studies found that concordance was greater for older than for younger adolescents (Allen et al.,1997), and was exceptionally high in a sample of psychiatrically disturbed adolescents. This mixed pattern of results suggests that adolescent attachment organisation, like infant attachment, shows stability, continuity, and high concordance with maternal attachment, in stable environments; but the stresses associated with the onset of adolescence may, at least temporarily disrupt adolescent attachment organisation. However, it must be borne in mind that most of the studies are of young people in mid to late adolescence, and many are of atypical, clinical populations.

Studies of attachment at the transition to adolescence

There are very few studies of attachment at the end of middle childhood and transition to adolescence. The most obvious problem is with the development of a measures to generate attachment classifications in the age 7 to early adolescent age group which is anchored in and validated by the strange situation and AAI body of research (Goldberg, Muir & Kerr, 1995). However, there is one promising development. Italian researchers (Ammaniti, van IJzendoorn, Speranza & Tambelli, 1998) conducted a longitudinal study of attachment in a sample of 31 junior high school students at ages 10 and 14, using the Attachment Interview for Childhood and Adolescence (AICA). The AICA is a modified version of the AAI, retaining the same basic structure. However, the language is somewhat simplified, and some questions relating to attitudes to a future child (e.g fear of loss of child, wishes for child) were removed, and other questions about current relationships with friends were added. The AICA was rated in the same way as the AAI by coders trained in AAI coding system.

Using the three-category system, the distribution of attachment at age 10 and age 14 was as follows (age 14 in parentheses): 29% (35.5%) Dismissing; 64.5% (51.6%) Secure; 6.5% (12.9%)Preoccupied. The four-way distribution at both ages was as follows: 25.8%

(35.5%) Dismissing; 64.5% (51.6%) Secure; 3.2% (9.7%) Preoccupied; 6.5% (3.2%) Unresolved. The distribututions at both age periods did not differ significantly from those of normative samples of nonclinical mother and fathers, or of older adolescents and young adults (van IJzendoorn & Bakermans-Kranenburg, 1996). In addition, the mean ratings on 'state of mind' scales did not differ significantly from those in young adult samples (Allen at al.,1996; Kobak & Sceery, 1988). The pattern of scores for the 10 and 14 year olds on the scales differentiating classification groups confirmed the theoretical assumptions used in the general coding system. Factor analyses of all the scales of the AICA, at both age periods, showed configurations which corresponded substantially to the distribution of scales expected for each classification. In addition, factorial dimensions based upon 'state of mind' scales showed greater stability from age 10 to age 14 than the dimensions based on 'inferred experience with parents' scales. These results appear to support the theoretical and methodological assumptions underlying the AAI (Main & Goldwyn, 1989), that is, that 'state of mind' scales reflect a more stable and enduring organisation of attachment, while the content of childhood experiences with parents may be reviewed and presented somewhat differently at different stages of development. There was a significant increase in metacognition by age 14, which may indicate that this is a specific property of adolescent rather than latency-age thought.

With regard to stability, the distribution at both age levels was fairly similar, with test-retest stability of 70.9% for the three organised categories. However, the relatively high proportion of change (29.1%) indicates that the passage from latency to early adolescence has the potential to change early attachment status. This was further underlined by the finding that the Dismissing category increased from 29% to 35.5% from age 10 to 14, and that there was a general movement towards dismissing strategies both within the Dismissing and Secure categories, as evidenced in a shift in sub-group classifications. In addition, the Dismissing category remained the most stable over time. Moreover, ratings on scales measuring maternal and paternal rejection, and derogation of mother and father - which could be construed as distancing strategies towards parents - were higher at age 14 than at age 10. This pattern of findings suggest that while over-all attachment organisation remains stable, attachment strategies tend to become more dismissing to facilitate distancing from parents in the search for autonomy.

Summary and critique

The preceding review of the literature indicates that researchers and theorists from the different traditions - psychoanalytic, developmental and attachment - have identified the transition to adolescence as a key period in psychosocial development. It is important to note, however, that in general, the studies reviewed deal with adolescents living in western, industrialised societies, predominantly in the U.S; and during the last half of the twentieth century. Thus, the findings must be viewed as culture-specific and time specific. There is evidence for both continuity and discontinuity in cognitive development, self concept and parent-child relationships in the transition from childhood to adolescence. In relation to cognitve-social changes, adolescents, compared to children, have more differentiated, abstract, and integrated self-concepts (Harter, 1990), but there is little evidence of dramatic developments in either perspective-taking or interpersonal understanding at the onset of adolescence, and a persistence of middle-childhood patterns well into middle adolescence (Lapsley, 1990). With regard to parent-child relationships, there is a growing consensus that changes in that relationship are best characterised as transformations rather than disruptions, and that transformations are 'necessary developmental processes that enable individuals to negotiate transitions towards age-appropriate levels of autonomy and interdependence while maintaining earlier relationships' (Collins, 1997. p. 8). Moreover, the significance of conflict and change must be understood within the context of the quality of the preceding and on-going parent-child relationship (Collins & Laursen, 1992).

Studies of attachment in middle childhood and adolescence provide crucial data on the organisation of attachment at different developmental stages, and on the continuity and discontinuity of attachment from infancy to adulthood. The correlational studies on adjustment also shows the complex links between child attachment , parental attachment, socialisation, developmental change in other domains and family variables. However, there are still significant gaps in in the theoretical understanding and measurement of attachment in the period between infancy and adulthood. While the strange situation and the AAI (which is anchored in the strange situation) have been well validated, there are substantial gaps in the validation of many of the measures used in middle childhood, the Main-Cassidy system being the best validated (see George & Solomon, 1999).

As was discussed in an earlier chapter of this review, in order to broaden the foundations of attachment theory and clarify the place of attachment in general development, the

mechanisms or causal pathways that account for the predictive validity of attachment for later developmental and socialisation outcomes must be specified and placed within a wider social-ecological context. In addition, there needs to be a better linkage between the attachment and socialisation paradigms. The initial efforts by Waters and his associates (1990) to incorporate socialisation theory into attachment theory and to more fully develop the concept of the 'goal corrected partnership' in middle childhood has been built on by some later research, particularly in adolescence (Allen & Land, 1999; Kobak et al., 1993). However, the developmental course of this partnership; its links with developmental changes in the parental caregiving behavioural system; and with other aspects of individual development and family functioning remains to be determined both theoretically and empirically.

Evidence with regard to the continuities and discontinuities in development from the different theoretical and research traditions reviewed in this chapter - psychoanalytic, developmental and attachment - all point to the importance of the transition to adolescence as a key juncture in development. Ainsworth (1989) argued that, with regard to normative shifts in the nature of a child's attachment to parent figures:

'it seems certain that another major shift takes place with the onset of adolescence, ushered in by hormonal changes...one must be alert to the fact that key changes in the nature of attachment may be occasioned by hormonal, neurophysical, and cognitive changes and not merely by socioemotional experience' (p.710).

Yet, there are virtually no studies of attachment organisation at this stage, and no stage-appropriate established, valid and reliable measure of attachment. Similarly, there are no studies of parent-child attachment concordance at this stage of the life cycle, and only one longitudinal study of attachment from infancy to age 10 (Grossmann & Grossman, 1991). The present study set out to investigate these issues.

CHAPTER 6

AN OVERVIEW OF THE PRESENT STUDY

Introduction

The sample for the present study was recruited from the Dublin Child Development Study (DCDS), a larger community-based longitudinal study of predominantly working class first-born infants and their mothers, half of whom were married and half single at the time of the infant's birth[1]. The present study investigated three broad sets of research questions.

First, it investigated the attachment organisation, assessed by the AAI, of a sample of 11-12 year old children and their mothers; the concurrent mother-child attachment concordance; the concordance between child attachment and infant attachment, assessed in the strange situation when the children were aged 18 months; and the concordance between infant attachment and maternal attachment over 10 years later. The rationale for investigating this set of questions derived from the preceding literature review that identified significant gaps in the investigation of attachment at the transition to adolescence that needed to be addressed. These included the lack of a valid and reliable measure of attachment for this age group; the lack of data on mother-child attachment concordance at the transition to adolescence; the lack of data of the continuity of attachment from infancy into the period of late latency/transition to adolescence; and the lack of data on the retrospective concordance of infant attachment with maternal attachment, when maternal attachment is assessed more than five years later.

Second, it investigated the effects of more 'distal' or contextual-ecological factors (Belsky, 1999) - marital status at the time of the infant's birth and life changes- on concurrent mother-child attachment concordance; continuity of infant-child attachment; and mother-infant attachment concordance. The rationale for this set of questions derived from the preceding review the the attachment research literature conducted from the ecological perspective. That review identified a number of psychological and socio-economic contextual determinants of attachment security in mothers and their children, including

[1] This study will be described in more detail in a later part of this chapter.

socio-economic deprivation, maternal stress, negative life change, marital status and spousal support. In addition, the sample of mothers used in this study were drawn from a larger sample where the mothers who were single at the time of the birth were found to be younger, poorer, less educated and living with a greater number of people than the married mothers. Moreover, their infants were significantly more likely to be classified insecure than the infants of married mothers (Wieczorek-Deering et al.,1991).

For the purposes of this study, single marital status at the time of the infant's birth will be used as a rough index of the more deprived socio-economic status of the mothers who were single at the time of the infant's birth, as well as the greater likelihood of general instability in their own and their children's lives (eg changes and disruptions in caretaking arrangements arising from the possibility of mother' subsequent marriage).

In the context of this study, life changes will refer to those experienced by children since their fifth birthday, and to those experienced by mothers in the 18 months preceding the AAI assessment. Although such changes do not speak directly to the life changes that may have occurred in earlier years, they will be taken as a rough index of general life stability.

Third, it investigated the self-reported attachment style of mothers and children in the mother-child relationship and in general relationships, using a variety of self-report measures; and the concordance of attachment, measured by the AAI, with self-reported attachment style. The rationale for this set of questions derives from the preceding review of the social-psychological attachment literature which identified the need to investigate how different measures of attachment, particularly the AAI and self-report measures (themselves derived from different 'traditions') relate to one another.

This chapter is organised in the following way. First, the more specific research questions (flowing from the three broad sets of questions outlined above) that guided the present study will be outlined[2]. Second, the present study will be located within the context of the DCDS, from which the subjects were selected. Third, the sample, procedure and method used in the present study will be described. Fourth, the limitations of the study will be discussed. Fifth, the layout of the results in the succeeding chapters will be outlined.

[2] The specific rationale from the literature will be given *before* each question is posed.

Specific research questions

Section A: Attachment at age 11-12 (section A); concurrent mother-child attachment concordance (section A); concordance between infant attachment and child attachment at age 11-12 (section A); concordance between infant attachment and maternal attachment over 10 years later (section A). The effects of marital status at the time of the infant's birth and life changes on the concordance of attachment between children and their mothers concurrently; between infancy and childhood; and between infants and their mothers ten years later will also be investigated.

A: The preceding review of the attachment literature has identified significant gaps in the investigation of attachment at the transition to adolescence. Researchers and theorists from different traditions - psychoanalytic, developmental, and attachment - have identified this as a key period in psychosocial development, with evidence for both continuities and discontinuities in development in the transition from childhood to adolescence. Yet, there are virtually no studies of attachment organisation at this stage. Researchers have identified the lack of a valid and reliable measure of attachment for this age group as a major issue to addressed (Goldberg 1995; Moss et al., 1998). One study has established that a modified version of the AAI (PICA) can be used successfully with 10 and 14 year olds (Ammaniti et al, 1998).

Thus, the first research aim of the present study is to investigate the use of the AAI on a sample of children at the transition to adolescence (age 11-12), suggesting the following question: .

Question 1: Will the AAI and its coding system discriminate the different classifications of attachment for this age group in the same way as it does for older adolescents and adults? Will the whole range of classifications be needed to describe the 'state of mind with respect to attachment' of this age group?.

The evidence for increased conflict between parents and children during the transition to adolescence (Hill, 1988), and of a general movement towards dismissing strategies on the AAI from age 10 to 14 (Ammaniti et al.,1998) suggests that in a sample of 11-12 year olds there may be a higher proportion of children classified Dismissing and more children assigned to the more dismissing sub-categories of the Secure classification (e.g. F1 and F2).

Bearing in mind the caveat entered earlier with regard to comparing this sample to larger, more representative sample, the following question is asked:

Question 2: Compared to the distribution of maternal AAI classifications, and to the distribution in other samples of young adults, will there be a higher proportion of children classified Dismissing, and a higher number assigned to the more dismissing sub-categories of the Secure classification?

A: High concordance has been shown between parents and their infants in studies using prospective, concurrent, and retrospective designs (van IJzendoorn, 1995); between adult women and their own mothers (Benoit & Parker, 1994); and between adolescent mothers and their own infants (Ward & Carlson, 1995). With regard to concordance between adolescents and their mothers, the findings are mixed. Some studies report concordance to be fairly modest over-all (Zimmermann et al, 1995). However, concordance has been found to be much higher for adolescents living with both biological parents than for adolescents living in other family structures (Allen et al., 1997). Other studies found that concordance was greater for older than for younger adolescents (Allen et al.,1997), and was exceptionally high in a sample of psychiatrically disturbed adolescents. (Rosenstein & Horowitz, 1996). This mixed pattern of results suggests that adolescent attachment organisation, like infant attachment, shows stability, continuity, and high concordance with maternal attachment, in stable environments.

A review of the developmental literature suggests that many factors may affect child security and the parent-child relationship at the transition to adolescence, including the onset of puberty, the timing of social-cognitive developments, changes in self and other expectations, and the number and timing of life changes, such as moving to secondary school (Montmayor & Flannery, 1990). It is expected that most children aged between 11-12 will still be attending primary school; will not have yet experienced the onset of puberty proper, although the hormonal changes of puberty will have begun (Gingham, 1980; Marina, 1990); will still spend substantial time with their families (Collins, 1990); will still be significantly embedded in the matrix of family relationships (Collins, 1997); and will not show any dramatic developments in their social-cognitive abilities, rather there will be a persistence of middle-childhood patterns well into middle adolescence (Lapsley, 1990).

Development during the period of latency allows the child to make more stable

identifications with the parent, replacing the more ambivalent identifications of early childhood (Freud, 1924; Blos, 1962). The stage of formal operational thought although beginning at the end of the latency period, will not be fully attained until about age 15. Thus, children between 11 and 12 will have more advanced metacognitive functioning than in early childhood, which should make them less vulnerable to attachment-related events and more able to adopt a more constructivist view of their knowledge-base. However, metacognitive abilities are not very evident in early adolescence (Lapsley, 1990), and monitoring of attachment representations, as measured by the AAI, may be a property of adolescent rather than latency age thought (Ammaniti et al., in press). Despite the growing importance of friends, childrens' perceptions of self and others increasingly converge with parents' perceptions during the transition to adolescence (Alessandri & Wozniak, 1987). Thus, children of this age may have had few opportunities to review their mental representations of attachment in the context of other intimate relationships outside the immediate family. This pattern of findings suggests that there is likely to be substantial concordance between the attachment organisation of children aged 11-12 and and their mothers.

Thus, the second research aim of the present study is to investigate mother-child attachment concordance at the transition to adolescence., suggesting the following question:

Question 3: Will mother-child attachment concordance be high at the transition to adolescence and correspond to that found between mothers and infants and adult women and their own mothers?

Higher mother-child concordance was found for adolescents living with both biological parents than adolescents living in other family structures (Allen et al., 1997). Marital status is not co-terminus with living with both biological parents. However, maternal married status, particularly in an Irish context, is likely to be associated with the greater likelihood of a child at the transition to adolescence having lived from birth with both biological parents than maternal single status, thus suggesting the following question:

Question 4:: Will mother-child attachment concordance be higher for the married-mother group than the single-mother group?

Given the greater expected life stability in the married-mother group, and the more

unfavourable personal and socio-economic circumstances of the single-mother group (Wieczorek-Deering et al.,1991), the following quuestion is asked:

Question 5: Will both mothers and their children in the single-mother group have experienced more negative life change than the mothers and children in the married-mother group?.

A : A small number of studies have investigated the continuity of attachment from infancy to young adulthood with mixed results: 72% secure-insecure and 64% three-way concordance found between infant attachment (with mother) and age 21 security (Waters et al., 1998); 77% secure-insecure and 63% three-way concordance found between infant attachment (with mother) and age 17 security (Hamilton, in press); strong concordance between infant attachment (with mother) and age 19 attachment status (Main & Hesse, 1998); no significant concordance between infant attachment (with mother) and age 18-19 security (Weinfield et al., in press) and between infant attachment (with mother and father) and age 16 security (Zimmermann et al., 1998). In addition, lower continuity has been found in individuals who have experienced negative life change. For example, the Waters et al. (1998) study found a concordance rate of only 44% for those whose lives had been disrupted, and Weinfield et al. (in press) found in their high risk poverty sample, that whereas only 39% were classified insecure in infancy, this rose to 68% at age 18-19. Over-all, the mixed results of these infancy-adolescence/young adult longitudinal studies echo the findings with regard to more short-term continuity of attachment in infancy and early childhood, that is, that continuity is very high in stable middle-class samples (Easterbrooks & Goldberg, 1990) and less evident in economically deprived samples, characterised by single-parent families or unstable family relationships (Vaughn et al 1979; van IJzendoorn, 1995).

Researchers have identified a significant gap in the study of the continuity of attachment from infancy into the period of late latency/ transition to adolescence (see Del Carmen & Hufman, 1996; Finnegan et al., 1996; van IJzendoorn and Bakermans-Kranenburg, 1996). There is only one longitudinal study of attachment from infancy to age 10 (Grossmann & Grossmann, 1991).

Thus, the third research aim of the present study is to investigate the continuity of attachment from infancy to age 11-12. Given the overall low SES profile in the present

sample, and the research findings referred to above, the following question is posed:

Question 6 : Will the concordance between infant attachment with mother, assessed at 18 months in the strange situation, and attachment assessed in the AAI at age 11-12 be lower than that found in stable, middle-class samples, but still significant?

Single marital status in a low-income working class sample was found to be associated with changes from secure to insecure attachment from 12-18 months, even though marital status did not tend to discriminate between the attachment groups at 12 months (Egeland & Farber, 1984). Single status and economic deprivation has also been found to be associated with lower continuity of attachment from infancy to adulthood (Vaughn et al., 1979; van IJzendoorn, 1995). This suggests the following question:

Question 7 : Will concordance between infant attachment with mother, assessed at 18 months in the strange situation, and attachment assessed in the AAI at age 11-12 be higher for the children in the married- mother group than for the single-mother group?

Maternal stress has been shown in most studies to affect parent-child interaction and contemporaneous child security (Belsky, 1996, 1999); short-term stability of infant attachment (Lyons-Ruth et al., 1991); and long-term stability of attachment (Waters et al., 1988; Weinfield et al., in press). This suggests the following question:

Question 8:: Will concordance between infant attachment attachment with mother, assessed at 18 months in the strange situation, and attachment assessed in the AAI at age 11-12 be higher for those children who experienced the least life change and whose mothers experienced the least negative life change?.

Given the expected increase in dismissing strategies at the transition to adolescence (see *Question 2* above), this is expected to be reflected in the direction of change in attachment between infancy and age 11-12., thus the following question is posed:

Question 9: Compared to how they were classified on the strange situation in infancy, will a higher proportion of the children be classified Dismissing on the AAI than were classified avoidant in the strange situation?

A:4: There are strong findings in relation to mother-infant concordance (van IJzendoorn, 1995). However, the retrospective studies of mother-infant concordance deal with intervals of no more than 5 years between the assessment of infant and maternal attachment (e.g. Main et al., 1985). In addition, there are no studies of the stability of the AAI for periods longer than 4 years (Ammaniti et al., 1996). Thus, while it is difficult to predict the expected concordance, the following question is posed: .

Question 10: Will the concordance of infant attachment with maternal attachment over 10 years later be significant, but lower than that found in existing studies where the interval between the assessment of infant and maternal attachment is much shorter?

Given the greater expected life stability in the married-mother group than the single-mother group (see above), the following questions are asked:

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Question 11: Will the concordance of infant attachment with maternal attachment over 10 years later be higher for the married-mother group than the single mother group?

Question 12:: Will the concordance of infant attachment with maternal attachment over 10 years later be higher for those mothers and children who experienced the least negative life change?

Section B: The self-reported attachment style of mothers and children in the two domains - mother-child relationship and general relationships - using a variety of self-report measures; the concordance between self-reported attachment style in the two domains; the concordance between mothers's and children's self-reported attachment styles in both domains (section B1); the concordance between attachment, measured by the AAI, and self-reported attachment style in the two domains (section B2).

B1: The review of the social-psychological attachment literature suggests that there may be a single representational system or 'set of core relational tendencies underlying responses to the various attachment measures' (Bartholomew & Shaver, 1998, p.41; Griffin & Bartholomew, 1994) but an individual's domain- specific, or relationship-specific, attachment patterns may be substantially different from each other (Bartholomew & Shaver, 1998; Owens et al., 1995). There is some evidence for convergence across various measures of adult attachment (Bartholomew & Shaver, 1998; Owens et al., 1995) with the

highest convergence when similar assessment measures are used within the same domain, for example, using two self-report measures in the peer domain (Bartholomew & Horowitz, 1991; Brennan et al., 1991; Scharfe & Bartholomew, 1994) or when the same domain is examined with two conceptually parallel methods, for example, interview and self-report measures of attachment to peers, although associations are stronger and less variable in the peer domain than in the family domain (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998; Scharfe & Bartholomew, 1994).

The weakest convergence occurs when different measures over different domains are compared, for example, when both the method (interview vs. self-report) and the content domain (early family vs. current close relationships) differed, (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998; Cromwell & Treboux, 1995; Scharfe & Bartholomew, 1994).

This pattern of findings suggest the following questions:

Question 13: For mothers and children, will there be strong convergence between self-reported attachment style in the mother-child relationship on the different self-report measures?.

Question 14: For mothers and children, will there be strong convergence between self-reported attachment style in general relationships on the different self-report measures?.

Question 15: For mothers and children, will there will be weak convergence between self-reported attachment style in the mother-child relationship and in general relationships?

There are no studies of the concordance between the self-reported attachment styles of mothers and their children. Given the arguments of the social-psychological attachment researchers that there may be a single representational system or 'set of core relational tendencies underlying responses to the various attachment measures' (Bartholomew & Shaver, 1998, p.41; Griffin & Bartholomew, 1994), and given that childrens' perceptions of self and others increasingly converge with parents' perceptions during the transition to adolescence (Alessandri & Wozniak, 1987), the following questions are posed:

Question 16: Will there be high concordance between mothers and children in their self-

reported attachment styles in the mother-child relationship?.

Question 17: Will there be high concordance between mothers and children in their self-reported attachment styles in general relationships?.

B2 It has been argued that the AAI and self-report measures of attachment styles measure different components of working models (Simpson & Rholes, 1998) or are not assessing equivalent constructs (Cromwell et al., 1999); or that self-report measures may be more suitable for assessing attachment in the peer domain (Crowell et al., 1999b). Thus, the following questions are posed:

Question 18: For both mothers and children, will the concordance between AAI attachment classifications and self-reported attachment style in the mother-child relationship and in general relationships be non-significant?.

Question 19: For both mothers and children, will the concordance between AAI attachment classifications and self-reported attachment style in the mother-child relationship be higher than that between the AAI and self-reported attachment style in general relationships?.

Background to the present study:

The twenty two mother-child dyads in this study constitute a sub-set of the DCDS, initiated in 1985 by Dr. S.Greene, Trinity College Dublin, and Professor K. Nugent, Children's Hospital, Harvard Medical School and designed as a longitudinal and wide-ranging study of the psychosocial development of a sample of community-based normal children and their families . Reports from different waves and sub-sets of the study have been published in the scientific literature (Greene, Joy, Nugent, & O'Mahony, 1989; Greene, Nugent ,Wieczorek-Deering, O'Mahony & Graham, 1991; Greene, Wieczorek-Deering & Nugent, 1995; Nugent, Greene & Mazor, 1991; Nugent, Greene, Wieczorek-Deering, Mazor, Hendler & Bombardier, 1993; Nugent, Lester, Greene, Wieczorek-Deering, & O'Mahony, 1996; Wieczorek-Deering, Greene, Nugent, & Graham, 1991).

The DCDS originally recruited 200 first-born infants and their families. The mothers were first recruited in the final trimester of their pregnancy, at the public ante-natal clinic of the National Maternity Hospital Dublin. The sample consisted of 100 married and 100 single

mothers. The criteria for inclusion in the study were: first pregnancy; no sign of health risk to baby; and age range between 14-38 years. Women were approached consecutively until there were 100 in each marital category. The refusal rate was approximately 5%. The mean age of the mothers was 22.5 years, with a range of 14-38 years. The sample was predominantly working class, modal social class IV or skilled manual. The categorisation of social class was based on educational and occupational levels, according to MacGreil's (1977) adaptation of the Hollinghead method of SES classification. The average educational level of the mothers was three years of secondary school. Using a multi-method, multi-source methodology, data was collected from the sample, or sub-sets of the sample, in a number of different phases.

One phase of data collection took place when the children were aged 18 months, and comprised investigation of a sub-set of 100 infants and their families (Wieczorek-Deering et al.,1991). A principal part of this phase of the study was the assessment of the infant's attachment to mother, using the strange situation procedure. Of the 100 mothers, 62 were married and 38 single prior to the birth of the infant. The demographic characteristics of this sub-sample resembled those of the whole sample, that is, the majority had a predominantly working class background (modal SES IV). The educational level ranged from completion of primary school to a non-degree third level qualification, the average being three years of secondary school. The mean age of the mothers was 23 years, with a range between 14 - 32 years. Whilst the social background of the married and single mothers was comparable, as with the original sample, there were significant differences between them on all other demographic characteristics: single mothers were younger (mean age 20) than the married group (mean age 25). They were also less educated, poorer and living with a greater number of people in the same household than married mothers. There were 54 boys and 46 girls in the sample, with 24 boys and 14 girls in the single mother group, and 30 boys and 32 girls in the married group. All infants were born by vaginal delivery at full term.

The classification of the infant's attachment to mother was on the basis of the original three-category system (Ainsworth et al., 1978). At that time, the DCDS coders were not trained to code the disorganised/disoriented attachment category. Each strange situation tape was coded by two independent coders, trained to reliability by Joan Pernice from the Boston Child Development Unit. Agreement between the coders was 92%. Disagreements were resolved by conferencing and consultation with a third trained coder.

The distribution of attachment classifications in the sample was as follows: Secure 80%, avoidant 15% and resistant 5%. Compared to the distribution of attachment classifications in the Ainsworth et al. (1978) study, the percentage of securely attached children was relatively high in the Irish sample and the over-all distribution was not significantly different, falling just short of reaching statistical significance. The relatively high proportion of secure attachments in this predominantly working class sample, comprising 38% single mothers was somewhat surprising. Possible explanations offered included time of assessment, with more infants tending to become secure than insecure between 12 and 18 months (Egeland & Sroufe, 1981) and the ameliorating effects of social network contact within the Irish context acting as a buffer against stress (Belsky,1988).

Comparison of the secure versus insecure attachment groups revealed that there were no significant differences between them with regard to age, socioeconomic status and educational level. Infants of single mothers were significantly more likely to be classified insecure than were the infants of married mothers. At the 18 months follow-up, 11 of the originally single mothers had married the father of the infant, but the effect of marital status at the time of the infant's birth still held.

The present study

Sample

The twenty two mother-child[3] dyads who participated in this were were selected by the Director of the DCDS, Dr. Sheila Greene, from the sub-set of 100 families where the infant's attachment with mother was assessed at 18 months. The goal was to select children, half of whom had been classified secure at 18 months and half insecure by DCDS coders; some of whose mothers were married at the time of their birth, and some who were single; boys as well as girls. Thus, in so far as was possible, the sample was selected for heterogeneity so that planned comparisons could be made between the different groups.

The method of selection was as follows. Of the sub-set of 100 families in the DCDS sample, 20 of the 100 infants were classified insecure. From the list of 20 children in the insecure category, 10 were selected, the selection determined according to their

[3] The original design was for 20 mother-child dyads, 10 secure and 10 insecure. However, as will be described later, when the AAI assessments were completed, it emerged that no strange situation data were available for two of the children. Two aditional mother-child dyads were then selected. Thus, AAI data are available for 22 mother-child dyads, but strange situation data for only 20 dyads.

identification number, which was assigned at the time their mothers first joined the study[5]. First, all the girls in the insecure category were selected, as there were so few, then the boys. As each child from the insecure category was selected, the next child on the total list of children who had been classified secure, and was of the same sex, was selected.

The list of 20 names was given to me by Dr. Greene, with no indication of the child's strange situation status, family background or mother's marital status at the time of the birth or subsequently. Two of the families were uncontactable, having moved abroad. Two families were unable to participate because of scheduling difficulties. One family agreed to participate, but had to withdraw, explaining that the child had been through a lot of illness in the weeks coming up to the assessment, and because of other scheduling difficulties. Dr. Greene then supplied five other names, of the appropriate strange situation status, sex, and maternal marital status at the time of the infant's birth. When the study was completed, it was established that in the case of the two families who could not be contacted, one child had been classified secure in infancy and one insecure. This was also true for the two families who could not participate due to scheduling difficulties. In the case of the family who had to withdraw, the child had been classified secure. Thus, those children who could not participate did not appear to be drawn disproportionately from the insecure category.

When the AAI assessments were completed, it emerged that for two of the children (one boy and one girl) no strange situation data were available for the children. Dr. Greene then selected two further names from the list, of the appropriate strange situation status, sex, and maternal marital status at the time of the infant's birth. The final total sample consisted of seven girls and 15 boys, reflecting the higher proportion of boys in the larger DCDS sample and the larger proportion of boys born to single mothers. All the girls and seven of the boys were born to married mothers. Of the 20 children on whom strange situation data were available, six were girls and 14 boys, with half of each sex classified secure and half insecure on the strange situation.

Demographic characteristic

Social class: The demographic characteristics of the sample used in this study, as measured

[5] As each mother was first seen by the DCDS researchers, they were assigned a code number, in ascending order (ie 001, 002...200)

by the DCDS coders at the time of the infant's birth, resembled those of the whole DCDS sample, that is, the majority (16 of the 22) had a working class background, with half the sample (11 of the 22) falling into SES IV (skilled manual). In the married-mother group[6], of the 14 mothers, half (seven) were social class IV, three were social class V, three were social class III and one social class II. In the single-mother group, half (four) were social class IV, two were social class V, one social class III and one was not classified[7]. Thus, the modal class of both the single and married group was similar, although proportionately more of the married-mother group - four of the 14 (28.6%)- than the single-mother group - one of the eight (12.5%) were in the higher social classes.

At the time of follow-up, the current social class of the families was determined, using the same system as the DCDS researchers used, that is, based on the mother's educational level and the occupation of the mothers' husbands (or, in the case single or separated mothers, their own occupation)[8]. Their current social class profile was substantially similar to their profile when the children were born (modal SES IV). The distribution across social classes was exactly the same for the single-mother group. For the married-mother group, the distribution was similar, except that there was one less in social class IV and one more in social class V.

The system for classifying socio-economic groups used by the DCDS study has been, in the interim, largely superseded by the system now used by the Central Statistics Office of Ireland, who in 1996 updated the socio-economic groups used for the classification of occupations (Central Statstics Office, 1996). This system takes no account of the differences between individuals on the basis of education. Rather, the new social class groups are based on similar levels of occupational skill. To take account of new types of occupation which may not have been reflected in the older classification system, the current social class of the sample was also determined based on this new system.

The distribution of social class for the 22 families was as follows: *Professional*, four; *Managerial and Technical,* one; *Non-manual*, three; *Skilled Manual,* five; *Semi-skilled*, six;

[6] Since six of the eight originally single mothers are now married, they are more correctly referred to as 'mothers who were single at the time of the infant's birth'. However, for brevity, they will be referred to as 'single mothers' or the 'single mother group' Similarly, mothers who were married at the time of the infant's birth will be referred to as 'married mothers' or the 'married-mother group', even though one is now separated.

[7] Data from the present study showed that this mother had completed three years of secondary school and her father, who was deceased at the time of the infant's birth, had been an unskilled worker, thus placing her , using the original criteria of SES categorisation , in social class IV.

[8] In the case of single mothers, the DCDS coders used the mother's education level and the occupation of the mother's own father.

and *Unskilled,* three. Thus, using this new system, the majority of families fell into the skilled and semi-skilled category - class IV and V. For the married-mother group, the distribution was as follows: *Professional*, three; *Managerial and Technical,* none; *Non-manual*, one; *Skilled Manual,* four; *Semi-skilled*, three; and *Unskilled,* three. For the single-mother group the distribution was as follows: *Professional*, one; *Managerial and Technical,* one; *Non-manual*, two; *Skilled Manual,* one; *Semi-skilled*, three; and *Unskilled,* none. Again, using this new system, there appear to be no substantial differences between the two groups, with half of each group falling into the *Skilled Manual* and *Semi-skilled* classes.

Mothers' education: With regard to mothers' education (which was taken into account in the original social class classification), four of the married-mother group had completed primary education only; four had completed three years of secondary school; four had completed secondary school and had their Leaving Certificate; and two had non-degree third-level education. Of the single-mother group, one had completed primary education only; three had completed three years of secondary school; four had completed secondary school and had their Leaving Certificate; and none had completed third-level. Thus, the educational profiles of the two groups were broadly similar to each other. They also broadly resembled the larger DCDS sample, although they were somewhat better educated, and the differential in education between the married and single mothers found in the larger sample was not found in this sample.

Mothers' age at the time of the infant's birth: With regard to the mothers's age at the time of the infant's birth, for the 22 mothers, the age range was between 18-29 (mean age 23). For the married-mother group, the age range was 21-29 (mean age 24.3); for the single-mother group, the range was 18-25 (mean age 20.6) - similar to the age profile in the larger sample of married and single mothers (mean age 25 and 20 respectively).

Mothers' current age, marital status:, number of children , and number of siblings in own family of origin: The mothers were aged between 31 and 42 years (mean age 35). The mean ages of the married-mother and single-mother groups were 36 and 33 respectively. Of the 22 mothers, 19 were married. Of the 14 mothers who had been married at the time of the child's birth, one had subsequently separated from her husband but was living in a long-term relationship and planned to remarry in the near future.. Of the eight mothers who had been single at the time of the child's birth, six were now married; one had married

but separated from her husband; and one was single but living in a long-term relationship, although not with the child. The number of children in the families ranged from 1-5 (mean 2.5 children). In the married-mother group, the range was 1-5 (mean 2.9); in the single-mother group the range was 1-3 (mean 2). The mothers themselves came from much larger families than they themselves now had. In the mothers' own families of origin, there was a range of between 2-12 children (mean 6.3). For the single-mother group, the range was between 2-7 (mean 4.3) and for the married-mother group, the range was between 4-12 (mean 7.4). Thus, the married mothers came from larger families than the single mothers.

Mothers' employment status: Fifteen of the 22 mothers were employed outside the home, ten working full-time and five part-time. Two were unemployed, having recently left part-time employment; and five were full-time homemakers. Using the new social class categorisation of occupations referred to above, the mothers' occupations were distributed as follows: *Professional*, one; *Managerial and Technical,* five; *Non-Manual*, seven; *Skilled Manual,* none; *Semi-skilled*, none; and *Unskilled,* two. Four of the married-mother group worked in *Managerial and Technical* occupations, one in *Professional*, two in *Non-Manual*,: two in *Unskilled*, three were full-time homemakers and two unemployed.

Five of the eight single-mother group worked in *Non-Manual* occupations, one in *Managerial and Technical,* and two as full-time home-makers. Comparing the married and single mother group, there were no substantial difference between them, although there were proportionately more married mothers -five (35.7%) in the two highest status occupational groups than single mothers -one (12.5%.).

Childrens' age, living arrangements and school status: At the time of the follow-up, the children in the sample were aged between 11 and 12 years old, with an age range of 11 years 6 months-12 years 10 months (mean age 11 years 9 months). All but one of the children were currently living with their mothers. That child was living with an uncle in the maternal grandparents' home. Another child had just recently moved in with his mother and new partner. All the children were attending 6th class (ie the final class) of primary school.

Summary: Thus, comparing the present sample to the original DCDS sample, this sample were predominantly of the same social class, but the mothers were somewhat better educated than the larger sample. Their current social class profile was substantially similar

to their profile when the children were born (modal SES IV). The single-mother group in the present sample were younger at the time of the infant's birth; had fewer children (which may be related to their younger age); and themselves came from smaller families than the married-mother group. Overall, the two groups did not appear to differ substantially in terms of social class, education, or maternal current occupation, although proportionately more of the married-mother group were in the higher social classes and themselves had higher-status occupations. However, it must be borne in mind that no data was gathered on current household income or house tenure. Thus, it is possible that the single-mother group are poorer and more disadvantaged than the married-mother group.

Setting and Procedures

Mothers were initially contacted by letter and subsequently by telephone. All of the mothers readily agreed to participate in the study. Researchers in the DCDS keep in regular contact with the families, for example by sending Christmas cards and issuing certificates to the children attesting to their participation in the study. The assessments were carried out in the Psychology Department, Trinity College Dublin. Every effort was made to schedule the assessments outside of school and extra-curricular time and the majority of families were seen on Saturdays. The families were brought to and from the Department by taxis, which were arranged and paid for by the study. No payment was made to the participants. The mothers and children were interviewed using the AAI, and then completed a number of self-report measures and questionnaires. Prior to the interview, all the mothers and children were informed as follows:

'You and your family have been part of the Dublin Child Development Study since the beginning. You know that the study is trying to learn as much as possible about families and child development. I have just joined the study and I am particularly interested in learning about how children get on with their parents and how they feel about their childhood. All the information you give will remain confidential. I will first interview you, and I would like to tape record the interview. Afterwards, the recording of the interview will be typed/transcribed. However, anything that would identify you or your family will be taken out of the interview. For example, the name of a particular person will be replaced by 'Person 1', a particular place by 'Place 2' and so on. Only I will see the full transcript. I will be sending on those transcripts to other researchers who will help me code them for my research, but they will only receive the confidential versions of the interviews. When

the interviews are finished, I would like you to fill in some questionnaires'.

After informed consent was given, general demographic information was obtained from the children and the mothers in a brief warm-up session prior to the administration of the AAI. The protocol for the AAI was followed, that is, that:

> 'The Adult Attachment Interview should be the first procedure which is administered on a particular day, and must not follow upon other interviews or tasks involving the description and evaluation of stressful life events (otherwise) the researcher risks detracting from the ability of the interview to "surprise the unconscious". (George et al., 1984, 1996, p.19).

All 22 of the child AAI interviews, as well as 14 of the 22 mother AAI interviews were carried out by the present researcher, who has been trained at the AAI Institutes conducted by Professor Mary Main and Dr. Erik Hesse at the University of London, and at the University of California at Berkeley. Of the eight remaining mother interviews, seven were carried out by a clinical psychologist with a research background in attachment theory (M.Byrne), and one by another clinical psychologist familiar with attachment theory (B.Duffy). Both interviewers were trained by the present researcher to administer the interview. All the children completed the self-report measures in the Department of Psychology, as did the eight mothers not interviewed by the present researcher. The remaining mothers were given the option of completing them in the Department of Psychology or at home. Most chose the latter option and were supplied with a stamp-addressed envelope. All except two promptly returned the completed measures.

Measures

The Strange Situation (Ainsworth et al., 1978). The structure, psychometric properties, and classification criteria of the strange situation procedure have been described in detail in Chapter 2. The 20 strange situation tapes used for this study had been coded for the original three organised attachment categories only. For the purposes of this study, they were coded again for all four attachment categories by two, new independent trained coders, Dr. Penelope Turten and Dr. Charles Stanley, who were blind to the DCDS classifications assigned, and to any other information about the children or their mothers. Each mother-infant dyad had been assigned an identifying code number in the original

DCDS study. This code was used in this study for all information gathered on the families. Dr. Turten and Dr. Stanley were both trained for coding the four classifications of the strange situation at training workshops conducted by Professor Alan Sroufe, University of Minnesota, and by Professor Mary Main at Leiden University. All tapes were judged to be codable. In the intervening years, however,the quality of some of the tapes was found to have deteriorated (e.g. sometimes facial expressions were difficult to see) making coding, particularly for the disorganised category difficult. The independent coders detected some procedural errors in a minority of the tapes (e.g. camera angles, timing) and in those cases the classification assigned cannot be as confident. The inter-rater reliability between the two new coders was high; over 90% in cases where no problems were identified in the tapes; for all cases, 85% for both the two-way (secure-insecure) and three-category analysis; and 80% over four categories. Disagreements between the two raters were conferenced in discussions and agreement reached after each coder had first independently coded all the strange situation tapes. The agreement between the original DCDS strange situations coding and the new coding, using the three-category system was 65% for the both the two-way (secure-insecure) and three-way classification. Since the original DCDS coders were forced to assign all cases to the three-category system, a more realistic measure of their agreement with the new coders is obtained by comparing their two-way (secure-insecure) classifications with the new two-way (secure-insecure) classifications based on the four-category system, which was 75%. Only the codings of the new independent coders were used in this study. (The strange situation procedure, including the eight episodes and criteria for classification were described in Chapter 2).

The AAI (George et al., 1984,1996): This semi-structured interview yields an attachment classification based on an individual's 'current state of mind with respect to attachment' expressed in the coherency of thought and feeling regarding attachment. The structure of the AAI, its psychometric properties, and classification criteria have been described in detail in Chapter 3. The interviews were recorded and transcribed verbatim following detailed directions (Main, 1994). Since the analysis of the interview depends upon an exacting study of the discourse properties, the transcription must include all errors in speaking , as well as all hesitations markers, and pauses which are timed. Transcribers were trained and supervised by the present researcher. Each transcriber was also supplied with a detailed set of instructions for transcribing interview (Main, 1994). Each first-draft transcription was fully checked by this researcher while listening to the audio-recording, not just for the usual typing errors, but particularly to reinstate any odd use of language,

grammatical irregularities, or punctuation errors that may have been inadvertently 'corrected' by the transcriber. Subsequent drafts were again checked by the present researcher against the corrected draft transcript. Finally, all identifying information (references to names, places, occupations etc) were removed, using a system recommended by Main (1994).

The interview is analysed in several stages, using a detailed scoring and classification manual (Main & Goldwyn, 1998), supplied to participants at AAI Training Institutes. The scoring and analysis was also described in detail in Chapter 3. Coding of the AAI is a detailed and time-consuming, taking an average of 4-6 hours, but often considerably longer. The average length of the AAI interviews for the mothers in this sample was approximately an hour and a half, longer than the expected one hour in American samples. English researchers using the AAI also report that their interviews with UK samples tend to be somewhat longer than 1 hour (R. Goldwyn, personal communication, 1998). The average length of the children's AAIs was between 45-60 minutes[9]

Each transcript was coded independently by two coders - the present researcher and an independent coder. The independent coder for the child transcripts was Ruth Goldwyn, who originally developed the AAI with Main (Main & Goldwyn, 1984, 1998). The independent coder for the mothers's transcripts was Dr. Elizabeth Hopper. Both coders have been trained by Mary Main and Erik Hesse. Both coders were blind to all information about the subject other than what was contained in the transcript. Disagreements between the two raters, for both child and mother transcripts, were conferenced in discussions and agreement reached after each coder had first independently coded all the AAI transcripts. A third independent coder, Dr. P. Turten, who has a special expertise in the Disorganised/Unresolved classification, independently coded cases where there was disagreement between the raters about the Unresolved classification (the most complex to code), or where a case was difficult or borderline Unresolved. In such cases, her judgment was accepted. Inter-coder agreement was high. For the children's AAIs, for the two-way analysis (secure versus insecure) the agreement was 86.4%; over three categories it was 86.4% and over four categories 72.7%. For the mothers' AAIs, for the two-way analysis the agreement was 81.6%; over three categories the agreement was 77.2% and over four categories 72.7%. (A detailed description of the AAI was given in Chapter 3. The full interview protocol is not included in the appendix, as it is not published and only available

[9] The length of the mothers' transcripts ranged from 12-34 single-spaced pages (Mean=23.5). The children's transcripts ranged from 11-33 single-spaced pages (Mean=15.9)

to those who have participated in the AAI Institutes).

The Self Interview (Cassidy, 1988): An adapted version of the Cassidy Self Interview, a measure to assess attachment at age 6, was used. The original interview consisted of a set of 20 questions, 6 of which were used for this study. The questions were as follows: (1) Can you tell me something that you like about yourself? (2) What do you think is not so good about you? (3) Do you think you are special? (4) Is there any way you could be a better kid? (5) Can you tell me five words that would describe you? (6) If I was going to tell someone just one thing about you, what would it be?. The interview was administered after the AAI, and was tape-recorded and transcribed verbatim. The transcripts were coded by the present researcher. No second independent coder was available. Every attempt was made to conduct this coding blind by the present researcher. However, even though the coding was done more than a year after the interviews, the responses of a few of the children were memorable enough to identify them. Criteria for classification developed by Cassidy (1988) were utilised. This measure was used primarily as an adjunct to the AAI, and to build a picture of how children of this age describe themselves.

Life Experience Survey (Sarason, Johnson & Siegel, 1978): The LES is a 57-item self-report measure that allows respondents to report events that they have experienced during the past year. For this study, the period was extended to 18 months, to allow a broader evaluation of the mothers' experience of life change. The LES was given only to the mothers. The advantage of the LES over other measures of life stress is that it distinguishes between desirable and undesirable change. The scale lists 47 specific events, plus three blank spaces in which subjects can indicate other events that they may have experienced, in the specified time period. Subjects separately rate the desirability and impact of events they have experienced. The impact of experienced events, at the time of occurrence, is rated on a seven point scale, ranging from extremely negative (-3) to extremely positive (+3). The sum of the impact ratings of those events designated as positive by the subject provides a positive change score. A negative change score is derived by summing the impact ratings of those events experienced as negative by the subject. A total change score is obtained by adding these two values, representing the total amount of rated change (desirable and undesirable) experienced by the subject during the 18 months. The test-retest reliability of the LES is moderately high, with correlations over two tests of .19 and .53 ($p < .001$) for the positive changes scores; correlations of .56 and .88 ($p < .001$) for the negative changes scores, and .63 and .64 ($p < .001$) for the total changes scores. Sarason et

al. (1978) point out that test-retest reliability coefficients are likely to underestimate the reliability of measures such as the LES because subjects may actually experience a variety of events in the time interval between tests. Negative changes scores, but not positive change scores, have been found to be significantly correlated with trait anxiety, self-reported depression, an external locus of control, and some types of personal maladjustment. Responses to the LES have been found to be relatively free from the influence of social-desirability bias (see Appendix A).

The Life Events Questionnaire (Berden, Althaus & Verhulst, 1990): The LEQ is an 18-item questionnaire that asks respondents to report events that their child experienced in the last two years. In the present study, this was adapted to events experienced since the child's fifth birthday, to allow a broader evaluation of the child's experience of life events in middle childhood. The LEQ is a highly modified version of the Life Events Record (LER) developed by Coddington (1972a, 1972b), which is one of the best known and most widely used life event questionnaires for children and young adolescents. Items on the LER were used as a source of items for the LEQ. Excluded were events expected to have a positive impact on children, since previous research (Berden et al., 1990) indicated that only events with an expected negative impact correlated with psychological dysfunction. Also excluded were events that were found to have a high 2-year incidence in the original sample, as so many children would be confronted with these events that their inclusion might attenuate the relationship, if any, between life events and psychological functioning. Also excluded were events that might themselves be manifestations of psychological dysfunction in the child. The scoring of the LEQ is a simple, unweighted, count of events experienced, expressed in a total event score (TES), as previous research has indicated that an unweighted, simple count provides similar results to weighting scores by different strategies (Berden et al., 1990). The test-retest (across a 2-week interval) reliability of most items on the the LEQ was moderate to high, with kappa coefficients of between .65 and 1.00. The inter-parent reliability (i.e. mother and father separately and independently filling in the LEQ for the target child) was moderate to high, although lower than the test-retest reliability, with kappa coefficients of between .47 and .88. A study of the contribution of parental negative life events to the prediction of changes in adolescent children's psychological functioning, using the LES (Sarason et al., 1978) found no significant effect, although the LES contains most of the items included in the LEQ, suggesting the need for a separate evaluation by the parent of the life events experienced by the self and by the child (see Appendix A).

The Relationship Questionnaire (Bartholomew & Horowitz, 1991): This is a single-item measure consisting of four short paragraphs describing Bartholomew's four attachment prototypes: secure, fearful, preoccupied, dismissing (Bartholomew, 1990, 1993; Bartholomew & Horowitz, 1991). Subjects choose the description that best fits their relationship style - for clarity the RQ used as a 'forced-choice' categorical measure will be referred to as the RQ1. The RQ can also be administered to obtain continuous ratings of each of the four attachment styles on a seven point scale. The highest of the four attachment ratings can be used to classify the subject into a best-fitting attachment category. The RQ derived in this way will be referred to as the RQ2. Both the RQ1 and the RQ2 can be worded in terms of general orientations to close relationships, or orientation to a specific relationship (Bartholomew, personal communication, 1993). For this study, two versions each of the RQ1 and the RQ2 were administered, one worded in terms of the child's relationship with mother/the mother's relationship with child, and the other worded in terms of general close relationships (see Appendix A).

Relationship Scales Questionnaire (Griffin & Bartholomew, 1994): This is a multi-item measure, consisting of 30 phrases drawn from the paragraphs descriptions in a number of self-report measures (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987). Subjects rate on a five point scale how well each item fits their characteristic style in close relationships. For this study, two versions were administered, one worded in terms of the child's relationship with mother/the mother's relationship with child, and the other worded in terms of general close relationships. RSQ scores for the four attachment prototypes are derived by computing the mean of the items representing each prototype. The internal consistencies of the RSQ prototype scores are variable and at times quite low. Griffin and Bartholomew (1994) attribute this to the fact that two orthogonal dimensions (self-model and other-model) are combined in the scales. For example, two items making up the secure sub-scale combine the self-model dimension ('I worry about being alone' - reverse scored) as well as the other-model dimension ('I am comfortable depending on other people'). The RSQ shows good convergent validity with the RQ (Griffin & Bartholomew, 1994).

For the study, one minor adjustment was made in the wording of two items on the RSQ. In item 4, the phrase 'merge completely' was changed to 'be completely at one', and in item 18 the phrase 'to merge completely' was changed to 'to be really close'. These changes were made because 'merge' did not seem to this researcher to be a term that is

commonly used in Ireland in relation to emotional experiences. In the case of the child subjects, each child was asked by the present researcher to read aloud the items in, and the instructions for, the RQI, RQ2, and RSQ. They were asked if they understood the meaning of the words and what was required. A few children queried the meaning of some words. Each child was then asked to give the meaning of the queried word as they understood it. If their meaning was consistent with the general meaning of the word, they were told that their understanding was correct. If they did not know the meaning of the word, they were supplied with a standard explanation. For example, the meaning of 'emotionally close' and 'emotionally intimate' was given as 'feeling very close to somebody or very close in your feelings to somebody'; the meaning of self-sufficient' was given as 'liking to rely on yourself'; and the meaning of 'abandoned' was given as 'being left'. The new meanings were written into the protocol in the appropriate places before the child started to fill in the questionnaires.

Analysis of the data

Because of the small sample size, no very powerful or sophisticated statistics are appropriate. However, wherever possible, the data will be quantified and subjected to statistical analysis. When that is not possible, data from particular sub-groups will be visually compared to data from other sub-groups in the sample, or to data from other samples. Since this is a small, non-representative sample, to establish the 'nature' of the sample, and to provide a general context for the findings, the distribution of the children's and mothers' AAI classifications; infant strange situation classifications; and self-reported attachment styles will be compared to those in other more representative samples. Answering the research questions will be approached in the following way:

Questions 1 & 2:: To establish if the method of coding the children's AAIs was similar to that used in other samples of adults and young people, the mean ratings of the children's AAI 'state of mind' scales; and the mean ratings of scales differentiating the different classifications will be compared to those in other samples, using 2-tailed t-tests. The proportion of Dismissing classifications and dismissing-type sub-classifications in the children's AAIs will be compared to those in other samples of adults and young people. Child AAI classifications will also be compared to their responses on the Self-Interview.

Questions 3 ,4, 5, 6, 7, 8, 10, 11 & 12: Fisher's Exact Test will be used to determine the

significance of the two-way (secure versus insecure) mother-child, infant-child, and mother-infant attachment concordance. This statistic will also be used to determine the significance of the relationship between marital status and mother-child, infant-child and infant-mother attachment (secure versus insecure) concordance Because of the extreme sparseness of the data in cells, the three-way and four-way corcordance in relation to the above cannot be subjected to statistical analysis and will be simply presented visually and the patterns discussed.. The significance of the relationship between marital status and life changes will be determined by one-tailed t-tests. The significance of the relationship between life events and continuity of infant-child attachment, and life events and mother-infant concordance will be determined by a one-way ANOVA.

Question 9: The proportion of Dismissing classifications in the children's AAIs will be compared to the proportion of avoidant classifications in the strange situation.

Question 13 ,14 ,15 ,16 , 17, 18, & 19: Fisher's Exact Test will be used to determine the significance of the two-way (secure versus insecure) concordance between the different self-report attachment measures and the AAI. The concordance between the different self-report measures; between the different domains (mother-child and general relationships); and between the self reported attachment styles of the mothers and children will be compared and discussed. The correlation between the continuous ratings on each of the four attachment styles on the RQ2 and the RSQ for mothers and their children will be computed using the Pearson product moment correlation coefficient. .

The data will also be examined in a more qualitative way. In relation to mother-child AAI concordance, the four possible groupings of secure/insecure mother-secure/insecure child will be examined in this way, to investigate any themes and characterises common to each grouping. That analysis will include the following: marital status at the time of the infant's birth; data in relation to the living arrangements of the families at the time of the strange situation[10]; data in relation to life changes on the LES and LEQ; data from the mothers' and children's AAIs, including reports of life changes since the child's birth (e.g. mother's marriage or marital breakdown; death of an important family member; significant change in caretaking arrangements, or other potential major stressors). In relation to infant-child concordance, and mother-infant concordance, a similar strategy will be employed in relation to the four possible groupings, that is, secure/insecure infant- secure/insecure child, and

[10] Data on the mother's marital status at the time of the infant's birth and living arrangements at 18 months were made available to the to the present researcher from the DCDS after the children and mothers were classified on the AAI and on all other measures.

secure/insecure mother - secure/insecure infant respectively.

Limitations of the study :

It is important to acknowledge the limitations of this study. It involves a small and non-representative sample. The participants were not randomly selected. Rather, they were selected, in so far as was possible, for heterogeneity, including children who were classified insecure, as well as those classified secure in infancy; mothers who were single at the time of the children's birth, as well as those who were married; boys as well as girls. The size and non-random selection has implications for the generalizability of the findings. This is particularly true for the findings with regard to the sub-groups in the study, for example secure mothers with insecure infants, which typically contain very small numbers. Thus, the findings in general, and most particularly in relation to the sub-groups, must be approached with great caution. As adverted to earlier in this chapter, to get a sense of the 'nature' of this small sample, and to provide a more general context for the findings, it will be compared to other, often larger, normal and clinical samples. However, any comparisons made must be understood in that context, and not as claims that the sample is 'normal' or 'clinical'.

While intercoder-agreement for both the strange situation and the AAI was high and in line with that found in published studies, the possibility of measurement error cannot be ruled out. Moreover, in a small sample, even one misclassification can exert a disproportionate effect. In the case of the investigation of concordance between infant attachment and maternal attachment over 10 years later, the results must be interpreted with great caution as there is no data on the stability of the AAI for periods longer than 4 years. This study is also the first to investigate child and adult representational attachment patterns in Irish society. The absence of any normative attachment data creates an added difficulty in interpreting the findings.

With regard to the comparison of the married-mother single-mother groups, it must be clearly borne in mind that marital status may not be a sensitive discriminating factor. Any differences discovered between the groups may be reflecting other factors rather than marital status per se (eg the relative youth and somewhat lower socio-economic circumstances of the single mother group) and/or factors that were not measured in this study (eg more general disadvantage; instability in living arrangements and caretaking; lack

of support; and personality/family factors). Similarly, differences among the mothers that might cut across marital status (eg quality of the spousal/partner relationship at the time of the infant's birth, currently, and in the interim) may be masked by using marital status as a differentiating factor. .

Given these limitations, therefore, the results are best approached as hypothesis-generating rather than hypothesis-testing, and the findings, although they may be interesting and meaningful within attachment theory, must be tested in a larger, more representative sample.

Layout of the results

The results are presented in five chapters. Chapter 7 describes the use of the AAI with the sample of children. Chapter 8 describes the concordance between the children's and mothers' AAI classifications. Chapter 9 describes the continuity of attachment from 18 months to age 11-12 and the concordance between infant attachment and maternal attachment over 10 years later. Chapter 10 describes the data on mothers' and children's self-report of attachment styles.

CHAPTER 7

RESULTS: THE MEASUREMENT OF CHILD ATTACHMENT AT AGE 11-12

The results in this chapter are presented in five main sections. Section A examines the use of the AAI for children of this age group, and compares the distribution of the children's AAI classifications to distributions in other samples. Section B compares the coding and classification of children's AAI with other samples. Analysis of how each of the interview scales contributes to the classification of security for this age group is also conducted. Section C presents examples of child discourse from each of the classifications. Section D outlines the children's responses in the Child Self-Interview.

Section A: The use of the AAI for children age 11-12

Children's AAI classifications: Examination of Table 1 shows that, using the three-category system, 13 (59.1%) of the children were classified Secure, nine (40.9%) Dismissing, and none Preoccupied. Using the four-category system, 12 (54.5%) were classified Secure, seven (31.8%) Dismissing, none Preoccupied, and three (13.6%) Unresolved.

Table 1

Classification of children on the AAI (three categories & four categories)

	Dismissing	Preoccupied	Secure	Unresolved	Total
Three category	9 (40.9%)	0 (0%)	13 (59.1%)	no	22 (100%)
Four category	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)

Using the three-category system, the distribution of the Dublin sample was compared to that found in a meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996) on four samples of adolescents and young adults (N=277) which, using the three-category system, found 56% classified Secure, 27% Dismissing and 17% Preoccupied. It can be seen from Table 2 that the over-all secure-insecure distribution of the Dublin children (59.1% and 40.9% respectively) compares to the secure-insecure distribution of samples in the meta-analysis (56% and 44%). The Dublin sample, however, is interesting in that there are 40.9% classified as Dismissing and none classified Preoccupied, compared to 27% and 17% respectively in the meta-analysis. Using the four-category system, the sample was also compared to a meta-analysis of three samples of adolescents and young

adults (N=225) conducted by the same authors. The over-all secure-insecure distribution of 54.5% and 45.5%, compares to 48% and 52% respectively found in the meta-analysis. Table 3 shows that the proportion of Unresolved classifications is lower in the Dublin sample than that found in the meta-analysis (13.6% versus 20%), although it falls well within the general range of Unresolved classifications found in the meta-analysis and in other studies

Table 2

Comparison of children's AAIs with a meta-sample of adolescents and young adults (three categories)

	Dismissing	Preoccupied	Secure	Total
Dublin children	9 (40.9%)	0 (0%)	13 (59.1%)	22 (100%)
adol/young adult	76 (27%)	47 (17%)	154 (56%)	277 (100%)

Note: 'Adol/young adult' refers to a meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996) on 4 samples of adolescents and young adults (N=277).

Table 3

Comparison of children's AAIs with a meta-sample of adolescents and young adults (four categories)

	Dismissing	Preoccupied	Secure	Unresolved	Total
Dublin children	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)
Adol/young adult	47 (21%)	27 (12%)	107 (48%)	44 (20%)	225 (100%)

Note: 'Adol/young adult' refers to a meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996) on 3 samples of adolescents and young adults (N=225).

Because the AAI has been used on only one sample of similar aged children (Ammaniti et al., 1998), the distribution of the Dublin sample was also compared more specifically to that of other low-risk samples of children, adolescents and young adults. First, using the three-category system, it can be see from Table 4 that the over-all distribution of secure-insecure attachment classifications is broadly similar to a sample of 10 and 14 year olds (Ammaniti et al., 1998); of 18 year olds (Kobak & Sceery, 1988); of first-second year college students, approximate age 18-22 (Hesse, van IJzendoorn, & Main, 1993); of 22 year olds (Sagi et al., 1994); of 25 year olds (Allen et al., 1996) and of 28 year olds (Fonagy, Steele, Steele, Leigh, Kennedy, Mattoon, Target & Gerber, 1996).

Compared to these other samples, the Dublin sample is again interesting in that there are no children classified as Preoccupied, and the proportion of children classified as Dismissing is the highest in all the samples, the next highest being the sample of 14 year olds (Ammaniti et al, 1998). Examining the secure-insecure distributions over all the samples, it is also interesting to note that the proportion of insecure classifications appears

to rise with the onset of adolescence, peaking at the end of adolescence.

Table 4

Comparison of children's AAIs with other samples of young people (three categories)

	Dismissing	Preoccupied	Secure	Total
Dublin Sample M age11.75	9 (40.9%)	0 (0%)	13 (59.1%)	22 (100%)
Ammaniti et al (1998) M age10	9 (29%)	2 (6.5%)	20 (64.5%)	31 (100%)
Ammaniti et al (1998) M age 14	11 (35.5%)	4 (12.9%)	16 (51.6%)	31 (100%)
Kobak & Sceery (1988) M age 18	17 (32.1%)	8 (15.1%)	28 (52.8%)	53 (100%)
Sagi et al (1994) M age 22.9	14 (23.7%)	4 (6.8%)	41 (69.5%)	59 (100%)
Allen et al (1996) M age25.8	15 (23.4%)	9 (14.1%)	40 (62.5%)	64 (100%)
Fonagy et al (1996) M age28	18 (21.2%)	14 (16.5%)	53 (62.3%)	85 (100%)
Hesse et al (1993)1st/2nd College	29 (32.2%)	17 (18.9%)	44 (48.9%)	90 (100%)

Note: 'M age 10' and 'M age 14' refer to AAI attachment at age 10 and 14 in a low-risk sample (Ammaniti, van IJzendoorn, Speranza, & Tambelli, 1998). The other named studies refer to attachment in older adolescent and young adults from low-risk samples (Allen et al., 1996; Fonagy, Steele, Steele, Leigh, Kennedy, Mattoon,Target & Gerber, 1996; Hesse, van IJzendoorn, & Main, 1993; Kobak & Sceery, 1988); Sagi et al, 1994).

Using the four-category system, it can be see from Tables 5, that the over-all distribution of secure-insecure attachment classifications is broadly similar to the other samples of 10 and 14 year olds (Ammaniti et al., 1998), and the proportion of Unresolved classifications falls mid-way between that in other samples ; of 18 year olds (Kobak & Sceery, 1988); of first-second year college students, approximate age 18-22 (Hesse et al., 1993); of 22 year olds (Sagi et al., 1994); of 25 year olds (Allen et al., 1996) and of 28 year olds (Fonagy et al., 1996).

Table 5

Comparison of children's AAIs with other samples (four categories)

	Dismissing	Preoccupied	Secure	Unresolved	Total
Dublin children Age 11-12	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22(100%)
Ammaniti et al.(1998) Age 10	8 (25.8%)	1 (3.2%)	20 (64.5%)	2 (6.5%)	31(100%)
Ammaniti et al.(1998)Age 14	11 (35.5%)	3 (9.7%)	16 (51.6%)	1 (3.2%)	31(100%)
Sagi et al (1994) M age 22.9	14 (23.7%)	4 (6.8%)	39 (66.1%)	2 (3.4%)	59(100%)
Allen et al (1996) M age25.8	12 (15.8%)	13 (17.1%)	34(44.7%)	17 (22.4%)	76(100%)
Fonagy et al (1996) M age28	17 (20%)	12 (14.1%)	50(58.8%)	6 (7.1%)	85(100%)
Hesse et al (1993) College	21 (23.3%)	10 (11.1%)	34 (37.8%)	25 (27.8%)	90(100%)

Note: 'Age 11-12' refers to the children in the present study. 'Age 10' and 'Age 14' refer to AAI attachment at age 10 and 14 in a low-risk sample (Ammaniti et al., 1998). The other named studies refer to attachment in older adolescent and young adults from low-risk samples (Allen et al., 1996; Fonagy et al., 1996; Hesse et al., 1993; Sagi et al., 1994).

Section B: Comparison of coding and classification of children's AAI with other samples:

Next, the use of the AAI with this age group was explored, to determine if the method of

coding of the transcripts and of classification of the children was similar to that used in the coding and classification used in other samples. First, the means of the children's 'state of mind' scales (which are crucial for classification) are compared to those in a sample of 10 and 14 year olds (Ammaniti et al., 1998) and with a sample of young adults (Allen et al., 1996). Scales for idealisation of mother and idealisation of father are combined into a single overall scale for analysis, as are scales for anger in relation of mother and father, scales for derogation of mother and father, and scales for coherence of transcript and coherence of mind. Inspection of Table 6 shows that with regard to derogation of parents, anger with parents, insistence of lack of memory, passivity and coherence, the mean ratings of the Dublin sample are very similar to the other samples. However, for idealisation of parents, the mean ratings of the Dublin sample are somewhat higher. This might reflect the higher proportion of Dismissing children in the sample. On the other hand, if this were the explanation, it might be expected that this would also be reflected in higher ratings in lack of memory which was not the case. Thus, the high idealisation may be a feature of this particular sample.

Table 6

Comparison of Means (and Standard Deviations) for 'state of mind' scales of child AAIs with other samples

State of mind	Dublin sample	age 10 sample	age 14 sample	young adult sample
Idealisation parents	M=4.42 (1.99)	M=2.90(1.48)	M=3.06(1.52)	M=3.05(1.80)
Derogation parents	M=1.02 (.11)	M=1.20(.48)	M=1.65(.91)	M=1.65(1.48)
Anger parents	M=1.57 (.87)	M=1.79(1.02)	M=1.68(1.01)	M=2.16(1.57)
Lack of memory	M=3.98 (2.49)	M=3.00(2.27)	M=3.92(2.18)	M=3.53(1.97)
Passivity	M=2.93 (.99)	M=2.37(1.60)	M=2.84(1.36)	M=2.76(2.00)
Coherence	M=4.48 (1.89)	M=4.77(1.67)	M=4.59(1.38)	M=4.19(2.00)

Note: Age 10 and Age 14 samples refer to the Ammaniti et al. (1998) sample; the young adult sample refers to the Allen et al. (1996) sample.

Next, the mean ratings on scales differentiating the different attachment classification groups were examined. This was to determine if the relations between the scale scores and classifications were the same in children's AAIs as they are in adults. This was important to establish, as coders, although using the normal coding and classification system, might have 'drifted' in their coding in order to accommodate specific features of the children's experience and discourse.

For this purpose, only the Secure and Dismissing classifications are relevant, since there were no children classified as Preoccupied. To determine the significance of the differences between the means, t-tests were used. Analysis of each variable (scale) relating to

experience of childhood, shows that the Secure group differs from the insecure/Dismissing[1] group by having significantly higher ratings on the following scales: loving mother, loving father, involving mother, pressure to achieve mother (with a trend towards higher ratings on the scales for involving father and pressure to achieve father). With regard to the 'state of mind' scales, Secure children also had significantly higher ratings on coherence of transcript and coherence of mind scales (with a trend towards higher ratings on metacognition). The Dismissing group, on the other hand, had significantly higher ratings on the rejecting mother scale, as well as on the idealising mother, idealising father, anger mother and lack of memory 'state of mind' scales. These results indicate that the scales differentiating Secure from Dismissing children operate in the same way as they do for adults, confirming the theoretical assumptions used in the general coding system.

Specific features of the sample

Given the age of the Dublin sample, one research question was whether the beginning of their struggle for autonomy from their parents would be reflected in an over-representation of Dismissing classifications, and an over-representation of dismissing strategies towards parents, reflected in derogation of parents and in the more dismissing sub-categories (F1 and F2) of the Secure group. In part, this seems to be the case in that, as observed earlier, the proportion of Dismissing children is higher than in other samples. Among the Secure group, six (46.2%) were sub-classified F1 or F2. Given the age of the Dublin sample (age 11-12 years), it is interesting to note that Ammaniti et al. (1998) found that, at age 10, among their 20 Secure children, six (30%) were sub-classified as F1 or F2. By age 14, of the then 16 Secure children nine (56.2%) were in the F1 and F2 sub-classifications. However, given that there is no directly comparable longitudinal data for the Dublin sample, these 'dismissing' features in the sample may be due to chance. It must also be borne in mind that, as noted earlier, in the Dublin sample, ratings on derogation of parents, another dismissing strategy, is lower than that found in other samples of children and young adults.

This pattern of results appears to answers research *Question1* positively; that is, the AAI discriminates attachment classifications in this age group in the same way as it does with adults, although no children were classified Preoccupied in this sample. of children. The answer to *Question 2* is also positive: a higher proportion of childen of this age group are

[1] Reference to a Secure AAI classification will always be capitalised since it refers to a particular classification. Reference to an insecure AAI classification (i.e. Dismissing or Preoccupied classification) will be in lower case.

classified Dismissing than in adult samples.

Table 7

Comparison of children's AAI scale score Means (and Standard Deviations) for secure and insecure classification groups

AAI Scales	Secure group	Dismissing group	F	t-test(2 tailed)
Inferred experiences				
Loving M	M=5.50 (1.68)	M=3.16 (.61)	0.023	0.001
Loving F	M=5.50 (1.35)	M=2.06 (4.17)	0.153	0.011
Rejecting M	M=2.92 (1.48)	M=5.78 (1.30)	0.992	0
Rejecting F	M=2.81 (.80)	M=3.44 (4.75)	0.048	n.s.
Involving M	M=2.69 (1.61)	M=1.11 (.33)	0	0.009
Involving F	M=1.31 (.63)	M=.11 (3.48)	0.055	n.s.
Press to ach M	M=1.81 (.99)	M=M=1.00 (.00)	0	0.02
Press to ach F	M=1.62 (.89)	M=1.00 (.00)	0	0.069
Neglecting M	M=1.23 (.78)	M=.78 (3.93)	0.053	n.s.
Neglecting F	M=1.50 (.91)	M=1.29 (.76)	0.275	n.s.
State of mind				
Idealisation M	M=3.31 (1.16)	M=6.89 (.89)	0.153	0
Idealisation F	M=2.85 (1.03)	M=6.31(1.25)	0.72	0
Anger M	M=2.00 (1.15)	M=M=1.00 (.00)	0	0.018
Anger F	M=1.62 (1.04)	M=1.38 (1.06)	0.512	n.s.
Derogation M	M=1.00 (.00)	M=1.00 (.00)*		
Derogation F	M=1.08 (.28)	M=1.00 (.00)		n.s.
Derogation Gen	M=1.31 (.63)	M=1.61 (.99)	0.314	n.s.
Lack of Memory	M=2.42 (1.46)	M=6.22 (1.87)	0.898	0
Metacognition	M=2.00 (1.35)	M=1.11 (.33)	0.003	0.07
Passivity	M=3.11 (1.06)	M=2.67 (.87)	0.788	n.s.
Fear Loss				
U/Loss	M=2.70 (1.80)	M=2.75 (2.00)	0.561	n.s.
U/Abuse	M=1.00 (.00)	M=2.50 (3.00)		n.s.
Coherence Transcript	M=5.65 (1.18)	M=2.61 (.96)	0.306	0
Coherence Mind	M=5.88 (1.04)	M=2.61 (.96)	0.559	0

* t-test cannot be computed as S.D. of both groups 0.

Section C: Examples of child discourse for the four AAI classifications:

Children classified Secure on the AAI.[2]

Individuals classified Secure on the AAI are primarily characterised both by the *value* they place on attachment relationships and their autonomy with respect to attachment relationships and experiences. These characteristics are reflected in their ability to freely explore their thoughts and feelings about attachment relationships, with moderate awareness of the nature and effects of their attachment experiences with their parents and

[2] For convenience, a brief description of the characteristics of the AAI classification in question will precede the examples.

others, with little self-deception regarding these relationships, and with objectivity and balance. Their discourse is characterised by fresh and free-flowing speech, vivid examples, meta-cognition (ability to reflect on the process of their own thinking and recall), and by ease, thoughtfulness and open-mindedness about the topic of attachment. Thus, their discourse is marked by high coherence: they can provide evidence for what they say, and can describe their experiences in a complete, succinct, relevant and clear way.

A significant theoretical and empirical question was whether children at the end of middle childhood/latency would be able to express their thoughts and feelings with regard to attachment in the way measured by the AAI, given that children of this age are still psychologically 'embedded' in the matrix of dependent relationships with parents, and, in addition, have not fully reached the abstract reasoning stage. This proved not to be the case. Instead, the discourse of children classified as Secure was found to meet the criteria for Secure adult discourse, and these children were found to be autonomous and balanced with regard to expressing their thoughts and feelings with regard to attachment. Following are examples[3] :

Case 20-C[4]: The following extracts provide an example of a child classified Secure, reflecting on his attachment relationships and experiences with his parents in an autonomous way. What is striking is the freedom and honesty with which he explores his thoughts and feelings about the topic, how balanced and objective his account is, how aware he is of own part in relationship difficulties, and how relatively at ease he is with his parent's and his own imperfections. Although clearly treasuring closeness with them, he does not idealise them and does not align himself with his father's punishment of him.

Some children have memories of being abused, kind of bad things happening them. Did you ever have/

'Like being smacked or something? ..Well, when I was - I wasn't - think I was about three or four years ago - I was really, really bold and like I - I was never doing me homework in school and I forgot me journal and me dad eh smacked me but like, he wasn't really going to hurt me and I moved -I tried to pull me hand away and he hit me, he hit me there and you could actually see me veins sort of. But he didn't mean to hurt me, like, and I thought he

[3] Interviewer's questions are in italics. Length of silences are noted in parentheses. Interruptions are noted by a slash (/) sign.

[4]Each mother-child dyad was assigned the same case number. For clarity, 'Case-M' refers to the mother and 'Case-C' refers to the child in each dyad. Since excerpts from the same cases may occur in different sections of this chapter, for ease of cross-referencing, each reference to a particular case is in bold type.

did but after when we were - when everything cooled down I asked him 'Why did you hit me so hard?' and he goes 'Why, where did I hit you?' and I showed him me hand and he goes 'Oh, I'm sorry, I didn't even mean that, I was only trying to smack you on the hand'.

In general, how do you think that all you experiences growing up in your family have affected your personality?

'Well, I think, I'm em - I'm a bit over tem-- I'm bad tempered and I get into trouble and I'd say that was from, like, mostly when me dad gave out to me or something, I said right, I'm not taking this anymore, I'm going to be even bolder, but like I never actually did, I just stayed the same as I was, I was always bad tempered'.

And what would you say is the thing that most satisfies you, that you most like about your relationship with your mam?

'Em, (.....6 secs) she always, like, just help out. She'd never like, 'Oh, I'm too busy, I have loads of stuff to do'. She'd always have a minute for me.....'

And is there anything about your relationship with her now that kind of disappoints you, or that you wish was different?

'I don't really get to see her that much, like I'd rather if I got to be with her more'.

And what about your dad? How would you describe your relationship with your dad now?

'Dad's funny, he's always bringing me places and like. Em, whenever there's a football match on he's always bringing me and he'd probably leave me brother at home with me mam or something, like I'd always be the first one to go, because he always gets more of the attention cause he's younger'.

And is there anything about your relationship with him that disappoints you a bit, that you wish was different?

'Well, I don't get to see much of him either. He works six days a week from eight in the morning till six at night, so like, I only see him, I barely even see him, I only see him when

I'm going to bed practically. And then Sundays he always gets his lie-in till about twelve or one and then when I do see him it's bringing me over to me nanny's and he always goes down the pub with me uncle or something'.

And say, if you were describing your relationship with your dad, rating it out of ten, so one would mean it was a really bad relationship and ten would mean it was absolutely brilliant, what would you say your relationship with your dad is really like? What number would you give it?

'Probably give it about six'.

And what about your mam? What number?

'Six or seven as well'.

Case 6-C: The following is an example of child classified Secure describing, first, her sense of standing support from her parents, and then reflecting on her own thought processes about an interaction with her father.

And what would happen the times you were sick? How would you react when you were sick at home? What would your mam do?

'Em, well, if she had anything planned, she'd call it off and she'd make sure she's home with me. And make sure, if I had a tummy ache, she'd have the a bowl beside me, in case I needed to get sick, or anything I needed, she'd be there beside me and she'd always be with me'.

When you were growing up, if you were upset about something can you remember being held by your parents, held in their arms?

'Yeah, em (. . . . 4 secs). If I was upset, em, and if I couldn't stop crying because I was so upset over it, I used to get really, really upset now and again because I, em, I couldn't work it out and/ (*Couldn't work what out?*) I couldn't work why, why it's wrong, and if I couldn't understand anything like that, em, my mam, she'd talk it over with me for a little while and then she might give me a hug and say 'Are you OK?'. And if not, I might sit on

her knee for a little while.'

This child described her father as 'really funny', given to rough-house playing sessions with her that she enjoys - 'it's a big laugh all the time'. However, she added:

'Yeah, em, sometimes the fun gets too far and you know, you keep on playing with him and then if you push him back and hurt him, he's, he's get cross and he's say 'You can't be doing that and it's not nice'. And then you kind of get upset because you think 'God he was doing it to me I was only doing it back'. And you kind of think it's unfair and it's really, sometimes it can get serious and he might say 'Get out of the room and stay our there I don't, I don't want you coming back into the room..'

She described a particular incident that started playfully, but got out of control, ending with her throwing the remote control across the room and breaking it, and her father inadvertently hurting her:

'And I got really upset because in his messing he might do that (*miming a pinch)* and it gives you a bit of a shock (*you mean pinch you?*). Yeah, and sometimes it'd give you a shock, you know, you just get a shock off it. Sometimes he can tiddle you, both at the same time though, and he done that to me and I ran upstairs to my bedroom and it was really sore. And I just looked at it and there was a little bruise on my leg. I just went downstairs and I couldn't, I didn't know how to say it to him cause he was my dad, but I didn't know how to say it to him, he was very cross with me at that stage. And cause he had thought I had broke the remote control, and that's why he got really cross at me. Em, I just went downstairs and I didn't know how to tell him, so I just burst out all my feelings and I showed him my bruise and he went 'Sorry, I didn't mean it' and we both apologised then'.

Case 19-C: The following extract provide an example of high coherence, marked by simplicity, and vivid and fresh discourse:

'Very close' - Can you think of a particular memory or incident that would help me understand why you chose that word to describe your relationship with your mum?

'Well, the fact that we always go everywhere with each other, and em, (. . . . . 8 secs) (*Any particular time that you remember, when you and your mam were particularly close?*)

(. . . . . 10 secs). Em, (. . . . . 5 secs) I used to get mocks and jeered in school. And mam was very close to me then. (*Can you remember a particular time when that happened?*). Em, she'd - she hugged me and em, what's the word (. . . . . 8 secs) we, sh--, she was very close then *(Can you tell me a little bit about that time?)* . Em, well, she'd hug me and I'd hug her sh-- and she'd, em, sh-- it made, it made things ok. When I hugged her'.

He volunteered the adjective 'sociable' to describe his relationship with his father.

'Sociable. Well, again, he would always talk to me. Even at em, stressful times. *(Can you remember a particular time that stands out in your mind about that?*) Em, (. . . . . 7 secs) around the same time as mammy was very frantic when aunty (name) was coming over, mad dash around the house to get everything in order. Em, he, he would always talk to me then. And, em, an, every, every time we drive, when we go out for a drive, sometimes long drives, we we usually talk to each other (*Does any particular memory pop into your mind about that?)* . Em (. . . . . 5 secs) I remember one time, we were driving home from (name of place), em, at something like, we, we woke up at four, f- three o'clock in the morning, to eh, to get home, because dad had to go to work. We ended up staying the night at daddy's auntie's and uncle's. So,em, even then he was absolutely knackered tired and he would still talk to me'.

Children classified Dismissing on the AAI.

Individuals classified Dismissing on the AAI are characterised by a state of mind that indicates a current attempt to limit the influence of attachment relationships and experiences in their thinking, feeling, and behaviour. They *dismiss* the import of attachment relationships or experiences, by dismissing any imperfections in their parent(s), or in themselves as a result of their negative experiences with their parents, or, more rarely, by derogating attachment relationships or experiences. This idealisation of the parent(s) in the face of contradictory or unsupportive evidence from their actual experiences with parents may be kept in place by seldom turning attention to attachment-related memories, hence a strong correlation between idealisation and insistence upon lack of memory for childhood in the interviews of Dismissing individuals. Their discourse is characterised by a generalised representation of parents and attachment experiences that is remote from actual experiences, and that is either actively contradicted by autobiographical memories or is not

supported by them. There is also a tendency to 'normalise' experiences, that is, to try to convince the interviewer that the subject's parents, feelings, or experiences are 'normal'. There is an emphasis on 'fun', 'activities' or material objects, which are valued as indications of a favourable childhood. The interview is not free-flowing.

Case 17-C: The following is an example of a child classified as Dismissing describing his relationship with his parents:

I'm going to ask you to choose five words to describe your relationship with your mam, going back as far as you can remember...

'Kind (*Kind, very good, that's one*). Generous (*generous, yeah)* . Nice (*nice, yeah).* Em, (. . . 3 secs). You could get along with her. (*yeah, and the last one?*) (. . . . . 9 secs) Em,...(*It's hard, isn't it?*). Yeah (*So, you've kind, generous, nice, get along with her..*). And, ... loving'.

I'll take the first work 'kind.' Is there a particular memory, or example, that pops into your head, that would describe why you used that word about your relationship with your mam?

'(. . . . . 7 secs) (*Any memory at all?*) (. . . . . 6 secs). Ah, like she brings me, along to loads of places. And, eh, we get on rides together. (*You mean on fairgrounds is it?*) Yeah. *(That's a very good general description. Can you think of a particular time?).* (. . . . 4 secs). Em, (. . . . 4 secs) I'm not really sure now. (*Any memory, any time, any example of your mam being kind to you?*). She bought me a load of things like, for Christmas. *(Yeah, this year you mean?)* . Yeah, and all the others. *(Can you think of any particular time?*).. Em, (. . . . 4 secs) No. (*No? OK. It's kind of hard sometimes).* Yeah'.

OK. Let's move on to the second word 'generous'. Any examples of that?

'She's very generous. She gives me a fiver a week for pay, and eh, Lucozade. She gives me, she buys me a load of clothes. And eh, (. . . 3 secs) she gives me sister a load of things. (*Can you remember a particular time she was generous to you? Any memory that stands out in your mind?).* They're all good. (*They're all good).* Yes, they are. *(Any particular one though that stands out in your mind?*). Em, (. . . . . 7 secs). Well, when she got stuff

for me birthday and all. (*This year?*) No, last year. *(What did you get?)* . She got Rollerblades for me. She got Man-United T-shirts and a load of things, others, you know. Coats, eh. (*So that was very good, okay).* Yeah'.

The next word you chose was 'nice'. Any particular memory?

'Well, she's always, like, nice, like. She's always happy. And she's always nice to us, and all. And (. . . . . 5 secs). She's just perfect, really. (*That's very good. And can you think of any particular memory of of that? I know this is very hard, but anything that just pops into your mid?)* (. . . . . 6 secs). Not really'.

The next one you chose was 'get along with her'.

'Yeah, she's fine to get along with. And, eh like, everything , like, if , eh (. . . . . 5 secs) *(It's hard, isn't it?)* . Yeah. *(I want you to think back on all the time you spent with your mam. Is there a particular time that stands out in your mind when it was easy to get along with her?).* Over on holidays like. We were all happy, and she used to get along with everybody. *(Right. What holidays were they now?)* Eh, in (name of place) we went to. (*Yeah. And was there any particular time when you were getting along with your mam?*). We went to the swimming pool, and I just said 'Can I go to the swimming pool?' and she went 'Yeah, go on, go, go'. And all'.

And the last one 'loving'

'Yeah, she's very loving, you know. She cares for everybody and (. . . 3 secs). She cares and eh, she buys stuff and all. (*And can you think of any particular memory about that?)* (. . . . . 5 secs). Eh, *(phew)* , she's , she is loving. She loves you a lot, and she always says 'I love you (name of child)' and all.'

Asked what he does when he is upset he answers:

'I go up to me bedroom. And stay there. (*Yeah, and what would happen then?)* . And then, I'd say I'm sorry and all. (*What?*). If I'm upset like, they done something. (*Who do you mean by they?)* Me ma and da. They wouldn't do anything, but, you know. If that happens, if I'm upset'.

What about the times when you would be upset in your feelings, emotionally upset. Like feeling down, or upset about something that happened, or worried? what would you do then?

'Em, don't really, wouldn't show it. (*You wouldn't show it?)*. No. *(To anybody?).* No. (*How come?).* I just wouldn't'.

It was striking that when asked if he was ever frightened or worried as a young child, he recounted an incident when he had an accident and was very frightened. He described his reaction as going 'to me bed in the hospital and waited there to see what happened'. He did not immediately turn to his parents as a 'secure base', describing them as 'scared' themselves. In fact, he did not even mention their presence until asked.

'Were you ever frightened or worried as a kid?

'Em, when I was, got hit by a car and thought, something was really going to happen to me'.

And what did you do when you were that worried?

'Just go to me bed in the hospital, and waited there to see what happened. (*Yeah?).* Yeah. *(And then did your parents come?*) No, I was beside me parents. *(Oh, you were beside them?*) Yeah. (*And how were they reacting?).* (. . . 3 secs). They were scared. (*Yeah?*). Yeah'.

This child also expressed a barely suppressed anger at his mother when asked if there was ever a time when he felt rejected as a young child:

'No, there wasn't any I recall. (*None that you can recall. Did you ever feel pushed away or ignored?)* . Em, (. . . 3 secs). I felt ignored because me ma was going deaf. (*Oh really, what happened?).* Well, she wasn't going deaf, she's still like that. *(Yeah ?).* You have to shout at her. (*There's nothing wrong with her hearing is there?).* There is, you have - well, there's nothing wrong, but you have to - well, you're around ten feet away from her 'Ma, can I have something to eat?' 'What? I can't hear you. (*And how do you feel about that?).* Well, here I am shouting 'Ma, will you answer me?' and she'd call 'I didn't hear

you'.

He returned to this theme later in the interview, displaying a marked unease with the topic.

What would you say is the thing that you most enjoy about your relationship with your ma? The thing that gives you the most satisfaction?

(. . . . . 10 secs). I'm not sure. (. . . . . 5 secs)'.

What's the thing that works best between you and your ma?

'Em, (. . . . . 5 secs). I can't remember'.

And what most disappoints you in your relationship with your ma?

'She's going deaf. *(Going deaf. Yeah).* Yeah, (..... 5 secs). I think that's the lot. That's it really'.

Children classified Unresolved on the AAI

A classification of an Unresolved state of mind with respect to experiences of loss or abuse is assigned on the basis of lapses in the monitoring of reasoning or discourse, or reports of extreme behavioural reactions during discussions of these experiences. These reactions may originate in frightening experiences surrounding the loss, and may be linked to the possible intrusion of dissociated or partially dissociated ideation taking place in the interview context. Lapses in the monitoring of reasoning can include indications of disbelief that the person is really dead, or that the abuse really occurred; disorientation about the time or the place of the death or abuse, and psychologically confused statements. Lapses in the monitoring of discourse include disoriented speech, prolonged silences, unusual attention to detail, or invasions into other topics of information regarding the death or abuse.

Case 22-C: The following is an example of a child classified as Unresolved discussing his grandfather's death. His account is characterised by confusion: about the time of the death, the closeness of the relationship, the effect of the death on him and how his feelings have changed. It is striking that his confusion about the time of the death is emphasised by his

struggle to be precise about it[5].Asked early in the interview when his grandfather died he replied:

'Em, I believe in September, not this September. Nine- I think it was 1993 or '94'.

Later in the interview, he was asked if there were any people who were important to him growing up, apart from his parents:

'Probably me grandad, but I never really got to meet him. I never really met him like to really talk to, cause when I, I was four, I think or younger, when he died. (*Right, so you did not know him before then did you?).* I, I knew him, yeah, but I can't remember, like, like, I didn't get to talk to him, as now like, but I can remember bits about him. He used to bring me into town every week and buy me jellies...and he brought me into Santa every year. (*Really?*). Yeah. (*You remember that?*). Yeah, and eh, that's it really I can remember'.

Asked about the circumstances of his grandfather's death he replied:

'..he was knocked down on the, just crossing his road, the, this truck didn't have lights, and kind of coming across the road, and he knocked him down'.

How did you react at the time to that?

'I didn't really know, until me mam told me. (*How did you feel when you heard?)* Sad (. . . . . 9 secs). (*crying silently). (You still feel very sad, do you?*). (. . . . 4 secs)...'

And did you go to the funeral?

'I can't remember (. . . . . 8 secs) *(whispers). (You can't remember. Things are sad for you aren't they?).* Mmm. *(You can't remember going to the funeral?).* I think I did, I can't remember really. .*(So you felt sad at the time?).* Yeah.'

And how many years ago was that now?

[5] Note: this child's mother reported in her interview that the death occurred 'about 7 years ago', that is when this child was aged nearly 5.

'Think it was two or three, three or four, three years ago'.

And have your feelings changed?

'Yeah, cause I'm much older now. (*How have they changed?)*. Em, when I was younger, I didn't really understand, I do now. (*Mmm, and what do you understand now?)* . Em, I didn't really know how he died, eh, (. . . . 4 secs)'.

How do you feel about it now?

'It was, sort of changed my life (whispers)..(*What?*). Didn't really know him. (*It changed your life did it?).* Sort of. *(How?).* Cause I can, can't really describe it (. . . . . 12 secs). (*it's hard to talk about it is it?*). Yeah *(whispers) (Do you miss him a lot?*) (. . . . . 7 secs)'.

How do you think it has changed your life?

'I don't really know. *(Do you think about him a lot?)* . Yeah. *(what do you think?).* Eh, I just wonder. *(What do you wonder?)* What he was like, and all (. . . . . 5 secs)'.

For the rest of the interview, which moved on to different topics, this child remained unsettled, speaking in a barely audible voice, interspersed by long silences.

Case 13-C: The following is an example of a child classified Unresolved with regard to abuse. His discourse is characterised by cognitive and affective disorganisation, manifested by an inability to speak about the abuse without simultaneously denying it, and by disorganised/disoriented speech. This child is also substantially idealising of his father, and aligns himself with his father's punishment of him.

Can you describe your relationship with your parents going back as far as you can remember, to when you were a little kid? How did you get on with them?

'I got on pretty fine, and em, but (father's name) he, he, he's changed a lot from now, cause he used to be, used to be real cranky because of his back was really, really, sore then,

so..he, hit us a few times when we, we, really annoyed him but now he doesn't do it anymore'.

Later in the interview he was asked about discipline at home.

What about when you were little, what would happen when you were bold?

'I'd get smacked with the strap, but he hardly never does that anymore *(Your dad, is it?)*. Yeah. *(He'd use a strap is it?)* Yeah. *(Would it hurt?)* Em, well it did hurt then, but it doesn't hurt now anymore (*Yeah, it's not happening now is it?*) No, hardly ever'.

So when you were little, what was it like then?

'(. . . 3 secs). Uh, it look, ok, since we were small, you know the way everything looks a lot bigger when you're small, well, I'd actually, the rope looked like, oh that long! *(mimes its length)*. As he goes uhh God!, now it's gonna, looks only, like, that long! *(subject says a few unintelligible words that sound like 'putting on belt)* (*It looked bigger than your arm span is it?)* Yeah *(Was it a whip?)* No, it was actually just his belt. And I go, I don't know and I always try to run off and hide cause it really did hurt me, but it doesn't hurt me anymore'.

And when you were little, when you say 'hurt you', what do you mean by that?

'Em, he wouldn't go 'wham bam' he'd only go like that, only hit my hand a little bit *(Just your hand, is it?)* Yeah, well, *(Would he hit you anywhere else?)* We, my leg, but, like, that wouldn't really hurt, it's only be, like, eh ..., that or something *(mimes)* sl--.not really that hard. *(So it was your hands mainly, was it?)*. Yeah, yeah, but like, he didn't really hit it that hard'.

Ok. And did it ever, even once, leave a mark?

'Eh, no! (*No?)* Oh, once it did, it was, like, I had a cut on it anyway, so, like, it really left a dint in the soft skin, so like. *(When you say dint what do you mean?)* Like, you know the way, well, just, like, left a little red mark over the cut but it's gone now'.
Did your dad know that you had a cut on your hand?

'What? Em, no, see he thought it was this hand, but he hit me on this hand so it was, like, really the wrong hand. *(Did it ever leave a bruise?)* No!'

And what would happen when you'd run of to your room and hide?

'Em, ...he'd say '(name of child) I won't hit you. I won't hit you, if you just behave a bit more. Please, I have a hard enough time as it is, and he comes down and he doesn't hit me, like (. . . . 4 secs). He's like, he's real, like, he's a real kind dad. *(Yeah, kind now, but that was then wasn't it?)* Yeah, and now he's like, a lot kinder, and he hardly never smacks anyone. He just shouts at them. (*But what about when you were little?)*. Yeah, it really happened when I was around four, but now,like, when I went to five, he hardly never smacked anybody, but when I was six he kind of stopped'.

When you were little, would you run to your room?

'(. . 2 secs). Well, like, I never always ran to my room, I ran behind, em, chairs and sometimes, he'll hit me, like here a bit, but ...(*On your thigh is it?*) Yeah, and now it just leaves, like, a red mark if like, I was really bold, now, really annoying him, so like, and he, and he always done it for the proper reasons he never done it just say if I hit my head you know the way people get really annoyed when people hit their head, by mistake and they say 'Why did you do that WUHHH! Ok, well, em he wouldn't do that he'd just say 'Are you all right, are you ok?' and then the way some dads like when the, when they're like that, just tapping the table you know the way they do is 'SHUT UP' shouting at the child while (father's name) would say 'Please stop, OK?' and cause, like, he's nothing like any other dad I ever known. *(You mean like he's...?)* /Like a Super-dad'.

So, you're saying other dads would shout but your dad wouldn't is it?

'Yes, he's like that, he only shouts when he gets really really annoyed. *(And did he ever shout at you when you hurt your head?)*. No. *(And did you ever hurt your head, like you were describing there?)*. Yeah, I did. Em, I hit a really sharp corner off a table and it was, like, really, really hurt and I was crying and (father's name) said 'What's the matter with you?" and I go 'I hit my head off the sharp end of a table'. And he's like 'Alright, you're alright, you're alright, you're alright, come upstairs and we'll stick and tell me how it happened and everything.' He really wants to understand what happened'.

Right. And what about when you're tapping on the table,what happened then, when you were little?

'He just said eh, 'Stop' and I stopped cause like he wasn't really going to do anything for just tapping the table. It's nothing really'.

So, when your dad used to do these things, how did you feel?

'Eh, like, cause anyway if he was going to smack me it would be only around once a week hardly never cause like, see, he didn't like smacking us, he hated it. It was the worst thing he could do'.

Were you scared?

'Yeah. *(Very scared?)* Yeah *(What were you scared of?)* I was just scared that like he would really really hurt me and everything but I knew he wouldn't but like I was still afraid'.

Section D: The children's responses in the Child Self-Interview.

The children's self interviews were analysed in two stages. First, the responses in each self-interview transcript were examined on a case-by-case basis and classified according to the criteria developed by Cassidy (1988). The responses of 11 of the 22 children were classified open-flexible. Of that 11, nine (81.8%) had been classified Secure on the AAI. Put another way, of the 13 AAI Secure children, nine (69.2%) were classified open-flexible, a finding very similar to the result in Cassidy's study (67%). The remaining four were classified as follows: three avoidant-perfect, and one body preoccupied. Of the nine AAI insecure children, three were classified avoidant-perfect in the Self Interview; two open - flexible; one negative; one body- preoccupied; and the remaining two were difficult to classify, and could best be described as 'constricted'. Next, the interview responses of all children classified Secure on the AAI were analysed on a question by-question basis, and compared to the responses of the children classified insecure on the AAI. The following characteristics and themes were identified in the responses to the questions:

Question 1: Can you tell me something that you like about yourself?

AAI Secure children: Their responses tended to be characterised by *lively , open discourse and vivid detail* - as evidenced in the following examples: **Case 10:** 'Em (. . . 3 secs) well, I'd say I'd like, I don't want to be bragging or anything, but I do have a good personality because there's a fella in my class that nearly every day I always make him laugh'. **Case 19:** 'Well, I like what I can do, I can do, I can do a lot of things, for myself. Em, oh, as you know by now, I'm very interested in the singing, I'm learning piano and I used to do Irish dancing and I won medals in the All-Irish finals...' **Case 20:** '(. . . . . 7 secs). I'm not lazy, I get up and do things like, and I'm all into sports, and I'm not like the person that'd sit down and watch telly all day, I don't watch two hours, three hours of telly, I watch a little bit of it'.

Another observed theme was the *valuing of relationships :* **Case 2**: 'Em. (. . . . . 13 secs). I like the way I have a bigger family than other people have. Something different to them instead of just having four or five in the family'. **Case 6:** 'Em, well, I like that, em (. . 2 secs) I can (. . 2 secs) I can talk to other people, that, aren't exactly as close as family, but I can talk to them and I wouldn't feel shy or embarrassed. And I can, em, make friends quite easily because I can talk to them'.

A number of responses were *body-focused*: **Case 1**: 'Em, I like the way I am, like that - I like my figure, I like, like what weight I am, what height I am. I like my hair, my eyes, everything'. **Case 15**: 'Me hair'... (. . . . . 6 secs). No, can't think of anything else'. **Case 18**: 'Me looks'.

AAI insecure children: Their responses were characterised by *sparseness, vagueness and lack of detail:* **Case 3:** '(. . . 3 secs). Being a footballer...(. . ... 12 secs). That's probably it'. **Case 9:** '(. . . 3 secs). Cause I play for a football team'. **Case 12**: 'I just like the way I am, ... what I do and that ... (. . . . 4 secs) I just like the way I am'. **Case 14:** 'I'm good at school'. **Case 22** : 'I'm a good footballer'.

Two children were unable *to answer the question:* **Case 7**: '(. . . 3 secs) In what way? . .. (. . . 3 secs) (*Exhales loudly*) (. . . . . 6 secs). No. Em, (. . . . . 5 secs). I can't actually'. **Case 17**: 'Eh, (. . . . 4 secs) I don't know.. Mmm, I'm happy, I am, em, I'm glad to have me parents. I can't really think of anything.'

One child gave a body-focused response**: Case 21** 'Like I'm tall'

Question 2: What do you think is not so good about you?

AAI Secure children : Their responses were classified by *lively, open discourse, and vivid detail* . **Case 5**: 'Em, I'm a bit greedy, and If I'm in a bad mood, I get moody eh, you know like hurt you, in a bad mood and just go off in a huff on you'. **Case 10**: 'I hate my name, I hate the colour of my hair (. . . . 4 secs). I slag people too much. I get angry too often, like, for over, over the likes of things, when when it comes to football I get really angry easily, really short fuse'.

Their responses were also characterised by an *implicit valuing of relationships:*
Case 11: (. . . . . 8 secs). I'm a bit mean sometimes to me little brothers and not helpful enough at home sometimes'. **Case 2**: 'Em, (. . . . . 12 secs). I think the way I'm a bit shy is not very good, so'. **Case 4**: (. . . . . 8 secs). I find it quite hard to make friends so'.

Two children gave body-focused responses: **Case 15:** 'Em, (. . . . . 6 secs) Me eyes...I'm short-sighted and every time every year I'm always reading, like, last year I used to, I didn't have a lamp, and I used to read with just the little, the bit of light from the landing. And I used to just be straining my eyes, they keep getting worse'. **Case 18**: Eh, have asthma'.

Three children *did not admit to any less than perfect aspects to self:* **Case 1**: Nothing'. **Case 16:** 'Nothing'. **Case 19**: 'Em, (. . . . . 11 secs). I'm not sure. Let's see (. . . . . 19 secs). *(Is that too hard?).* It is, yeah'.

AAI insecure children: Although most of these children acknowledged less than perfect aspects to self, their responses tended to be characterised by sparseness, *vagueness and lack of detail:* **Case 3:** 'Em, (. . . . . 13 secs). Being good.... A bit bold sometimes'. **Case 7**:'(. . . 3 secs). Eh, not so good, not so good (. . . . . 6 secs). Eh, (. . 2 secs) there's sometimes that I can't do something that I want to do'. **Case 9:** (. . 2 secs). I have a bit of a short fuse. *(Tell me a little bit about that?).* I can't really say anything...'.

Their acknowledged faults tended to be *self rather than relationship focused:* **Case 14**: 'I'd like to be better at soccer'. **Case 17**: 'One of me habits. Cracking me knuckles. I love doing that'.

One child did not admit any faults: **Case 12**: 'Nothing'. Another child failed to answer at all: **Case 2:** (. . . . . 19 secs). Eh, (. . . . . 24 secs).

Question 3: Do you think you are special?

AAI Secure children: Many of the children responded to this question by saying they were *special to their parents, and/or as first-born children.* **Case 1**: 'Yeah, to me mam and dad I am'. **Case 2:** 'Not really, but I might be a bit because I was my parent's first child. Not in any other way. **Case 11**: 'Em, my mam says I am because I am her first child. No, not in any particular way like'. **Case 20:** 'Yeah, to me mam and dad I'd say I probably would..like that I was the first child'. **Case 15:** 'Em, I think everybody's special in a way really *(And do you think you're special?)* Yeah. Probably because I'm the oldest, and I'm always -I'm going to be like -I'm trying to be the way - I'm trying to turn out well, and like, I'll be the first one and if, I'm going to set an example for all me younger cousins. And I have to set an example for all of them cause I'm the oldest cousin from me mam's side. I'm the oldest child from me mam's side and....Yeah, I've got me sister I've got two other cousins, I've got loads of ba-- I've got two baby cousins - three baby cousins and two more on the way so'.

Another common theme was *personal achievements:* **Case 6**: 'Em, well in some ways I would but in other ways I'm just...Em, (. . . . 4 secs), I can swim and I can play the piano and I can listen to other people's feelings without bursting in with my own problems'. **Case 8:** '(. . . . . 5 secs) *(Laughs)*. Sort of, sort of...Like I can, eh (. . . 3 secs). I can do things that some people can't and all. I've achieved things that some people never achieve. Like,em (. . . . . 5 secs) like em, like I could em, (. . . . . 12 secs) *(lists specific prizes in sports).* **Case 19:** 'Yeah, well I can do a lot of things that other people can't do, or couldn't do to save their lives like play the piano. I'm the only one in my class who can actually play a song'.

Two children did not consider they were special: **Case 5** and **Case 10** : 'No'.

AAI insecure children: Like the Secure children, most of the insecure children responded to this question by saying they were *special to their parents, and/or as first-born children:* **Case 3:** '(. . 2 secs). Sort of, yeah...to me nanny and me mam'. **Case 7:**'(. . . . 4 secs). To me mam and dad and family, yes'. **Case 9**: 'Yeah, just to me mam and da'. **Case 13:**

'To who?. My mam, I think, thinks I'm special. Because every parents in the world think their child is special'. **Case 17**: Em, I think everybody's special... *(In what way are you special?)* Don't know. I have me mam and dad'.

Personal achievements were also cited, although generally with *less exuberance and detail* than the Secure children: **Case 14:** 'I suppose I'm average like everyone else..I'm very good at maths, I can add it all up right in my head'. **Case 22:** 'In football, yeah *(In any other way?)* I dunno, not really'.

Question 4: Is there any way you could be a better kid?

AAI Secure children: The majority of the 13 Secure children (10) acknowledged they could be better. They acknowledged they could improve their *behaviour in relation to their parents* . **Case 2**: 'If I listened to me mam more, so'. **Case 4:** 'Em, ((. . . . . 5 secs). *(Laughs)*. I don't know. You'd have to ask my mum that one!'. **Case 11**: 'Em, not being as cheeky to my mam, and trying harder at things and not giving up so easily'. **Case 18**: 'To do what all me, me ma and me da tell me'.

They also acknowledged they could improve their *behaviour in relation to other people, particularly anger-control*: **Case 5**: 'Be nicer.. not be mean to my sister and (. . . . . 9 secs). That's really all. **Case 6**: 'Well, if I lost my temper because I can get really cross and it might be only silly little things that I think are right and other people don't'. **Case 8:** 'Treat more people with more respect and all'. **Case 20:** 'Help out and try and lower me temper'.

A small number of children did not acknowledge that they could be better. **Case 1:** 'No, not really. I's ok to be as I am now'. **Case 10:** 'No'. **Case 19**: 'Em, (. . . . . 9 secs). I'm not sure'.

Only one child cited improvement in school achievement as a way they could be better: **Case 15:** 'Probably if I tried a bit more at me maths, cause I'm always trying to find a way out of doing me maths, because maths are like - I don't understand them. Spend ages trying to understand them'.

AAI insecure children: Like the Secure children, a majority of the nine insecure children (8)

acknowledged they could be better. They cited the need to improve their *behaviour in relation to their parents :* **Case 7**: '(. . . . . 7 secs). Do what my mam tells me right away'. **Case 17**: Em, behave better em, (. . . . . 5 secs). That's all'. **Case 22:** 'Be more reliable and *(sighs)* do things when I'm told to do them, listen to people'.

Three children felt they could *improve their achievement in school*: **Case 3**: '(. . . . . 5 secs). By working harder in school and listening to me teacher and not being bold'. **Case 9**: Yeah, if I worked harder in school because sometimes I mess'. **Case 14:** 'Em, (. . 2 secs). To do better at Irish'.

One cited *anger-control*: **Case 13:** Yeah, if I didn't, if I didn't, if I could calm myself down when I'm real angry. Well, sometimes I get really angry'.

Question 5 : Can you tell me five words that would describe you?

<u>Secure children:</u> Eight of the children (61.5%) could give the full five adjectives to describe themselves, three gave four adjectives, and two gave 2 adjectives. Most of the adjectives chosen were positive: **Case 1:** '(. . . . . 5 secs). Em, nice, kind, gentle, caring and loving person'. **Case 2:** 'Em (. . . 3 secs). Can be good, can be bad, I can (. . . . . 16 secs) Can be funny. Em (. . . . . 6 secs) a bit clever...em, (. . . . . 8 secs) friendly. **Case 4:** 'Stubborn,em (. . 2 secs) stubborn (. . . . 4 secs) I say things before I don't think, before I think. Em, (. . . . . 13 secs)). Em, (. . . . . 9 secs). I can't think of anything else'. **Case 5:** 'Eh, sporty, fun, eh, (. . . . 4 secs). eh, happy and (. . . . . 5 secs) loving, (. . . 3 secs) and (. . . . . 8 secs) *(laughs)* (. . . . 4 secs) unique'. **Case 6:** 'Quick tempered (. . . . . 5 secs) shy. (. . . .. 5 secs) difficult (. . . . . 8 secs) kind (. . . . . .. 10 secs) laughable. **Case 8:** '*(Laughs).* eh, (. . . 3 secs). funny, eh, (. . . . . 8 secs) curious, (. . 2 secs), hopeful (. . . . . 11 secs) eh, advice-giving or something, eh, (. . . . . 9 secs) someone who thinks the sky is the limit''. **Case 10:** 'Eh, funny, and I'd say brave (. . . . . 6 secs) eh, (. . . . . 7 secs) funny, brave, and eh, God, I can't think (. . . . . 13 secs) annoying eh (. . . . . 11 secs) sad (. . . . . 8 secs) eh, *(sighs)* (. . . . . 19 secs) eh, (. . . . . 7 secs) can't think'. **Case 11:** (. 4 secs) 'Sport, I love sport like (. . . 3 secs). **Case 15**: 'Shy (. . . 3 secs) em, talkative, I'm very talkative, eh (. . 2 secs) a bookworm, em, (. . 2 secs) telly addict and (. . . . . 5 secs) em, kind of smart'. **Case 16:** 'Happy, gentle, careful (. . . 3 secs), generous and (. . . . . 6 secs) liked'. **Case 18:** 'Eh, (. . . . . 19 secs) good-looking (. . . 3

secs). I'm helpful (. . . . . 17 secs) ..I can't think for anything else'. **Case 19:** 'Amazing *(laughs),* eh, (. . . . 4 secs) friendly (. . . . 4 secs) em, (. . . . . 5 secs) Does em count? *(Does what?)* Em *(laughs) (What does em mean?)* I wonder. Eh, (. . . 3 secs). hard working. eh, intelligent. em (. . . . . 9 secs) don't know'. **Case 20:** 'Em, bad tempered , happy, helpful em, (,. . . . 4 secs)... (. . . 3 secs) I'm liked by most people and em, (. . . 3 secs) well-educated.

AAI insecure children: Five of the children (55%) gave the full 5 adjectives to describe themselves, one child gave 4 adjectives, one 3, one gave 1, and one could not give any. Most of the adjectives chosen were positive. It is interesting to note that four of the children seemed to find the task difficult, asking the interviewer, while in the middle of answering, how many adjectives they had already given**: Case 3:** 'Sometimes bold, sometimes good (. . 2 secs) good footballer (. . . . . 8 secs) good personality (. . . 3 secs) good to talk to'. **Case 7:** (. . . . . 5 secs) Em (. . . . . 7 secs) *(exhales loudly)* (. . 2 secs) Funny (. . . . .. . 7 secs) trustful (. . 2 secs) keep things to myself when is needed. How many is that? *(Three).* Two more. Em, (. . . . . 11 secs) I can't think of anymore'. **Case 9:** (. . 2 secs) Alright (. . . 3 secs) sometimes good, sometimes very good, sometimes bad (. .. 3 secs) sometimes brilliant.' **Case 12:** 'I don't know any *(Can you give me even one word to describe yourself?).* No'. **Case 13**: 'Me, self-reliant, responsible, impatient. How many is that? *(Three)* (. . . . . 6 secs) *(laughs)* Everything when I say 'how much is that' it's always three...I can remember nearly everything..and I don't really know anymore'. **Case 14**: 'Describe myself? Oh, em, (. . 2 secs) learnive *(What?).* Learnive, I can em, I can learn things very easily. Em, (. . . . . 9 secs) it's hard to judge yourself isn't it? *(laughs).* Eh, (. . . . . 7 secs) Let's see I'm not great at sports anyway. Eh, I like reading. I suppose that isn't a word though. Em, I'm good at my computer and eh, (. . . . 5 secs) and eh, (. . . . 4 secs) How many more is there? (. . 2 secs) eh, (. . . . 4 secs) I like travelling'. **Case 17**: 'Em, (. . . . 4 secs) Gosh, eh. Easy to get along with, em, (. . . . 4 secs) eh, (. . . . 4 secs) eh, I'm not sure'. **Case 21**: 'Tall (. . . . . 5 secs), quick-witted (. . 2 secs) fast (. . . . . 10 secs) skilful like in football and eh, (. . . . . 5 secs) hungry always. **Case 22:** ' Good kid, eh, like sports, em, (. . . . . 10 secs) don't like school, eh (. . . . . 10 secs) What was the first one? *(Good kid)* Get along with people, and eh, (. . . . 4 secs) always play games with people'.

Question 6: If I was going to tell someone just one thing about you, what would it be?

AAI Secure children: Seven (53.8%) of the children chose descriptions of their personality: **Case 1:** (. . 2 secs) That I'm a nice person'. **Case 2:** 'Em, that I'm nice and friendly'. **Case 4:** '(. . 2 secs). Em, (. . . . 4 secs) Friendly. **Case 5:** 'Am, that I'm fun'. **Case 6:** 'Em, (. . . . . 6 secs) em, that I can listen and I can understand, to anything if you were saying'. **Case 10:** '(. . . 3 secs) Got a good per- I've got a good personality, eh, (. . . 3 secs) eh, that I'm funny to be around with and eh, that's it'. **Case 20:** 'Em, that I'm not lazy and that I can play most sports and that I get up and do things'.

Five (38.5%) chose their hobby or interest as their preferred self-description: **Case 11**: 'Em, (. . . 3 secs) that I'm good at sports'. **Case 15**: 'I'm a bookworm'. **Case 18**: 'Eh, (. . . . . 9 secs) that I like Man United and he better not be a Liverpool supporter!' **Case 19**: '(. . . . . 6 secs) Em, (. . . . 4 secs) Does em count? Eh, (. . . . . 11 secs) I like music'. **Case 8:** 'I don't know because it's you'd be picking it! *(No, you pick it)*. That I like aeroplanes'.

AAI insecure children : Their responses were more constricted: **Case 3**: '(. . . . . 6 secs) Good personality. **Case 7**: (. . . . . 6 secs). Say (*exhales loudly*) probably trustful and honest'. **Case 9** : 'I dunno'. **Case 12** : 'I'm nice'. **Case 13**: 'Em, like that I'm real restless'. **Case 14** '(. . . 3 secs) I'm good at maths'. **Case 17** : 'Em (. . . 3 secs) okay to get along with'. **Case 21** : '(. . . . . 24 secs) How I look like, what I look like'. **Case 22:** ' About me football'.

Summary of children's responses on the Child Self Interview

The pattern of results on the Self Interview suggest that it corresponds reasonably well to the AAI, not just in terms of classifications, but in terms of the characteristics of the discourse. The responses of AAI Secure children on the Self Interview were generally characterised by lively, open, elaborated discourse, similar to their discourse in the AAI. In contrast, the responses of AAI insecure children were characterised by constriction, sparseness and lack of detail, again similar to their discourse in the AAI. In terms of the content of their responses, while there were some differences, it was discourse style, rather than content that distinguished the responses of the AAI Secure and insecure children. The more direct questions about self, rather than the selection of adjectives, distinguished the children better. Finally, it is worth noting that the content of the children's responses suggests that children of this age are still significantly embedded in the matrix of family

relationships and parental expectations, rather than in the world of peers and peer expectations. While the validity and reliability of the Self-Interview as a measure of attachment in middle childhood has yet to be established, it appears to be a useful adjunct to other measures of child attachment.

CHAPTER 8

RESULTS: MOTHER-CHILD ATTACHMENT CONCORDANCE ON THE AAI

This Chapter examines the concordance between the children's and mothers' AAI classifications and is organised into five main sections. Section A examines the distribution of the mothers' AAI classifications and compares it to distributions in other samples. Section B examines the concordance between the children's and mothers' AAI classifications. Section C examines mother-child concordance in relation to the mothers' marital status at the time of the birth. Section D examines mother-child concordance in relation to life events experienced by the mothers in the 18 months prior to the administration of the AAI, and life events experienced by the children since their fifth birthday[1]. Section E identifies the themes and characteristics of the four different groupings of secure/insecure mother-secure/insecure child.

Section A: The distribution of mothers' AAI classifications.

Using the three-category system, 11 (50%) of the mothers were classified Secure, two (9.1%) Dismissing, and nine (40.9%) Preoccupied. Using the four-category system, 10 (45.5%) were classified Secure, two (9.1%) Dismissing, seven (31.8%) Preoccupied, and three (13.6%) Unresolved. Within the Secure category, there was a spread of sub-categories: four (36.4%) each in the F1 and F2 (i.e. the more dismissing) sub-categories; four in the F4 (i.e more preoccupied) sub-category; one in the prototype F3 sub-category; and two with mixed sub-classifications. Thus, compared to the distribution of the children's AAIs, less mothers were classified Dismissing (9.1% versus 40.9%) and within the Secure classification, slightly less were placed in the more dismissing sub-classifications (36.4% versus 46.2%). This pattern of results again appears to answer positively research *Question 2,* that is, the more dismissing stance of 11-12 year old children compared to adults.

[1] Analyses of the effect of marital status and life events on child-adult concordance, infant-child concordance and mother-infant concordance will use the three-category system only because of the small numbers of Disorganised/Unresolved AAI subjects in the study.

Table 8.

Classification of mothers on the AAI

	Dismissing	Preoccupied	Secure	Unresolved	Total
Three category	2 (9.1%)	9 (40.9%)	11 (50%)	na	22 (100%)
Four category	2 (9.1%)	7 (31.8%)	10 (45.5%)	3 (13.6%)	22 (100%)

First, using the three-category system, the distribution of the Dublin sample was compared to the distributions found in a meta-analysis conducted by van IJzendoorn and Bakermans-Kranenburg (1996) of 13 samples of non-clinical mothers (N=584); 14 clinical samples (N=439) and 8 samples of low SES parents (N=411). Table 9 shows that the over-all distribution of mothers' secure-insecure attachment in the present study seems broadly similar to that of the low SES parents in the meta-analysis. However, the proportion of Preoccupied mothers in the present sample seems high, and is broadly similar to the proportion seen in clinical samples, while the proportion of Dismissing mothers seems unusually low and is not comparable to any of the other samples. Using the four-category system, the distribution in the Dublin sample was compared to a meta-analysis of nine samples of non-clinical mothers (N=487); six clinical samples and five samples of low SES mothers (N=350) (van IJzendoorn & Bakersman-Kranenburg, 1996). Examination of Table 10 shows that the proportion of Unresolved mothers (13.6%) is relatively low in the Dublin sample, but well within the range found in samples of non-clinical and low SES mothers in the meta-analysis.

Table 9

Comparison of mothers' AAIs with a meta-analysis of normal mothers, clinical mothers and low SES parents (three categories)

	Dismissing	Preoccupied	Secure	Total
Dublin mothers	2 (9.1%)	9 (40.9%)	11 (50%)	22
non-clinical mothers	139 (24%	107 (18%)	338 (58%)	584
clinical samples	180 (41%)	204 (46%)	55 (13%)	439
Low SES parent	137 (33%)	76 (18%)	198 (48%)	411

Note: 'Non-clinical mothers', and 'low SES parents' refer to the meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996) on 13 samples of non-clinical mothers, 14 clinical samples, and 8 samples of low SES parents.

Table 10
Comparison of mothers' AAIs with a meta-analysis of normal mothers, clinical mothers and low SES parents (four categories)

	Dismissing	Preoccupied	Secure	Unresolved	Total
Dublin Mothers	2 (9.1%)	7 (31.8%)	10 (45.5%)	3 (13.6%)	22 (100%)
Non-clinical mothers	80 (16%)	44 (9%)	269 (55%)	94 (19%)	487 (100%)
Clinical samples	43 (26%)	42 (25%)	14 (8%)	66 (40%)	165 (100%)
Low SES mothers	87 (25%)	29 (8%)	135 (38%)	99 (28%)	350 (100%)

Note: 'Clinical samples' and 'low SES mothers' refer to the meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996) on 9 samples of normal mothers, 6 clinical samples, and 3 samples of low SES mothers.

Section B: Concordance between children's and mothers' AAI classifications:

An examination of the concordance between the children's and mothers's AAI classifications (see Table 11). shows that, using the three-category system, the concordance for the secure-insecure split was found in 16 of the 22 dyads, an observed match of 72.7% versus 50% expected by chance alone which is significant (Fisher's Exact Test, one-sided. $p<.05$). This result parallels the 75% correspondence found in a meta-analysis of parent-infant attachment (van IJzendoorn, 1995) and the 75% correspondence found between adult women and their mothers (Benoit & Parker, 1994). The concordance for the three-classifications was found in 10 cases, an observed match of 45.45 %. This compares to the 70% mother-infant correspondence for three-classifications found in the above meta-analysis and 75% in the adult daughter-mother study. The lower concordance in this study is largely attributed to the fact that no children were classified Preoccupied. As can be seen from Table 12, of the 11 Secure mothers, nine had Secure children. Of the two Dismissing mothers, one had a Dismissing child, and it is interesting to note that, in the other case, the child was very difficult to classify, and was finally given a classification of Borderline Secure/Dismissing. Of the nine Preoccupied mothers, six had Dismissing children.

Table 11
Comparison between children's and mothers' AAIs (two-way, three categories)

	AAI		
AAI-m	Secure	Insecure	Total
Secure	9 (40.9%)	2 (9.1%)	11 (50%)
Insecure	4 (18.2%)	7 (31.8%)	11 (50%)
Total	13 (59%)	9 (40.9%)	22 (100%)

Note: Observed match= 72.7% vs 50% expected by chance alone. Fisher's Exact Test, one-sider, $p<.05$.
*2 cells have expected count less than 5. The minimum expected count is 4.50.

Table 12
Comparison between children's and mothers' AAIs (three categories)

AAI

AAI-m	Dismissing	Preoccupied	Secure	Total
Dismissing	1(4.5%)	0 (0%)	1 (4.5%)	2 (9.1%)
Preoccupied	6 (27.3%)	0 (0%)	3 (13.6%)	9 (40.9%)
Secure	2 (9.1%)	0 (0%)	9 (40.9%)	11 (50%)
Total	9 (40.9%)	0 (0%)	13 (59.1%)	22 (100%)

As can be seen from Table 13, the concordance over four categories was found in 9 cases, that is, an observed match of 40.8 %.

Table 13
Comparison between children's and mothers' AAIs (four categories)

AAI

AAI-m	Dismissing	Preoccupied	Secure	Unresolved	Total
Dismissing	1 (4.5%)	0 (0%)	1 (4.5%)	0 (0%)	2 (9.1%)
Preoccupied	4 (18.2%)	0 (0%)	3 (13.6%)	0 (0%)	7 (31.8%)
Secure	4.5%)	0 (0%)	7 (31.8%)	2 (9.1%)	10 (45.5%)
Unresolved	1 (4.5%)	0 (0%)	1 (4.5%)	1 (4.5%)	3 (13.6%)
Total	7 (31.8%)	0 (0%)	12 (54.4%)	3 (13.6%)	22 (100%)

Thus, *Question 3*, which asked if mother-child concordance for this age group will correspond to that found at other stages of the life cycle is answered positively in relation to the secure-insecure split, but not in relation to three-category and four-category correspondence.

Next, the children's and mothers' ratings on the AAI scales were compared. Table 14 shows that, in terms of similarities, only the scales measuring coherence of transcript and coherence of mind were significantly correlated. Since the classifications rely heavily on the coherence scales, this high correlation between mothers and children on these scales is likely to be a function of the high concordance generally between child and mother attachment in the sample. In terms of the scales measuring probable experience of childhood, there was no significant correlation between the (probable) experiences of mothers and children. In fact, there were significant differences, with the children significantly more likely to have more loving mothers, less neglecting mothers and fathers, less maternal pressure to achieve, and less involving/role-reversing fathers (and to a lesser extent less involving/role-reversing mothers) than their own mothers had in childhood. The children were also significantly more idealising of mother (and to a lesser extent of father),

and had better recall of childhood than their mothers. These latter results may be due to their age. On the other hand, the high idealisation is more likely to be reflecting the high proportion of Dismissing children in the sample. Similarly, the children were significantly less angry with their mothers than the mothers themselves were with their own mothers. The higher anger ratings for mothers reflect the high proportion of angrily Preoccupied mothers in the sample.

Table 14
Comparison of children's and mothers' mean AAI scale scores: similarities and differences

AAI Scales	Children	Mothers	Correl.	Sig.	t-test	Sig(2-tailed
Inferred experiences						
Loving M	M=4.55 (1.77)	M=2.64 (1.61)	0.307	n.s.	4.49	0
Loving F	M=4.09 (3.27)	M=3.14 (2.02)	0.277	n.s.	1.34	n.s.
Rejecting M	M=4.09 (1.99)	M=4.79 (2.19)	0.07	n.s.	-1.16	n.s.
Rejecting F	M=3.07 (3.01)	M=4.00 (2.41)	0.033	n.s.	-1.15	n.s.
Involving Mother	M=2.05 (1.47)	M=3.27 (2.29)	-0.187	n.s.	-1.95	0.064
Involving Father	M=.82 (2.28)	M=2.32 (2.08)	0.133	n.s.	-2.448	0.023
Press to ach M	M=1.48 (.85)	M=2.75 (2.27)	-0.034	n.s.	-2.429	0.02
Press to ach F	M=.91 (2.33)	M=1.68 (1.67)	0.017	n.s.	-1.273	n.s.
Neglect M	M=1.05 (2.47)	M=2.95 (2.04)	0.19	n.s.	-3.099	0.005
Neglect F	M=.000 (3.74)	M=2.59 (2.04)	0.131	n.s.	-3.023	0.006
State of mind						
Idealisation M	M=4.77 (2.08)	M=2.48 (1.92)	0.24	n.s.	4.364	0
Idealisation F	M=3.57 (3.44)	M=2.07 (1.54)	-0.109	n.s.	1.795	0.08
Anger M	M=1.59 (1.01)	M=2.91 (2.09)	0.275	n.s.	-3.007	0.007
Anger F	M=1.50 (1.01)	M=1.86 (1.42)	-0.215	n.s.	-0.89	n.s.
Derogation M*	M=1.00 (.00)	M=1.05 (.21)			-1	n.s.
Derogation F	M=.59 (2.15)	M=1.09 (.43)	0.042	n.s.	-1.077	n.s.
Derogation Gen	M=1.43 (.79)	M=1.11 (.38)	-0.173	n.s.	1.6	n.s.
Lack of Memory	M=3.98 (2.49)	M=2.61 (1.51)	-0.3	n.s.	1.951	0.064
Metacognition	M=1.64 (1.14)	M=1.66 (1.08)	0.059	n.s.	-0.07	n.s.
Passivity	M=2.93 (.99)	M=2.91 (3.02)	-0.038	n.s.	0.033	n.s.
Fear Loss						
U/Loss	M=2.29 (1.51)	M=3.04 (2.27)	0.333	n.s.	-1.144	n.s.
U/Abuse*	M=1.00 (.00)	M=4.00 (.000)				
Coherence Transcript	M=4.41 (1.87)	M=4.45 (1.75)	0.605	0.003	-0.132	n.s.
Coherence Mind	M=4.55 (1.92)	M=4.18 (1.76)	0.578	0.005	1.004	n.s.

Note: the Standard Deviations are in parentheses.
*Correlation and t cannot be computed because the standard error of the difference is 0.

Section C: The relationship between the children's and mothers' AAI classifications and mothers's marital status at the time of the birth:

Table 15 shows that, using the three-category system, of the 14 mothers who were married at the time of the child's birth, nine (64.28%) were classified Secure, four (28.57%) were classified Preoccupied, and one (7.14%) Dismissing. The corresponding classifications for the eight single mothers were two (25%) Secure, and five (62.5%) Preoccupied, and one (12.50%) Dismissing. Table 16 shows that, using the four-category system, of the 14 married mothers, eight (57.14%) were classified Secure, three (21.43%) Preoccupied, one (7.14%) Dismissing and two (14.29%) Unresolved. The corresponding classifications for the eight single mothers were two (25%) Secure, four (50%) Preoccupied, one (12.5%) Dismissing and one (12.5%) Unresolved. Fisher's Exact Test showed that the differences in the over-all secure-insecure distribution of classifications for married and single mothers (using the three-category system) showed a trend towards significance (p=.091, one-sided).

Table 15

Relationship between mother's AAI classifications and marital status (three categories)

Marital status	Dismissing	Preoccupied	Secure	Total
Married	1 (4.5%)	4 (18.2%)	9 (40.9%)	14 (63.6%)
Single	1 (4.5%)	5 (22.7%)	2 (9.1%)	8 (36.4%)
Total	1 (5%)	9(45%)	10 (50%)	22 (100%)

Note: Observed match between marital status and maternal attachment security (secure vs. insecure) 68.2% vs.50% expected by chance alone. Fisher's Exact Test (p=.091, one-sided).
*2 cells have expected count less than 5. The minimum expected count is 2.80

Table 16

Relationship between mother's AAI classifications and marital status (four categories)

Marital status	Dismissing	Preoccupied	Secure	Unresolved	Total
Married	1 (7.14%)	3 (21.43)	8 (57.14%)	2 (14.29%)	14 (63.6%)
Single	1 (12.5%)	4 (50%)	2 (25.00%)	1 (12.50%)	8 (36.4%)
Total	2 (9.09%)	7 (31.82%)	10 (45.45%)	3 (13.64%)	22 (100%)

Noting the higher proportion of Preoccupied classifications among the single mothers, the sub-samples of married and single mothers was compared again to the meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996). However, it must be borne in mind in making such comparisons that, in this small sample, the absolute number in each classification are very small. For ease of comparison, the distribution for single

mothers appears at the top of the table and that for married mothers appears at the bottom. Examination of Table 17 shows that of the 14 married mothers, nine were classified Secure (64.28%). This proportion is is comparable to that found for non-clinical mothers (58%) in the meta-analysis. Only one mother was classified Dismissing (7.14%), a lower proportion than that found in the meta-analysis of non-clinical mothers (24%), and four classified Preoccupied (28.57%), higher than that found in non-clinical mothers (18%). For the eight single mothers, only two were classified Secure (25%), compared to the higher proportion (58%) found in non-clinical samples, and in low SES samples (48%) and the lower proportion found in clinical samples (13%). Only one was classified Dismissing (12.5%), a lower proportion than that found in non-clinical, clinical and low SES samples. Five were classified Preoccupied (62.5%), a higher proportion than that found in clinical samples (46%). Across the four-category system, Table 18 shows that the proportion of Unresolved classification for both married and single mothers (16.7% and 12.5% respectively) is broadly similar to that found in non-clinical samples.

Table 17
Comparison of married and single mothers' AAIs with a meta-analysis of normal mothers, clinical mothers and low SES parents (three categories)

	Dismissing	Preoccupied	Secure	Total
Dublin single mothers	1 (12.5%)	5 (62.5%)	2 (25%)	8 (100%)
non-clinical mothers	139 (24%	107 (18%)	338 (58%)	584 (100%)
clinical samples	180 (41%)	204 (46%)	55 (13%)	439 (100%)
Low SES parent	137 (33%)	76 (18%)	198 (48%)	411(100%)
Dublin married mothers	1 (7.14)	4 (28.57%)	9 (64.28%)	14 (100%)

Note: 'Non-clinical mothers', and 'low SES parents' refer to the meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996) on 13 samples of non-clinical mothers, 14 clinical samples, and 8 samples of low SES parents.

Table 18
Comparison of mothers' AAIs with a meta-analysis of normal mothers, clinical mothers and Low SES parents (four categories)

	Dismissing	Preoccupied	Secure	Unresolved	Total
Dublin single mothers	1 (12.5%)	4 (50%)	2 (25%)	1(12.5%)	8 (100%)
Non-clinical mothers	80 (16%)	44 (9%)	269 (55%)	94 (19%)	487 (100%)
Clinical samples	43 (26%)	42 (25%)	14 (8%)	66 (40%)	165 (100%)
Low SES mothers	87 (25%)	135 (38%)	29 (8%)	99 (28%)	350 (100%)
Dublin married mothers	0 (0%)	3 (25%)	7 (58.3%)	2 (16.7%)	12 (10%)

Note: 'Clinical samples' and 'Low SES mothers' refer to the meta-analysis conducted by van IJzendoorn and Bakersman-Kranenburg (1996) on 9 samples of normal mothers, 6 clinical samples, and 3 samples of low SES mothers.

The concordance between mothers' and children's attachment (ie secure mother/secure

child and insecure mother-insecure child), was also examined in relation to marital status. Table 19 shows that for the 14 married mothers, nine were Secure and five insecure. Of the nine Secure mothers, seven had Secure children. Of the five insecure mothers, three had a Secure child, giving an over-all secure-insecure concordance of 64.3% for the married group. Of the eight single mothers, six were insecure and two Secure. Of the six insecure mothers, five had insecure children. Of the two Secure mothers, both had Secure children, giving an over-all concordance of 87.5% for the single group. An examination of Table 19 shows that in the married-mother group, there were nine concordant dyads compared to seven dyads in the single mother group, an observed frequency of 45.4% versus 56.4% expected by chance alone which, using Fisher's Exact Test, is not significant. In terms of the four possible groupings of secure/insecure mother-secure /insecure child, the secure-secure combination is the most frequent in the married group, and the insecure-insecure combination in the single group. Thus, the answer to *Question 4* is negative. In fact, the mother-child concordance was higher for the single-mother than the married mother group.

Table 19

Relationship between marital status and mother-child attachment concordance (two way, three categories)

Marital status

	Single	Married	Total
Secure M- Secure C	2 (9.1%)	7 (31.8%)	9 (40.9%)
Insecure M- Insecure C	5 (22.7%)	2 (9.1%)	7 (31.8%)
Secure M-Insecure C	0 (0%)	2 (9.1%)	2 (9.1%)
Insecure M- Secure C	1 (4.5%)	3 13.6%)	4 (18.2%)
Total	8 (36.4%)	14 (63.6%)	22 (100%)

Note: Observed match between marital status and mother-child concordance (secure vs insecure)45.4% vs 56.4% expected by chance alone. Fisher's Exact Test, ns.

* Two cells have expected count less tna 5. The minumum expected count is 2.18

Section D: The relationship between life events experienced by the mothers in the preceding 18 months and the children since their fifth birthday, mothers' marital status and mothers' and children's AAI classifications :

First, the distribution of life events among mothers and children is examined. Data was available for 19 of the 22 mother-child dyads only. On the LES, for events experienced over the preceding 18 months, the mothers had a range of between 1-36 positive change impact scores, with a mean of 12.37 (S.D.=7.15); a range of between 0-12 negative impact change scores, with a mean of 4.26 (S.D.=3.84); a range of between 1-43 total change impact scores, with a mean of 16.63 (S.D.=8.73). Table 20 shows that compared to a normative sample of 171 female college students (Sarason et al., 1978), the mothers

experienced more positive change impact, slightly less negative change impact, and slightly more total change impact than the student group. Compared to a sample of 18 students who were clients of a counselling centre, the mothers experienced more positive change impact, considerably less negative impact, and less total change impact. On the LEQ, Dublin children experienced a range of 0-4 life events, with a mean of 2.11 (S.D.=1.52) since their fifth birthday, that is, in the preceding 6-7 years. Comparable normative data are not available, since the LEQ was modified for this study to refer to the period since the fifth birthday rather than the preceding two years. However, in a normative sample of 1397 children aged between 6-16 years (Berden et al., 1990), the range of life events experienced by them in the preceding two years was between 0-6 (Mean=.98, S.D.=1.03).

Table 20
Mean number of life events among mothers and children.

	LES pos ch	LES neg ch	LES total ch	LEQ
Dublin mothers	12.37 (7.15)	4.26 (3.84)	16.63 (8.73)	2.11 (1.52)
College female LES Mean	6.71 (5.51)	5.64 (6.43)	12.35 (8.82)	
Counselling clients LES Mean	8.33 (5.83)	16.6 (9.37)	24.94 (10.91)	
LEQ general child pop mean				.98 (1.03)

Note: Standard deviations appear in parentheses.

Next, the relationship between marital status at the time of the infant's birth and life events is examined. First, t-tests were used to determine the significance of the difference between the mean number of positive, negative and total life changes experienced by single and married mothers in the 18 months preceding the assessment. Table 21 shows that in the 18 months preceding this current assessment, the single mothers had experienced significantly more negative life change as measured on the LES, with a mean of 5.75 (S.D=3.62) than the married mothers, with a mean of 2.92 (S.D.=3.73). There were no significant differences between the married and single mothers with regard to positive or total life changes. Next, a t-test was used to determine the significance of the difference between the mean number of life events experienced since their fifth birthday by the children of single and married mothers as measured by the LEQ. Results show that children born to single mothers experienced significantly more life events, with a mean of 3.00 (S.D=1.41) than the children born to married women with a mean of 1.33 (S.D.=1.30). Thus, *Question* 5 is answered positively -the single-mother group experienced more negative life changes and their children experienced more life events than theeir married-mother group counterparts.

Table 21
Mean number of life events experienced by married and single mothers

	Single mothers	Married mothers	t-test (1-tailed)
LES pos change	13.25(10.18)	10.83 (5.13)	n.s.
LES neg change	5.75 (3.62)	2.93(3.73)	$p<.05$
LES total change	19.00(10.70)	13.75 (7.81)	n.s.

Note: Standard deviations appear in parentheses. Data available for 19 subjects only.

Section E: Examples of concordance and lack of concordance between mother-child attachment classifications[2]

Secure mother-secure child

There were nine Secure mother-Secure child pairings. Examination of their AAI transcripts revealed a number of common characteristics and themes. With regard to the mothers, seven of the nine were *married* at the time of the child's birth. Examining their scale scores for probable experience in childhood, it would appear that their own mothers did not provide a solidly 'secure base' for them in childhood. Most of these mothers would be classified as having an *'earned security''*. Six of the nine selected their father as the person they felt closest to in childhood. On the loving scales, their experiences of loving behaviour from their mothers in childhood was rated lower than from their fathers.[3] Based on a 9-point scale, the average rating of their loving experiences from their mothers was 3.5 and 4.3 from their fathers. Such a rating for loving experience from mothers denotes an 'instrumental' type care and attention provided to the child, but without much expression of physical affection, and emotional comfort, especially when the child was distressed

On the rejection in childhood scales, the average rating for rejection by their mothers was 4.6 and 3.3 by their fathers.[4] On the rejection scale, such a rating for fathers denotes a mild rejecting of the child's expressions of attachment, a mild aloofness or reserve in expressing affectionate feelings to the child. The ratings for their mothers denote a moderate rejection

[2] The four groupings are based on the AAI three category system

[3] Loving parental behaviour during childhood is measured on a 9-point scale. The scale is designed to measure the extent to which the child had a sense of the emotional support and availability of the parent, especially in times of trouble. For example, memories of being emotionally and physically comforted, especially when distressed, of bringing problems to the parents and being supported and forgiven, are rated as loving behaviour and can lead to a rating of 5 or above, even when combined with somewhat unloving, pressurising or role-reversing experiences. The average rating assigned to parents in the original Bay Area study was 5.

[4] The rejection scale assesses the extent to which the parent rejects or avoids the child's attachment. This scale is designed to assess a parental aversion to, and/or efforts to minimise the child's the child's expression of the child's dependence, affection, attention, need or attachment.

of attachment, characterised by an absence of pleasure in the child, a degree of parental 'remove', and an affectional response to the child that was consistently limited. Many of the mothers remembered their own mothers being preoccupied by the *responsibilities of rearing often very large families* . One woman **(Case 2- M)** said: 'Well, I remember my mum being under severe pressure because she had so many children'. Another woman **(Case 18-M)** selected the word 'busy' to described her relationship with her mother in childhood:

'Busy, eh, my mother was always very busy. She was always doing, doing, doing. Em, (. . 2 secs) and we always, like that, we all had our things to do and like right through right up until I got married like, it was always like that'.

An examination of their responses to the questions on the AAI regarding their relationship with their parents in adolescence and adulthood suggests that these mothers 'earned' their security, either by actively rebelling against or escaping from their childhood influences, and/or by a process of reflection and thought about attachment, resulting in their coming to understand and forgive their mothers. Despite their often difficult background, including one mother classified Unresolved with regard to parental abuse, many of the mothers tried strenuously to forge better, more autonomous relationships with their mothers in adult life. Most succeeded. Some did not succeed, but remained realistic and aware of the limitations in their relationships with their mothers..

Case 15-M: This woman was the eldest child in a large family. Her mother worked long hours outside the home, and as a consequence, this woman had major caretaking responsibilities for her siblings from a very early age and was also physically abused by her father. Asked to describe her relationship with her parents growing up she said:

'Em, I never got on with me father at all. We never - we used to clash kind of. All the time. He never, em, -- called me by me name. He always called me (derogatory nickname)....I used to say to me husband, you know, I - I used to be trying to think could I ever remember him saying me name, you know, just to think back, just once, but I can't. Now he probably did. Whether it's cause I haven't got a good memory at any time, you know, I have a very bad memory, but I can't remember him ever being nice to me, you know, in any way. Or I never remember him sitting down and talking to me or, having a conversation with me or anything like that. You know. Me ma was kind of always busy,

you know, she was, always, she used to seem to me, when I was younger, that she always seemed to be pregnant, you know, I used to say, oh God, she's not pregnant again! You know, I'd be so embarrassed at the thought of it, you know, then. And I'd say, oh God, there's another one on the way, you know, that was kind of it, but I was never told she was pregnant, you know, I'd just guess for myself after some, you know, length of time..Cause she wasn't there much, for me to be close to her, I don't think, cause she was... Now we're very close. Me and me mother is very, very close now. But then, we hadn't got a relationship at all'.

Do you remember ever being held by either of your parents?

No. No, no, no. (*Or being hugged by them?)* No, never. *(No memories at all of that?).* None at all.

This woman attributes the change in her relationship with her mother to an incident in her early adult life, when her mother attempted to blame her daughter for the hardship in her own life, and said something particularly hurtful and unfair to her, and this woman finally found the courage to confront her mother:

'I was getting blamed, that's the way I felt, and there was absolute murder. It went on for weeks and eh, you know. It was a big argument. Took a long time to get over. Things that was said, you know, which, even today, I do say, how could she have said something like that, but it was said, and that was it. But I think em, (*Were you able to say things to her that you wanted to say?*). Yeah. (*And how did you feel about that afterwards*.?) I felt great. I really did. I felt grand and I knew I was after hurting her. I didn't go out intentionally to hurt her, but that's the way it turned out, at the time. But I was glad, that I said what I said. *(And did it change your relationship with her?).* Yeah, definitely. *(In what way?).* Em, we're much closer now than what we ever were. Much closer *(That's interesting, isn't it?).* Yeah, very interesting *(laughs).*

Later in the interview she returned to the topic:

'She's worked all her life, and she's had a hard life. But, I'd say only since, maybe three, four year ago, when we had that argument, that we were really close like. That we'd actually talk about things that we'd never talk about before. Yeah, and it was the first time

- well I'd say, it'd be a week and a half later I wouldn't go near her and she wouldn't come near me but eventually she came to me. And it was the first time I ever remember her putting her arms around me, or telling me that she loved me. And that's the only time I ever remember her doing that, was then'.

And how is it now? How is your relationship with her now?

'It's great now. We get on. *(Do you see a lot of her?)*. All the time. Every day I see her. Every day. *(And you get on?)* Brilliantly. Yeah, brilliantly. *(Are you able to talk about things?)* Everything. Like, I can actually tell her anything, where before I'd tell her nothing'.

Another woman **(Case 19-M)**[5] described her father as follows:

'He was very affectionate always. And you'd never, I've never had any doubt that the loved me. I knew he loved me. Em, always, you know. *(Any particular time that pops into your mind, any particular memory?)*. Yeah, getting carried home from school, getting carried home from school up on his shoulders, yeah'.

Describing her mother she said:

'I don't remember that much about mum when dad was around, do you know what I mean?. She obviously did all the practical things, but, em, he was certainly the one I, well think I was more emotionally attached to as a young child'.

Can you tell me to which parent you felt the closest to in childhood and why?

'My dad. *(Why was that?)* Just, em, (. . . . . 5 secs) I just did. He was very, my mother's a more practical person than he was'.

Why wasn't that particular closeness there with your mother, do you think?

'Em, my mother's a bit of an island. She's not, she would never talk about, she would never talk to you about emotional things, or (. . . 3 secs) do you know what I mean?'

[5] This mother's child (Case 19-C) was used as an example under 'Children classified Secure on the AAI' in Section A.

Asked to describe her relationship with her mother now, in adult life she said:

'(. . . . . 7 secs). It's not close, it never will be. Em, it's more duty.'

Is there any special source of satisfaction in your relationship with her now?

'No'.

Is there any special source of dissatisfaction?

'No. *(Anything that disappoints you about the relationship?)*. No, I've given up on that long ago'.

Another mother **(Case 20-M)**[6], asked which parent she was closest to in childhood said:

'My father *(Why was that?)*. Because he made life a bit easier for me. He didn't get on my case. *(He didn't get on your case?)*. No. *(Why wasn't that particular feeling of closeness there with your mother?)* Because, she was, always, like, em, (. . 2 secs) giving out to us or telling us what to do and when to do it and he didn't do that'.

Did you ever feel rejected as a young child?

'Yeah, with, well all the time when things were going on through my life I would have felt rejected *(By?)* By my mother. *(Can you describe how it would have been for you?)*. Think I was, em, (. . 2 secs) kind of unwanted. *(How old were you when you first felt that way?)*. Maybe six or seven. *(And do you think your mother understood that you were fling rejected?)* No. *(Did you ever feel rejected by your dad?)* No.'

Later in the interview she was asked:

What is your relationship with your mum like now?

'Brilliant. After all that *(laughs)*. Em, I ring her a lot and we talk about - she's a bit more - she's more open with me cause she has a sister who's very open whom I'm very close to

[6] This mother's child (Case 20-C) was used as an example under 'Children classified Secure on the AAI' in Section A.

now- and through her we'd get me mother to talk. And I just started putting everything into perspective. I realised why things happened that did happen and why she was the person she was and how hard life had been on her never mind me, I mean I had an easy ride then compared to what she had been through and we just got her to open up more and talk more, where now, I can ask questions and I'll get answers, I don't get 'Oh, it doesn't matter or...*(Is there any source of disappointment in your relationship with her now?)*/ Em, I think I've forgiven her for everything. *(What is the source of greatest satisfaction in your relationship with her now?)*. That I have a relationship with her and I have a good relationship with her'.

Next, the ratings on the probable experience in childhood scales in the case of the children in this grouping were examined. The average rating for loving behaviour from mothers was 5.7, and 5.5 from fathers. This rating denotes that the children received more actively affectionate and expressive love from their mothers (and their fathers) than the mothers themselves received in their childhood. Of the nine mothers, none had herself experienced ratings of maternal love above 6. In contrast, five mothers had a child who had experienced love from them rated above 6. On the rejection in childhood scales, the children received an average ratings of 2.7 from both their fathers and mothers, lower than the mothers themselves had experienced in their childhood. This rating denotes that the mothers (and their fathers) do not rebuff their children's bids for affection and comfort, especially when they are distressed. Thus, over-all, these Secure mothers, despite their own often difficult backgrounds, were able to provide a 'secure base' for their own children. The mothers were conscious of the disparity between their own experience of childhood and that of their children. One mother **(Case 6-M)** speaking of her own mother and her daughter said:

'My mother said if she only had more time I probably could have been, done something, you know, in the way of I wanted to be an actress, that won't happen to (child), I will have the time. Money will be the only thing that will stand in her way but if it's time, I'll have it'.

One mother quoted above **(Case 15-M)** said:

'I wish for her to have all the things that I didn't have, you know. I want her to have a good education. I want her to have a good job, that she wants, that she'd be happy with. A good life, you know. I'd like her to travel the world and see everything. I know everybody

says that about their, their children, they want them to have all this, but I really do want it for her. But I know that, I know that whatever decisions she makes in her life, I'll stand by her...'

Insecure mother-Insecure child

This grouping of seven insecure mother-insecure child pairings was the second largest grouping. A number of characteristics and themes emerged from an examination of the mothers' and children's transcripts. Five of the seven mothers were *single* at the time of the child's birth. Six of the seven were classified *Preoccupied.*, with four passively Preoccupied and two angrily Preoccupied by either their mothers or fathers. Three mothers were physically *abused by their parents*- two of whom were also sexually abused. One mother was classified Unresolved with regard to abuse, one had a borderline Unresolved classification, and the other was classified E3, that is, overwhelmingly preoccupied by her traumatic experiences. Their childhoods were marked by a *lack of love and emotional support from either parent.* On the loving scales, the average ratings for loving behaviour in childhood from mothers was 1.8 and from fathers 1.4 . The ratings for rejection of attachment by mothers was 4.3 and by fathers 4.7. Thus, compared to the Secure mothers above, these mothers experienced moderate rejection from both parents. Unlike the Secure mothers, these mothers have been unable to come to terms with their difficult childhoods, remaining *passively or angrily preoccupied by their experiences and relationships with parents.*

An examination of the loving and rejection scales in their children's AAIs shows that the average ratings for loving behaviour from mothers was 3.1 and from fathers 3.6., denoting a mainly 'instrumental' type care, with little expression of affection. The mean ratings for rejection of the child's attachment was 5.7 from mothers and 5.0 from fathers, denoting a moderate degree of rejection of their children's bids for affection. Thus, struggling with their own difficulties, while these mothers are more affectionate to their children than their parents were to them, they are also more rejecting of their children than their parents were to them, and neither they nor their husbands have been able to provide a 'secure base' for their children.

The following is an example of an insecure mother-insecure child, where the mother was classified Preoccupied and the child Dismissing - the most common insecure mother-

insecure child pairing in the study[7] .

Case 21-M: In her AAI, this mother was clearly still preoccupied by and mentally entangled with her parents. What was striking about the interview was that, despite an extensive discussion of her feelings[8] about her childhood and her relationship with her parents, her descriptions remained passive and vague, yet conveyed an inchoate sense of negativity. Her attempts to provide an over-view of her childhood experiences were marked by oscillatory tendencies, for example, a negative evaluation followed quickly by a more positive evaluation, changing to a negative, followed by a disclaimer. Once this mother began to recount events involving her own childhood, or her own rearing of her children, there were often subtle confusions between past and present, between herself and her parents, evidenced, for example, in sudden slipping into present tense or her parent's voice from childhood.

Can you describe your relationship with your parents in childhood?

'We weren't a very lovey, loving family, you know the way lovey - I don't mean loving I mean she I mean thought the same of every one of us I suppose but - what would I say we weren't very em- affectionate maybe I would - the word maybe would be but we were always treated well, like, you know, I mean - you often remember being lying in bed listening to other kids playing and you had to be in like you know, so we were probably - I found myself doing this as well, like you know, we were in early sort of and we'd be looking out the window and other kids'd be out playing and we'd say why weren't we out playing, like you know. And em.... *(And how did you get on with them?)* Oh, very well, you know what I could think of, you know. I mean there'd be arguments if I wanted to go somewhere, like you know, I'd ask my mother rather than my father and she'd say we'll ask him like, you know, is it OK, and if you wanted to go somewhere, but I got on fairly well with them yeah'.

What would your parents do when you were emotionally upset as a child?

'They wouldn't - they wouldn't probably see you because you'd be in the other room or

[7] This mother was classified Unresolved/ Preoccupied on the AAI. For the purposes of this example, only her Preoccupied attachment status will be dealt with.
This transcript ran to 30 single-spaced pages, with 1,454 lines of text.

if you were crying they'd just say oh you know you're not going and that's it like you know, just leave it as that, like'.

Asked if she had any memories of being held, or hugged or cuddled by her parents as a young child, she provided a curiously passive description of being handled by her father:

'Not really, they were never like that, like we didn't think we were missing out on anything because we didn't know, like you know (. . . . 4 secs) I'd sit up on my - you know, you'd sit up on my father's knee if he came in and he'd be, you know, whooshing you up and down, like you know, I mean if you were em, you know there, what do you call them, rhymes, like you know, things you'd be sitting as a child, like you know, you'd have that done for you, like and there'd be turns, like there'd be a queue, like you know, for you know, once he's started first he'd have a queue of the children like doing it, like you know. I never really, we never, as I say we weren't that type of a family, like you know, that we were very...'

At the end of the interview, asked what she felt she had learned above all else from her childhood experiences growing up in her family she starts with a rather hallowed view of 'always being together', moves to the childrearing responsibilities the children had, then trails off with an unfinished sentence:

'We were always together. We were never separated like children, we were always together and a big family, like, so, we were always there, with each - we - reared each other, like, I mean I looked after the smaller ones than me and - so I suppose just being...'

Case 21- Child. This child was classified Dismissing on the AAI.[9] Despite the different attachment strategies adopted by mother and child, there were remarkable similarities in their interviews at the level of their inability to provide a coherent account of relationships Thus, while his mother's responses were characterised by marked vagueness, his were characterised by a marked insistence on lack of recall for childhood memories. Clinically, there were also interesting similarities, with the child's account seeming to contain echoes of the mother's, although these similarities are not used for classification purposes. Asked why he chose 'always helped me' as a description of his relationship with his mother he replied:

[9] This child's classification was Ds/Ud. For the purposes of this example, only his Dismissing attachment status will be dealt with.

'Em, (. . . . . 26 secs) *(Can you think of a particular time when your mam helped you?).* No, can't really think of a time. *(You can't think of a time she helped you?).* I know she did, but I just can't think of any times'.

Asked what he would do when upset as a young child his reply echoed his mother's:

'Em, (. . . . . 5 secs) can't really think of that one. I'd just be in my room all the time'.

Similarly, his reply to the next question carries a curious echo of his mother's response, conveying, like she did, an impersonal, almost disembodied sense of being held by his parents as a small child:

Do you ever remember being held by your parents, you know, being held on their laps or cuddled or hugged by them?

'(. . . . . 13 secs). I know there is a few times, like, when I was real young, like, they're just, like the way you just hold any little child, just have them sitting on your lap and all. Can't really remember recent times. I'm a bit old for it now *(laughs)'.*

Asked about how her parents disciplined them, this child's mother had answered as follows (note the lapse into the present tense in an unmarked quotation from parents):

'They might threaten to put you out, out in the dark at night like, I'll put you outside that door now now, in the dark. *(And would that frighten you?*). Oh, yeah. Yeah, it'd be... *(Did they ever do it?* Not that I can remember, but I've done it to mine *(laughs).* Sometimes it works better that way. No, not, well not that I can remember. I do find I don't remember much about my ..'

'

It is not clear from his mother's interview whether she used this punishment with this child, although she did say ' I've done it to mine'. He makes no reference to that punishment in the interview:

Were your parents ever threatening to you in any way? Did they ever make threats against you, you know, to discipline you or even as a joke ?

'(. . . . . 7 secs). No. If I done something really bold, they just, like ground me for a day or something. Just wouldn't let me out that's all'.

Some children, for example, say that their parents might threaten to leave them or send them away from home. Did your ever parents do that, or anything like that?

'No'.

Some children have memories of being abused. Did anything like that ever happen to you or in your family?

'No. No, nothing ever really happened'.

However, interestingly, when asked if he was ever frightened or worried as a child he denied he was. His response to the next query about ever being worried was first to deny ever being worried, then, oddly, he refers to worrying about 'where I'd go or what I'd do' when he grew up, becoming vague and incoherent in his reply:

'Em, (. . . . . 17 secs). No. *(Were you ever worried about anything growing up?)* Em, (. . . . 4 secs). No. I just probably worried sometimes about what would happen to me, like, when I was growing up and all *(Like what ?)* That's all really,like I just wondered, like, where I'd go or what I'd do. *(You mean when you grew up?)* Yeah. *(You mean for a job is it?)*. Yeah, like, if I was going, like, out to see some, like, eh, sights or something, like, what I'd do or what I'd see or something. Just, worried about that sometimes, that's all really. *(I don't really understand, what do you you mean by going out to see some sights?)* Like, just, well, not really seeing some sights, just like, like I was, I worried about what I'd do when I'd grow up and, don't know really'.

Asked if there was anything in particular he had learned above all from his childhood experiences growing up in his family his reply again echoed his mother's:

'(. . . . . 5 secs) No, can't think of anything. *(What do you think you've learned the most from growing up in your family?)* (. . . 3 secs). Families always, like, families always, like, stick together'.

Another mother **(Case 22-M)**, who was sexually abused in childhood, was classified Unresolved/Preoccupied. Her child **(Case 22-C)** was classified Unresolved/Dismissing. When describing her relationship with her child[10] she showed some awareness of her difficulties, which, however, is compromised by an element of indecisiveness and ambivalence:

You described earlier how (child) talks about you being sad and maybe shouting at him a little bit.

'Yeah. Ah, yeah. (. . . 3 secs). Em, I don't know. I think it probably goes back to me childhood. I'd often, even me shouting at the kids myself and I'm saying, Jeez, me mam used to do that like, you know. And I don't want to be like that (. . . 3 secs). Em, (. . 2 secs). (Child) often says to me like you're always giving out, always moaning (. . . . . 5 secs) which I know I do and I'm trying not to (. . . 3 secs) *(cries).*....I think I must over-do it like, you know what I mean, cause I mean (child) is even getting to the age where he notices more (. . . 3 secs). And eh, (. . . 3 secs) I can be terrible to him (. . 2 secs), you know (. . . 3 secs). And it's wrong, it's so wrong. *(When you say you can be terrible to him..)* I'd reject him (. . 2 secs). You know, if I was in a bad humour and he was, dunno whatever, he'd come in and he'd, like he can be a smart-ass at times as well like, you know what I mean (. . . 3 secs). And he'd annoy me, and say give us a hug...And I just find it very hard to (. . . 3 secs) you know (. . 2 secs) be emotional cause you know, cuddle him and that, you know. Or physically. But eh, (. . . . 4 secs) like it is hard bringing up children...I mean I know what's right and wrong and (. . 2 secs) how far you can go with kinda (. . 2 secs) making sure you do the best you can do for them. And then you don't want to be giving in too much either (. . 2 secs), you know. And I can be, I can do that a lot of the time. Like me husband said, they'd walk all over you'.

Insecure mother- secure child

This grouping of four insecure mother-secure child pairings was the third largest grouping. A number of characteristics and themes emerged from an examination of the mothers' and children's transcripts and rating scales. *Three of the four mothers were married* at the time of the child's birth. Three mothers were classified Preoccupied and were *angrily (rather than passively) preoccupied,* with their mothers. These mothers seem to have experienced

[10] This mother's child (Case 22-C) was quoted as an example of an Unresolved/Dismissing classification in the proceeding A1 section of this chapter.

a *somewhat more loving childhood* than the insecure mother- insecure child grouping. The mean ratings for loving behaviour in childhood from their mothers was 2.5 and 2.6 from their fathers - almost mid way between those of the secure mother- secure child and the Insecure mother-Insecure child groupings. Their mean rating for rejection from mothers was 3.6, and for rejection from fathers 3.3. Thus, compared to the secure mothers, they experienced the same level of rejection from their fathers, but interestingly, *less rejection from their mothers*. Despite their on-going preoccupation with their own parents, these mothers (and their husbands) were able to provide a 'secure base' for their children. An examination of their children's AAIs showed that the ratings for loving behaviour was 5.0 from their mothers and 5.4 from their fathers. The ratings for rejection was 3.3 from their mothers and 3.0 from their fathers. Thus, these children experienced about the same level of affectionate caretaking and acceptance of their bids for attachment as did the Secure children of Secure mothers, and more loving and less rejection than the insecure children of insecure mothers.

One child **(Case 11-C)** described his relationship with his mother as follows:

The next one you chose was 'friendly'. Have you any particular memory of that?

'(. . 2 secs). Like she'd always be there to talk to me if I needed to talk, eh, about anything. Like and we'd always like just sit down and talk about anything, like doesn't have to be like anything that happened, just anything about what I did in school or sport, that's all really'.

He convincingly described how his parents acted as a 'secure base' when he was lonely on his first trip away from home:

'(B)ut then when I was older, I think I was about ten, I went down to (name of place) with my friends and that was the longest I'd ever been away like. *(How was that?)* That was bad like, I nearly had to ring them nearly every day like. I was crying and everything *(laughs)* because it was my first time away from home for that long. *(So you were homesick were you?).* Yeah. *(How were they when you used to ring them?)* We, they were just saying like 'Don't worry, do you want me to come down and collect you?' but I, I, I stuck it out and I stayed the week like, once I was talking to them it was grand, yeah'.

Another child **(Case 8- C)** described his mother's tender care when he was sick:

When you were sick, when you were small, what would happen?

'Em, when I was small, my, my mam would stay home with me and all. And she'd put me up, put me up in her room. She'd put me to bed and all and she'd say 'You lie down there for a while and I'll get you something easy so you can swallow it easy' and all. And like, she'd have a towel in front of me, like a basin in case I got sick or something and eh, she always like eh, she always told me what to do, like sort of easy position, if you get - lie sort of in this position you'll sort of eh, feel better and all. And what you should do if you're about to get sick is call her name and she'd come up and help you and all'.

Yet, in each of the transcripts of secure children with insecure mothers, there was evidence of some fragility. One child **(Case 16- C)** was classified as Secure/Borderline Ds. This child, whose mother was classified Dismissing, was moderately idealising of her mother, and showed a moderately high insistence on lack of recall for childhood. However, there was a sense of standing support from her father and she did value her closeness with him, and so was placed in the Secure classification. Another **(Case 11-C),** whose mother was classified Preoccupied, had relatively high scores for involving anger in relation to his mother (characteristic of a Preoccupied 'state of mind with respect to attachment') as well as relatively high scores on idealisation of mother (characteristic of a Dismissing 'state of mind'), which made him difficult to classify. However, his view of his father was balanced and coherent. Another **(Case 8-C)** had relatively high ratings for passivity of thought processes (a characteristic of the Preoccupied classification), manifested in frequent vague expressions, difficulty in seizing on a meaning, and a tendency to wander off, as though by association of private thoughts.

This child **(Case 8-C)** also seemed to be preoccupied by a traumatic accident suffered by his father resulting in severe injury. This accident happened five years before the interview, when the child was eight, although he reported it as happening when he was five. Some qualities of his discourse resembled the sub-category of the Preoccupied classification (E3), where the individual seems overwhelmed and fearfully preoccupied by a past frightening event, which appears to invade discourse, even when the event is not being discussed. Such individuals sometimes report frightening dreams and nightmares and may exhibit some confusion as to whether certain events actually occurred.

The next word you chose was 'very long' as a description of your relationship with your mam.

'Yeah, cause I've been like with her for about eleven years now and all. *(Can you give me an example, or memory, that would help me understand why you chose that description of your relationship with your mam?)* Eh, (..... 5 secs) when I was about three or something, eh, (.. 2 secs) what do you call it, I was like thinking about what it's like to be dead and all and I was thinking if I die I like me mam'd be gone and I'd say 'Oh no,no, no that would never happen' and all and sort of, eh, em, along the lines, we were sort of, I was really worried and all, and I kept away from like, eh, knives and all in case something happened to me and all. I didn't want to lose me mam. *(And what was making you think of that?)* (.... 4 secs) Like, eh, (... 3 secs) every time when I was looking at TV and all. Or when I wasn't I was going round the house and say there was something on the wall, I'd go up to it like that and I was just, I just get a little sort of em, beat in my head saying 'don't do that, don't do it, something's going to happen', like, I'd look down, I'd look across the way and there'd be like knives and I'd be taking, I'd take, I'd be taking the cutting board for me mam so I asked her to get it and all. *(The cutting board is it?).* Yeah, and the knives were on it. *(What were you afraid would happen?)* The knives would come out (..... 5 secs). *(And how did your mam react to that/).* I never really told her'.

Later in the interview he recounted vivid and frightening dreams, with some disoriented thinking evident in his account.

Were you ever frightened or worried as a child?

'Yeah, when my dad had the injury. Or eh, I'd have nightmares or at night and all. Feel worried sometimes something would happen cause most of the time I have like a dream twice over and like, like about two weeks later it happens and I say, I'm saying, like, 'Oh, hang on I know what's going to happen next' and all and it happens'.

Examination of the transcripts of these children's mothers also revealed that some of the mothers had an involving style of interacting with the children, such that their own needs became confused with the perceived needs of the child. They did however, show some awareness that this involvement was not appropriate, but seemed unable to resolve it, remaining absorbed by their own needs.

One mother **(Case 11-M)** describing the time when she suffered a frightening episode of depression in her life said:

'(. . . . . 5 secs) No, the the most terrifying time of my life was when I was going through depression. Em, - - it was a horrible time, I mean I wasn't any good to anybody. Em, I'd two young kids and, I could, I was on twenty-four hour watch when I wasn't in hospital, when they let me out. I had to have somebody with me all the time, an adult.....I mean (child) used to come down at fi-- at five, how old was he, four years ago, he was eight. Em, and he used to be making his own breakfast because Mammy would just be vegetated on the couch...and (younger child) was crying in the buggy. And I always remember (child), em, saying 'It's all right mam, you just stay where you are' he says 'I'll get him a Liga and I'm going to get some toys'. You know, like, that must have been very hard on him. Em he must a gone through now I've never, I've never to this day asked him how was he aware of anything going on at the time. Em, I don't know whether that's right or wrong, whether I should find out whether he was aware, to maybe explain to him. But it was the most frightening time of my life that time, I mean I never, I never, I would never have thought I was capable of the things I was doing, the things I was thinking. Em, I mean I ju-- I had no control over myself, em, that was the most fri-- and I don't think anything could frighten me as much as that'.

Describing how she misses the child when he is away she said:

'But at night when I sit down the two little fellows are gone at eight o'clock and if (husband) is working, he works nights every so often, like I'm there on my own whereas me and (child) we'd have a game down or we'd be sitting yapping or sitting looking at the te-- and I miss him because he's like my little lifeline, he's my conversation level, you know, in an evening, you know'.

Another mother **(Case 1-M)** describes her preoccupation with her daughter's weight:

If you had three wishes for (child) twenty years from now, what would they be? What I'm thinking about here is what kind of future do you want to see for her?

'Well, my thing always was with her to have her health, be happy and not to put on weight *(laughs)*. Just have this thing, I've always suffered with weight problems and I do be

looking at her and saying that's great now, you're taking after your daddy, you're going to be tall and thin, you're not gonna, cause I suffered with it like I went through all the slagins and the and I really don't want that for her and I'm probably funny now, I don't kinda go out of me way and say these things to her but, it's just always there. Now I'd say to me husband 'Thank God like she's getting your build' and now an odd time I'd say to her like you know would you stop eating, she eats, she never stops eating and I'd say you're gonna end up like a house. But em, I think if, even I had one wish that would be that she, I know it probably sounds a bit stupid really but, it's that she stays keeps her figure, that she doesn't end up over-weight. Even when she gets older like or has kids or whatever but I suppose realistically is that she has her health and once she's happy you know, that would be, I mean I wouldn't be wishing for riches or things like that for her. I'd like her to be happy'.

It may be that the fragilities identified in the children's 'state of mind' will continue to be 'contained' within an over-all Secure-autonomous attachment. Alternatively, under the pressures of adolescence, these tendencies towards involving anger, passivity of discourse. or dissociation may become exacerbated, and/or their mothers' over-involving style of parenting more exaggerated, and some of these now Secure children may become insecure in adolescence.

Secure mother-insecure child

There were 2 Secure mother-Insecure child pairings. In both cases, the mothers, who were married at the time of the child's birth, had experienced multiple, chronic stresses in their own lives and in their families of origin. Their average ratings for loving behaviour in childhood from their mothers was 1.8 and 5.0 from their fathers. Their average ratings for rejection in childhood was 6.5 from their mothers and 2.0 from their fathers. Thus, compared to the mothers in the insecure mother-insecure child grouping, these mothers experienced the same lack of maternal affection and even higher maternal rejection. Interestingly, they had the most positive experiences with their fathers - their mean ratings for paternal love were the highest in all 4 mother-child groupings, and their ratings for paternal rejection the lowest. This standing support from their fathers may have been a critical factor in their remaining Secure in the face of such maternal rejection and general life stress. An examination of their children's AAI transcripts showed that the average rating for loving behaviour from mother was 3.2, similar to the ratings for the children in the

Insecure-mother-Insecure child groupings. The average rating for rejection from mothers was 6.0, the highest in all four groupings. Thus, these mothers experienced great difficulties in accepting their own children's bids for attachment and closeness.

Both mothers showed some awareness of their lack of closeness with the child. One mother **(Case 13- M),** very stressed by difficult family circumstances, described how she handed over substantial care of the child to her husband. Describing how she 'pushed' the child and her husband together 'an awful lot' she said:

I'm sorry for that now because I think I isolated myself a bit from him, in doing that...I think he's very close to me but I think I've missed out on some of the signals through the years because I thought, well, (child) has (husband) at least he has, you know, something.. .

The other mother **(Case 14- M)** said:

'I worry about (child) because - I dunno - more so than any of the others really. *(Why is that?)* I dunno - he's just more awkward with it or something *(laughs).* Maybe - I think I feel that I done an awful lot for him as a child and then...'

This theme was echoed by her child **(Case 14-C)** who chose 'plays with me' as one of his descriptors of his relationship with his mother: 'I suppose, em, when I was smaller she played with me'. Asked if he had a recent example of that he replied:

'Em, well, not very recently, you know, since she had the babies. When I was smaller, you know, she used to always play with me and me toys. *(Can you remember a particular time?).* I can remember her playing with me when I was, like, em, four, but I can't think of any, sort of like, em, (. . 2 secs) time, a particular time but I can remember her playing with me when I was smaller.'

The interviews of both these mothers were characterised by their balanced and forgiving stance towards their own troubled parents and the traumatic childhoods they suffered. Despite their awareness, however, both these mothers seemed too stressed by their on-going traumas to be able to make the effort involved in forging closer relationships with the children, finding refuge in the hope that their children would get by, like they did, and also forgive them.

One mother **(Case 14- M)** said:

'(S)ometimes I - don't as I said I don't think I'm great at mothering to him but (. . 2 secs) I just hope he learns to get by and get what he wants in life and do what he wants.....That's all I can do'.

The other mother **(Case 13-M)** asked what she hoped her child would have learned from his experiences of being parented by her, replied:

'Mm, em, (. . 2 secs). I hope he'll have gained some sense of, I hope he just knows that we were doing our best, you know, we've made, we didn't get it right I hope he'll forgive us really I suppose in some ways that he'll look back and, but I hope he's able to talk about it, I hope he can come back and say these things, probably as much as forgiving, forgiving us all for what we've done *(laughs)*. But em, I'd like him to learn that people make mistakes all the time, you know, and accept it and try and identify the really serious ones from the, you know, the ones that aren't that bad'.

Mother-child concordance using the four-category system.

The differences between the groupings of secure/insecure mother-secure/insecure child generated by the three- and the four-category systems were located in secure mother-secure child grouping. One of the Secure children and one of the Secure mothers were classified insecure, that is, Unresolved/Secure in the four category system.[11] The child **(Case 6-C)** suffered the loss of a beloved family member in traumatic circumstances less than a year and a half before the interview. The effect of the loss was aggravated by on-going confusion in the family about the circumstances surrounding the death and the threat of litigation arising from it. In the second case, a mother **(Case 15-M)** was classified Unresolved/Secure with respect to abuse suffered in childhood.

[11] The other Unresolved children and mothers were classified Unresolved/Insecure, and thus fell into the same insecure mother-insecure child grouping.

CHAPTER 9

RESULTS: THE CONCORDANCE BETWEEN ATTACHMENT IN INFANCY AND AT AGE 11-12 AND THE CONCORDANCE BETWEEN INFANT ATTACHMENT AND MATERNAL ATTACHMENT 10 YEARS LATER

This Chapter has two main parts. Part 1 examines the continuity of attachment from 18 months to age 11-12. Section 1A examines the distribution of the infants' strange situation classifications and compares it to other samples. Section 1B examines the concordance between the children's AAIs at age 11-12 and their strange situation classifications at 18 months. Section 1C examines the relationship between the mothers' marital status at the time of the birth and the continuity of infant-child attachment. Section 1D examines the relationship between life events experienced by the mothers over the past 18 months and the children since their fifth birthday and the continuity of infant-child attachment. Section 1E identifies themes and characteristics common in each of the four secure/insecure infant-secure/insecure child groupings.

Part 2 examines the concordance between infant attachment and maternal attachment over 10 years later. Section 2A examines the concordance between the mothers' AAI attachment classifications and infant strange situations attachment classifications. Section 2B examines mother-infant concordance in relation to the mothers' marital status at the time of the birth. Section 2C examines mother-infant concordance in relation to life events experienced by the mothers over the 18 months and the children since their fifth birthday. Section 2D identifies themes and characteristics common in each of the four secure/insecure mother-secure/insecure infant groupings.

PART 1: THE STABILITY OF ATTACHMENT FROM 18 MONTHS TO AGE 11-12.

Section 1A: The distribution of the infants' strange situation classifications at 18 months:

Using the three-category system, 15 (75%) of the infants were classified secure, three (15%) were classified avoidant and two (10%) resistant. Thus, over three categories, 25%

were classified insecure. Using the four-category system, 13 (65%) were classified secure, two (10%) each were classified avoidant and resistant, and three (15%) were classified disorganised. Thus, over four-categories, 35% were classified insecure. First, the three-category distribution of the Dublin sample is compared to a meta-analysis of 1,584 strange situation classifications from normal samples; a large sub-set (548) of 1,624 classifications from clinical samples, including maltreating, psychiatrically impaired and teenage mothers; a drug-exposed and adoption sample; and 542 classifications from comparison/control groups used in clinical samples (van IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992). Examination of Table 22 shows that the distribution of the Dublin sample is similar to those in normal samples, and has an above average proportion of secure children. In that respect, it is most similar to the comparison/control groups. van IJzendoorn et al. (1992) note the over-representation of secure attachment classifications in such groups, compared to normal samples. Compared to the original Ainsworth et al. study (Ainsworth et al., 1978), which was almost the same size (see Table 23) the Dublin sample showed a broadly similar distribution of secure-insecure attachment. It is interesting to note that, in terms of the distribution of attachment classifications, the Ainsworth et al. sample remains almost the prototype of that found for the normal samples in the meta-analysis.

Table 22

Comparison of distribution of strange situation classifications of Dublin sample with normal and clinical samples

	Avoidant	Secure	Resistant	Total
Dublin infants	3 (15%)	15 (75%)	2 (10%)	22 (100%)
normal samples	325 (20.5%)	1062 (67%)	197 (12.4%)	1584 (100%)
Maternal problem	132 (27.3%)	237 (48.9%)	115 (23.8%)	484 (100%)
Drug-exposed	9 (50%)	7 (38.8%)	2 (11.1%)	18 (100%)
Adoption	13 (28.2%)	24 (52.1%)	9 (19.5%)	46 (100%)
Comparison	96 (17.7%)	395 (72.9%)	51 (9.4%)	542 (100%)

Note: Normal sample' refers meta-analysis of classifications from normal samples; 'Maternal problem' refers to classifications from clinical samples, including maltreating, psychiatrically impaired , and teenage mothers; 'Drug-exposed and 'Adoption' refer to samples with specific problems and characteristics; 'Comparison' refers to comparison groups used in clinical samples. All the above groups are part of meta-analysis conducted by van IJzendoorn, Goldberg, Kroonenberg, & Frenkel (1992).

Table 23

Comparison of distribution of strange situation classifications of Dublin sample with Ainsworth et al. sample (1978)

	Avoidant	Secure	Resistant	Total
Dublin infants	3 (15%)	15 (75%)	2 (10%)	22 (100%)
Ainsworth et al.(1978)	22 (21%)	70 (66.7%)	13 (12.4%)	105 (100%)

Next, using the four-category system, the distribution of the Dublin sample was compared to a meta-analysis of 306 normal and 191 clinical strange situation classifications, including

maltreating, psychiatrically impaired, and alcohol-abusing mothers mothers, as well as a drug-exposed sample (van IJzendoorn et al., 1992). Examination of Table 24 shows that, compared to normal samples, the Dublin sample again has a higher than average proportion of secure classifications, but a similar proportion of disorganised classifications.

Table 24
Comparison of distribution of strange situation classifications (four categories) of Dublin sample with normal and clinical samples

	Avoidant	Secure	Resistant	Disorganised	Total
Dublin infants	2 (10%)	13 (65%)	2 (10%)	3 (15%)	20 (100%
normal samples	70 (22.9%)	168 (54.9%)	23 (7.5%)	45 (14.7%)	306 (100%)
Maternal problem	54 (28.3%)	43 (22.5%)	15 (7.85%)	79 (41.4%)	191 (100%)
Drug exposed	3 (16.6%)	7 (38.9%)	1 (5.6%)	7 (38.9%)	18 (100%)

Note: 'Normal sample' refers meta-analysis of classifications from normal samples; 'Maternal problem' refers to classifications from clinical samples, including maltreating, psychiatrically impaired , and alcohol-abusing mothers mothers; 'Drug-exposed' refer to samples with that specific problem. All the above groups are part of meta-analysis conducted by van IJzendoorn, Goldberg, Kroonenberg, & Frenkel (1992).

Section 1B: The concordance between the children's AAIs and their strange situation classifications at 18 months:

Table 25 shows that, using the three-category system, of the 15 infants classified secure on the strange situation, nine (60%) were classified secure on the AAI. Of the five infants classified insecure on the strange situation, two (40%) were classified insecure on the AAI. Thus, the observed two-way (secure versus insecure) concordance between infant and child security of attachment was 55% which is just what would be expected by chance alone, which using Fisher's Exact Test is not significant. Over the three categories, Table 26 shows that of the 15 children classified secure in the strange situation, nine were classified Secure on the AAI, and the remaining six were classified Dismissing. Of the three children classified avoidant in the strange situation in infancy, two were given the corresponding classification - Dismissing - on the AAI, and one was classified Secure. Of the two children classified resistant in the strange situation, both were classified Secure on the AAI. Thus, the three-category concordance is 55%.

Table 25
Comparison between children's AAIs and strange situations (two-way, three categories

AAI Classification

Strange Situation	Secure	Insecure	Total
Secure	9 (45%)	6 (30%)	15 (75%)
Insecure	3 (15%)	2 (10%)	5 (25%)
Total	12 (60%)	8 (40%)	20 (100%)

Observed match= 55% vs 55% expected by chance alone. Fisher's Exact Test, one-sided, ns. * 2 cells have expected count less than 5. The minimum expected count is 2.

Table 26

Comparison between children's AAIs and strange situations (three categories)

AAI Classification

Strange Situations	Dismissing	Preoccupied	Secure	Total
Avoidant	2 (10%)	0 (0%)	1 (5%)	3 (15%)
Resistant	0 (0)%)	0 (0%)	2 (10%)	2 (10%)
Secure	6 (30%)	0 (0%)	9 (45%)	15 (75%)
Total	8 (40%)	0 (0%)	12 (60%)	20 (100%)

Next, the concordance between the children's AAIs and their strange situation classifications at 18 months is examined for the four-category systems. Of the 13 children classified secure in the strange situation, six (46.15%) were classified Secure on the AAI. Of the seven children classified insecure in the strange situation, only two (28.6%) were classified insecure on the AAI. Thus, the secure-insecure match was 40% versus 52% expected by chance alone, which using Fisher's Exact Test is not significant.

Table 27

Comparison between children's AAIs and strange situations (two-way, four categories)

AAI

Strange Situations	Secure	Insecure	Total
Secure	6 (30%)	7 (35%)	13 (65%)
Insecure	5 (25%)	2 (10%)	7 (35%)
Total	11 (55%)	9 (45%)	20 (100%)

Observed match= 40% vs 52% expected by chance alone. Fisher's Exact Test, one-sided, ns. * 2 cells have expected count less than 5. The minimum expected count is 3.15.

Table 28

Comparison between children's AAIs and strange situations (four categories)

AAI

Strange Situations	Dismissing	Preoccupied	Secure	Unresolved	Total
Avoidant	1 (5%)	0 (0%)	1 (5%)	0 (0%)	2 (10%)
Resistant	0 (0%)	0 (0%)	2 (10%)	0 (0%)	2 (10%)
Secure	5 (25%)	0 (0%)	6 (30%)	2 (10%)	13 (65%)
Disorganised	0 (0%)	0 (0%)	2 (10%)	1 (5%)	3 (15%)
Total	6 (30%)	0 (0%)	11 (55%)	3 (15%)	20 (100%)

Over the 4 categories, Table 28 shows that, of the 13 children classified secure in the strange situation, six were classified Secure on the AAI, five were classified Dismissing and two Unresolved. Of the two classified resistant on the strange situation, both were

classified Secure on the AAI. Of the three children classified disorganised, one was classified Unresolved on the AAI and one Secure.

Thus, the over-all trend was for a lower proportion of children to be classified secure in childhood than in infancy, from 75% to 60% for the three-category system, and from 65% to 55% for the four-category system. There was also a noticeable increase in the proportion of Dismissing (avoidant) children, from 15% in infancy to 40% in childhood. Thus, Question 9 is answered positively. .

The finding of 55% infant-child concordance compares to the 64% found in Waters et al.'s (in press) sample; and the 63% in the Hamilton (in press) sample. Thus, Question 6, in so far as it asked if infant-child attachment concordance would be somewhat lower than that found in stable, middle class families, but still significant, was answered negatively. .

Section 1C: The relationship between the concordance of infant-child attachment and the mothers' marital status at the time of the birth:

Examining first the concordance for the 12 children born to married mothers, Table 29 shows that ten were classified secure and two insecure in the strange situation in infancy. Of the ten classified secure in infancy, eight were also classified secure on the AAI in childhood and two classified insecure. Of the two classified insecure in infancy, one was classified secure and one insecure in childhood. Thus, for the children of married mothers, a match between infant and child attachment was observed in nine (75%) of the 12 cases. Next examining the concordance for the eight children born to single mothers, Table 29 shows that five children were classified secure and three insecure in the strange situation in infancy. Of the five children classified secure in the strange situation, four were classified insecure on the AAI in childhood and one secure. Of the three children classified insecure in the strange situation, two were classified Secure on the AAI and one insecure. Thus, for the children of single mothers, a match between infant and child attachment was observed in two (25%) of the eight cases. The observed over-all concordance of 75% versus the expected concordance of 51% was significant (Fisher's Exact Test, one-sided, $p<.05$). Thus, Question is 7 is answered positively, that is, infant-child attachment concordance is higher in the married -mother than in the single-mother group.

Table 29
Relationship between concordance of infant-child attachment and mothers' marital status at the time of the birth (3 categories)

	Married	Single	Total
Secure I-Secure C (N=9)	8 (40%)	1 (5%)	9 (45%)
Insecure I-Insecure C (N=2)	1 (5%)	1 (5%)	2 (10%)
Insecure I-Secure C (N=3)	1 (5%)	2 (10%)	3 (15%)
Secure I- Insecure C (N=6)	2 (10%)	4 (20%)	6 (30%)
Total	12 (60%)	8 (40%)	20 (100%)

Note: Observed match 75% vs 51% expected by chance alone. Fisher's Exact Test, one-sided, p<<05).
*7 cells have expected count less than 5. The minimum expected count is .80.

Section 1D: The relationship between the stability of infant-child attachment and life events experienced by the mothers over the past 18 months and by children since their fifth birthday:

Table 30 shows that mothers with children classified secure in infancy and in childhood (N=8) experienced a mean of 14.37 (S.D.=9.81) positive life changes, a mean of 2.13 (S.D.=2.23) negative life changes, and a mean of 16.50 (11.79) total life changes in the 18 months preceding the current assessment. Their children experienced a mean of 1.38 (S.D.=1.41) life events since their fifth birthday. The corresponding means for mothers of children classified secure in infancy and insecure in childhood (N=6) were 9.83 (S.D=4.96), 7.17 (S.D.=4.31), 17.00 (S.D.=8.09), and, for their children, 2.50 (S.D.=1.64). For mothers whose children were classified insecure in infancy and secure in childhood (N=3), the means were 12.33 (S.D.=4.73), 5.67(S.D.=4.16), 18.00 (S.D.=4.58), and for their children, 2.00 (S.D.=1.00). For mothers whose children were classified insecure in infancy and childhood, the corresponding means were 12 (S.D.=2.83), 2.00 (S.D.=.00), 14 (S.D.=2.83), and for their children 4.00 (S.D.=.00). Thus, the mothers of the secure-secure group experienced the most positive changes, the second lowest negative life changes, and their children experienced the least number of life events since their fifth birthday. In contrast, mothers of the secure-insecure group experienced the most negative life changes and and the least positive life changes, and their children experienced the second highest number of life events. Mothers of the insecure-secure group experienced the second highest negative life changes, but their children experienced the least number of life events. The insecure-insecure group children experienced the most life events. A one-way ANOVA of the differences between the groups showed that, with regard to mothers's negative life changes, the difference between the groups was significant (F=3.18, df=3, p=.05). In relation to

mothers's positive life changes and total life changes, and to children's life events, the differences between the groups did not reach significance. Thus, *Question* 8 was answered positively in the case of the mother's negative life change but not in the case of the children's experience of life change.

Table 30
Stability of infant-child attachment and mean life events experienced by mothers and children (three categories)

	LES pos ch	LES neg ch	LES total ch	LEQ
Secure I-Secure C (N=8)	14.37 (9.81)	2.13 (2.23)	16.50 (11.79)	1.38 (1.41)
Secure I-Insecure C (N=6)	9.83 (4.96)	7.17 (4.31)	17.00 (8.09)	2.50 (1.64)
Insecure I-Secure C (N=3)	12.33 (4.73)	5.67 (4.16)	18.00 (4.58)	2.00 (1.00)
Insecure I-Insecure C (N=2)	12.00 (2.83)	2.00 (.00)	14.00 (2.83)	4.00 (.00)
Total 19* (100%)	12.37 (7.15)	4.26 (3.84)	16.63 (8.73)	2.11 (1.52)
F	n.s.	0.05	n.s.	n.s.

Note: Standard Deviations appear in parentheses.
*Data available for 19 subjects only.

Section 1E: Themes and characteristics common in each of the four secure/insecure infant -secure/insecure child groupings[1]

Secure infant-secure child.

There were nine children in this, the largest, grouping. Their lives seem *stable and largely positive*. Of the nine, eight had mothers who were *married* at the time of the child's birth, seven of whom have remained married. In the case of the one child **(Case 11-C)** whose mother was single, it is interesting to note that his parents had married and were living together by the time the infant was one. Of the four groupings, the mothers of these children had experienced the most positive life changes and among the lowest negative life changes in the 18 months preceding the AAI. The children themselves had experienced the least number of life events since their fifth birthday. A second common characteristic was that six of the children had mothers classified *Secure* on the AAI. All six were discussed under 'secure mother-secure child' in Chapter 8. Likewise, the remaining three children with insecure mothers were discussed under the 'insecure mother-secure child' grouping in Chapter 8. It is likely that many of the common characteristics and themes discussed there were also influential in maintaining the stability of attachment security from infancy to childhood, particularly the active affectionate caretaking and lack of rejection these children

[1] The four groupings are based on the three category system

experienced from *both* mothers and fathers Hence, there will be no further discussion here.

Secure infant-insecure child.

This was the second-largest grouping, with six children. The most obvious common characteristic was that *all six children had insecure mothers*. This grouping was described under 'insecure mother-insecure child' in Chapter 8. Thus, many of the characteristics and themes identified there were also likely to have influenced the change in attachment status from secure in infancy to insecure in childhood, in particular, the finding that *both* parents provided *low levels of affectionate caretaking and moderate levels of rejection.* In addition, these children and their families have experienced *negative life change in the intervening years*. It was reported above that mothers of this grouping, in comparison to the mothers of children whose attachment status remained the same, or changed from insecure to secure, experienced the lowest positive life change and the highest negative life change. In addition, their children experienced the second highest number of life events.

Four of the children had mothers who were single at the time of the child's birth. At 18 months, two of the infants were living with their mothers in the maternal grandparents' home, and one had lived in such an arrangement for at least some of his first year[2]. Some of the children had also experienced *significant changes in their caretaking arrangements*. Examination of the children's (and their mothers') transcripts revealed that two of the latter group had experienced significant changes in their caretaking arrangements from infancy to childhood. These cases will be described in some detail below.

One child **(Case 3-C)** was reared with his mother in his grandmother's home. His mother, who was single at the time of his birth, moved out when the child was aged between 5-6 years to live with a new partner, but he remained with his grandmother, whom he calls 'nanny'. This child has suffered very significant losses in recent years. One of his grandparents died in traumatic circumstances, and shortly afterwards his other grandparent was permanently hospitalised with a very serious and chronic illness. The child has continued to live in his grandparents' house with his uncle. This child, although very traumatised, is not classified Unresolved, but does have moderately high scores on the

[2] All but 1 of the infants of married mothers were living with both parents in their own home at 18 months, the other was living with both parents in the maternal grandparent's home. Of the eight infants of single mothers, four were living with their mothers and fathers at 18 months, one of whom had lived with his mother in the maternal grandparent's home until he was 12 months, and one of whom had significant involvement with his maternal grandparents throughout his infancy. Four infants were living with their mothers in the maternal grandparents home.

unresolved loss scale.

Ok, and then your nanny lived with you. She minded you as well did she?

'Yeah, she minded me most of the time, like she used to mind me more, more or less than anybody else'

Asked who was the person he felt closest to growing up he said:

'Probably me nanny. *(And then, after that, who would be the next closest?)*. Me grandad and then me mam'.

It is unclear how much involvement his mother had in his life from infancy to age 11, or whether her involvement changed significantly, particularly when she left home. His answer to the question about feeling rejected in childhood (see below) may indicate that his mother's involvement did indeed diminish when she left home. His mother works full-time, with unpredictable hours, and he described her as working 'most of her life, like'. She visits him every day and cooks dinner for him most days. Interestingly, in her interview, she made no reference to the child's living arrangements, although she did refer to him staying 'overnight' with an uncle with whom he lives.

Asked how she felt when she had to separate from the child his mother **(Case 3-M)** replied:

'Well, the usual feelings of getting back to him, and wanting to be with him. But in the sense, he's so independent that I know I won't have to worry about him. You know, he's a very independent child, and a very, very good child. You know, he doesn't, doesn't give me any trouble whatsoever.....*(So would he have stayed overnight anywhere?)*. Oh, he stays overnight, in, em, my, brother's house. *(And how are you usually when/)* As long as I know he's safe I'm ok once he's happy with, staying where he's staying. I'm ok about it.'

Do you ever feel worried about him?

'No, not really. No, because he's a fairly confident child.'

When the child was asked to described how he got on with his mother as he was growing up and whether he saw much of her he replied:

'Well, I haven't seen much of her lately, cause she's been working like throughout the day, like, she only came, she was working and I do be in school like everyday and if I miss a day it's only because I'm sick or something, usually go into school though, cause (. . . 3 secs) just, like, don't us, I haven't seen her usually, because she's been at work, she didn't get in till quarter to ten last night.'

Asked how he got on with his granny growing up he replied:

'*(Sighs).* Ok. She used to do everything for me, you know (. . . 3 secs) *(And your mam, would come and visit like she does now, is it?).* Yeah. *(And when your mam used to come and visit, how used you get on with her when you were a little kid?)* Ok. Like, I used to, like I wasn't allowed go out on the road till I was about five as there's a main road just situated right at the side of me house like, and I was only allowed go out the back till I was about five. Well, I was allowed go out but I didn't go like, cause I didn't know anybody or anything cause they didn't really come out. *(And was it your granny that was rearing you at that point?).* Yeah. *.(And how did you get on with your granny?)* Ok, like (. . . 3 secs). Like, we used to do everything together and everything like.'

Later, he chose 'looked after me' as one of the phrases to describe his relationship with his mother in childhood:

Can you think of a particular time or example, any particular memory of your mam looking after you?

'(. . . . . 12 secs). No.'

Asked if he ever felt rejected as a child he replied:

'Yeah, I remember me mam used to go to work all the time, like, and she wasn't there *(And how old were you when you first felt that way?).* About five or six.'

This child showed substantial idealisation of his mother and grandmother and a

characteristically Dismissing self-reliant stance in the interview. However, his defences faltered when he was asked about being separated from his grandmother:

What was it like for you being away from home for the first time?

'(. . . . 4 secs). It was alright like. (*Do you remember anything about it, how you reacted being away from home?)* No.'

So, was the first time you were away from your nanny when she got sick?

'Yeah, maybe, yeah. *(What was that like?)* (. . . . . 18 secs). *(How long ago was that?).* Well, she only went in a few weeks ago. *(And was that the first time you were away from her?)* (. . 2 secs). Yeah, and except for when I was on holiday with me mam. *(When did you go on holiday with your mam?).* When I was seven. *(How was that?).* Alright (. . . . 4 secs). *(And how did you react to being away from home?).* OK. *(So, what was it like when your nanny went to hospital?)* (. . . . 4 secs). Alright like. *(How did you react to it?)* (. . . . . 25 secs) *(Do you find it hard to talk about it?)* (. . . 3 secs). *(Are you still feeling upset about it?)* (. . . . 4 secs). Yeah *(whispers). (It's very hard on you, isn't it?).* Yeah *(whispers). (Have you ever talked to anybody about it at all?).* (. . . . . 17 secs) *(Do you go and see her often, how is it when you see her?).* Ok, like *(whispers)* (. . . . . 8 secs). *(Would you rather not talk about it?)* Ok.'

Another child **(Case 9-C)** lived with his mother and grandparents until he was aged four. His mother then married and he went to live with her. However, he seems to retain a significant involvement with his grandmother who minds him after school every day. When this child was asked who he would say reared him he replied:

'Well, I was living with me gran first. *(With your granny?).* Yeah. And with me mam and gran and me two aunties and me grand.'

Asked to whom he felt closest as a child he replied:

'Me mam. *(Your mam always, was it?).* Yeah. *(Did you miss your gran when you moved out?).* A bit but I still come down to her'.

His mother **(Case 9-M),** describing the child's current relationship with his grandmother said:

'She idolises the ground he walks on. She's like his little maid, like that she never did for us. He lies on the couch and shouts in his orders and my mother goes running with the tray and because he was four when we got married and he lived there he still he has our house is his home he says this is my house but his granny's is his home as well, so he would never stay a full week in my house, he sleeps at least one night a week in his granny's. He has never broken that, he has his own bedroom, he has.'

Two of the children had mothers who were married at the time of their birth. In one case **(Case 7-M)**, the mother, in the 18 months prior to the AAI, experienced the highest negative life change of all the mothers in the entire sample. These changes included employment difficulties, change in social activities, and more separation from spouse as a result of other commitments. In addition, this mother, who had suffered multiple physical and sexual abuse as a child, when asked if she had any other experiences that were overwhelmingly frightening described an episode that happened six years before:

'No, well I think only once where I really felt as though I was going off the deep end. I really did I was really worried and all I could think of was it didn't really matter about me if I actually dropped dead, right, it was actually pure stress it was just a build up I think of everything at this stage the balloon burst.'

In the other case **(Case 21-M),** this child's mother experienced a number of significant losses since this child was born, including the death of both her parents, about which she remains significantly Unresolved. In fact, her score for Unresolved loss was 9 - the highest in the scale and the highest rating given to any subject in the sample.

Another theme that emerged in both the above cases was the perception that these children were now receiving less parental care and attention than in earlier years. One mother **(Case 7-M)** describing how she hated to be away from the child when he was small said:

'Like I think actually in the beginning it caused (husband) and I problems because I went from this young girl going out dancing and all the rest of it to totally protective maternal nutcase. No, I wouldn't let anybody have him and I though nobody could mind him,

nobody could feed him, nobody could do anything, you realise that's silly but yeah, I was a good ten months before I'd let somebody have him you know ...Yeah, I was very protective of him earlier'.

Examining the child's AAI **(Case 7-C),** it appears that this mother currently exhibits very little affection for the child and is quite rejecting.

One child **(Case 21-C)**, when asked to describe his relationship with his parents as a young child he replied:

'Well, I don't really like get much attention now as I did when I was the only child, cause, like, cause now they're the youngest and they probably think that I'm able to look after myself now'.

Insecure infant-secure child

There were 3 children in this grouping. These children all had *Secure mothers.* Thus, many of the characteristics and themes described under 'secure mother-secure child' in Chapter 8, would apply to their current relationships with their mothers and would account for their current secure status. However, *the conditions of their lives have changed since infancy.* For example, two of the children were born to single mothers and both experienced significant changes in caretaking arrangements since infancy. In one case **(Case 20-C)**, the child lived with his mother and grandmother until his mother married when he was nine months old, when his mother moved out. From then until age four, the child continued to live with his grandmother five days days a week, staying with his parents only at weekends. Thus, he was assessed in the strange situation just nine months after a significant change in his caretaking. Describing that time the mother **(Case 20-M)** said:

'I think at the time I was selfish and it was, and it was giving me a chance to get - to go back to work and get some money together to maybe, to get a car or to be able to give him more than we were able to give him at the time and as well as that then I was so young that I was - that I didn't have a child any more to - I could go out at night and never had to look for a babysitter or things like that'.

In the other case **(Case 10-C)**, the child's mother broke up with the child's father in his

second year. Describing that time his mother **(Case 10-M)** said:

'We were just so young and immature, and, it was ridiculous, he was on the dole. I was, you know, supposed to be going to College, and not going in every day, and it was just, rut (sic), big time.'

She then married another man who was rejecting of the child and hit him frequently. She then separated from her husband. This child now lives with his mother and step-sibling, of whom he is very jealous. His mother describes herself as follows:

'I mean I think I've matured a lot, and I've learned a lot in the last ten years, but I, you know, I, I've come a long way, personally, in the last two years, three years, since I separated from my husband'.

Even more significantly, this child has always had a very close relationship with his maternal grandparents, and has re-established a close relationship with his paternal grandparents. He has also established a reasonably close relationship with his father. In fact, he identifies his paternal grandmother as the person, above all others in his life, to whom he feels the most attached. He described staying with his paternal grandparents for some time, after his mother separated from his step-father:

'And I got so attached to staying there, I didn't really want to go home to see my new house, cause I wanted to stay....I was, I was eh, I was like, I'd just get back to my ordinary, normal self, just an ordinary life again, you know'.

This child was exceptionally thoughtful and reflective, and was open about the effects of his experiences. Recalling when his mother got married he said:

'Eh, but I remember the wedding. I remember it was, eh, (. . . . 4 secs) it was , eh, ah, it was my, they, they were going on their honeymoon on my birthday. So I never saw my mam on my birthday. *(How old were you then?)*. I was seven, exactly seven. *(That was hard)*. Yeah, and I had to stay with (name of maternal grandmother) on my birthday. *(And do you still feel bad about that?)* Yeah, And they came back, and they had no present for me'.

He was similarly open about the effect his sister's birth had on his relationship with his

mother:

'Yeah, things, my life has just changed altogether really. *(In what way has it changed? I know you said you get less attention now and that she annoys you. Is there any other way?).* Well I - no, there's no other way, it's just I'm sort of, like, left out. So I'm not important anymore'.

He tries to be forgiving about his mother. Describing how his step-father used hit him across the face in front of his mother and maternal grandmother he said:

'And my mam was standing right behind him, and so was my grandmother, and they wouldn't do anything to stop him. *(Why?)* They just wouldn't'.

Later, asked why his mother acted the way she did he said:

'I don't know. She probably didn't want to get involved, just in case it might happen to her.'

He is aware of the pressures on his mother:

'Well, you see, she's a hard, she's hard, she works's very hard to try to keep a roof over, em, me and (name of sister) head. You know, like, to get the house and to do the petrol and the food and all, so.'

Nonetheless, he is forthcoming about the effects on him. Asked if he sees much of his mother and if they do lots of things together he replied:

'Eh, no. I ask her to do a lot of things and she doesn't want to. *(Why is that?)* I don't know, she just, like, needs to, she goes, ah, she keeps saying that I need the money for the petrol and all. I have to buy food and all.'

This child also had high scores on metacognitive monitoring (that is, the ability to reflect on on-going thinking), which is a marker of autonomy. In fact, he had the second highest scores in the whole sample of mothers and children. Speaking of his annoyance at his sister, and the fact that his mother does not support him, he said:

'Well, she was annoying me there last Friday morning and I said, I was just about to stand up and just shout my head off and say 'Listen, if she's not going to stop, I'm moving out'. I'd go up to my grandmother's. So, I, I nearly done that but I didn't *(sighs). (What changed your mind?)* I don't know (. . . 3 secs). Just. I didn't want to annoy (name of mother)'.

Asked if there were any aspects of his experiences growing up that had a bad effect on him, or were a set-back to him he replied:

' (. . . . 4 secs) eh, I remember, like, it was if, em, I remember, eh, I used to be hit and all *(By your step-father is it?).* I just want to take my aggression out on other people. Like my anger out on them. I just wanted to just, start beating up people, like. *(And did you ever do that?).* No. If other people started annoying me and all, and calling me names in school, and I just get the, get adrenalin, you know, from, just remember what they done to me, what (stepfather) done to me'.

The third case **(Case 2-C)**, involved as child whose parents had severe marital difficulties early in the marriage, because her husband drank heavily. Describing these times this child's mother **(Case 2-M)** said:

'Yeah, I've had hugely, um, traumatic experiences in my marriage and very frightening times, um. . . . (4 secs), yeah, I would consider those huge, yeah. And, um. . . (3 secs). . .'

Later she said:

'(T)hose were the times when I was terrified very frightened and very very stressed. *(What would happen during those time?).* He would be very, um, very very aggressive and sometimes violent'.

Asked what would her husbands actually do during these times she said:

'Um, he would (. . 2 secs) he would more throw things about the house than he would me. But if I kept pushing and pushing and pushing and pushing the situation because I wasn't, I just wasn't willing to let it happen and I wasn't willing to *(sighs),* wasn't willing

to take the easy way out, or what I consider the easy way out, I wanted him to get better I wanted it to work and. But unfortunately for poor (child), she saw, witnessed a lot of it,um, and that's my biggest regret of all of it, that I didn't handle the situation as well as I could and I should'.

These marital difficulties have now been resolved, and the child is now Secure, with the second highest meta-cognitive score of the children in the sample.

Insecure infant-insecure child.

There were two children in this grouping. The first case **(Case 12-C)** involved a child whose mother was single when he was born. His mother, who was classified as passively preoccupied by her parents, had a very difficult relationship with her own father and had no support from the child's father. The child lived with his mother and grandparents until age 7 when his mother moved out. She later married and now has another child. He remained with his grandparents, and only came to live with her at age 11. Asked how she felt when she moved out without the child, this mother's account **(Case 12-M)** was confusing and incoherent, characterised by many run-on sentences, unmarked quotes from others' speech, and a tendency to wander off into details:

'I wanted to take him with me. I wanted him to come with me and me ma didn't really want to let him go and me ma convinced me that it was the right thing to do. 'Have him over at weekends, let him come over when'. He didn't want to come over, he didn't want to move over himself, he cried, all his friends are over in me ma's and he has no one to play with, he would come over. First of all he would come over every Wednesday, he used to, be and stay over. I would drop him over in the morning, on Thursday morning., and then he would come on Saturday and spend Sunday and maybe go home on Sunday. And then as the weeks went on, he got hat bit older and the summer came, and he might come over once a month once every two months, and it was getting that he wasn't really coming over at all and I was saying, but I still used to go over to me ma's. But then he used to nark me like, like he doesn't seem that he wanted to know me but yeah, when I was pregnant, and he was over with me and I explained to him when I have a baby and then he said when did the baby get in and you are trying to explain and eh, and I said 'Oh , the baby's cot' like, there is only one bedroom, and 'the baby's cot is coming in', but yet he wasn't coming over 'Don't get rid of his bed, leave his bed there'. I says 'Oh, I will get rid of your bed so that

you won't come over' you know, to see, 'Oh no, don't get rid of me bed'. So he wanted his bed there, to know that he had a place there if he wanted it he didn't really want to be there. And then I, when I had her, I I felt it worse I felt like I was really neglecting him, but ma said 'He is getting all the love and attention he needs over here (name) I said 'Yeah, but ma, I don't think it's right and I used to get myself upset over it then, that he is over there and she is here. So then, when I got that house I said 'I got a house do you want to move in, it it only around the corner from your nana' and he says 'I will go over and have a look'. So he went over and had a look at it and he said 'which bedroom can I have and I said 'You have which one you want, which one do you want he said 'That one'. The next day he took all his stuff and me ma is cry, me ma didn't tell me until lately that she pleaded with him not to go but he came and I said but he wanted to come and then he was threatening me 'I am going back to live with me nana, you are too cruel''.

This child's interview was characterised by bizarre behaviour, and a marked lack of cooperation. His insistence of lack of recall for childhood was so extreme that he scored top of the scale. He repeatedly answered questions by saying 'I don't remember'. Throughout most of the interview, he made no reference to the fact that his father (or his mother's new partner) did not live with him when he was growing up, only mentioning the latter towards the end of the interview. His responses were often odd. For example, asked who lived with him in his granny's house when he was growing up he replied:

'Me aunty and me uncle and me, I used to. *(And you. And who else?)* The two dogs. *(And your mam?)* And me ma.'

And what about your dad., where did he live?.

'(Name of place)'.

So when you were growing up your dad wasn't around, was he?

(No answer)

No? When did he come to join the family?

'A few years ago or a few months ago. *(A few months ago?)*. Or something.'

The second case **(Case 13-C)** involved a child whose mother was married and classified Secure, but who was very stressed and handed over substantial care of child to her husband, who physically abused him. This case was dealt with in some detail under 'secure mother-insecure child' in Chapter 8.

Continuity of attachment from infancy to childhood using the four-category system.

The differences between the groupings of secure/insecure infant-secure/insecure child generated by the three- and the four-category systems were as follows. Using the three-category system, there were nine children who were classified secure in both infancy and childhood. Using the four-category system, three of those children were classified insecure: two were classified disorganised/secure in infancy and Secure in childhood, and one was classified secure in infancy and Unresolved in childhood. In one case, the mother of the child classified disorganised/secure in infancy **(Case 5-M)**, asked to describe any traumatic experiences she suffered in her life said:

' In my whole life? Em, I had, eh, I was pregnant when I was eighteen, in College. And eh, I had a miscarriage at, at about a month. And it was, it was actually the worst time possible, to be eighteen and find yourself pregnant. And I actually left College. Anyway myself and my husband, who was the father of this baby, went, we went away, we stayed in, we went to (name of country), for a year, because we just, we didn't know what else to do. I couldn't imagine broaching this subject at home, you know, the fact that you were pregnant, because as I say, the, my, my parents wanted you to go to College, and everything you know, I just couldn't disappoint them.... and I lost the baby..and it, really, I think it took me years to get over it. It, it was the fact that nobody knew.nobody at home knew, and still don't'.

Later she said:

'When I lost the baby I, I was very upset because I had, you know, I had made the move, and you had decided that you were going to cope with this, I'm gonna have the baby,and I could actually see the pram. So I actually had, sort of planned, because I'm a great one like that for planning, you know....But I mean, for years and years, I really wanted a baby, and when I was eighteen I didn't want a baby, but I had lost one, I had to have one to replace it, you know, I was, it was, the strangest thing'.

It is possible that his mother, now classified Secure, was herself Unresolved, at the time of this child's birth and infancy, and may have been frightened that this baby would not survive, thus possibly adversely affecting her caretaking.

The other case **(Case 19-C)** involved a child, now Secure, but classified disorganised/secure in infancy. Why this child should be be disorganised is not clear. However, his mother, classified Secure, did report that her father had died when she was 6. She described her reaction to his death as follows:

'Em, I stopped talking apparently. Em, *(For how long?).* I don't know. I'm sure I talked when I had to, in school and stuff like that, but I did stop talking *(At home?).* Mmmm. *(For how long?).* Don't know. *(Was it like, months or weeks?).* Can't remember. I've only been, I've been told this by other people,do you know what I mean. Em, it was hugely traumatic, it was awful. It was like as if, the whole world just stopped'.

She reported staying upset for a long time after the death. It is possible that this mother may have been still Unresolved/Secure at the time of the child's birth and during his infancy.

The third case **(Case 6-C),** involving a child classified secure in infancy and Unresolved/Secure in childhood as a consequence of a grandparent's recent death in traumatic circumstances. This child was described in some detail under 'Children classified Secure on the AAI' in Chapter 8. Other than those three cases, the four-category system yielded the same results in stability of attachment from infancy to childhood.

The themes and characteristics identified in the four groupings suggest that continuity of attachment security from infancy to childhood is associated with the continuation of a positive, stable family environment; and continuity of insecurity with the continuation of a stable negative environment. Change in attachment status from secure in infancy to insecure in childhood is associated with negative life change; and change from insecure to secure status with positive life change. This pattern of results thus answers *Questions 7 & 8.* positively.

PART 2: THE CONCORDANCE BETWEEN INFANT ATTACHMENT AND MATERNAL ATTACHMENT OVER 10 YEARS LATER

Section 2A. The concordance between mothers' AAI and infants' strange situation classifications: The distribution of the AAI classifications of the 20 mothers was as follows[3]: Using the three-category system, ten (50%) of the mothers were classified Secure, one (5%) Dismissing, and nine (45%) Preoccupied. Using the four-category system, nine (45%) were classified Secure, one(5%) Dismissing, seven (35%) Preoccupied, and three (15%) Unresolved.

Table 31

Classification of mothers on the AAI

	Dismissing	Preoccupied	Secure	Unresolved	Total
Three category	1 (5%)	9 (45%)	10 (50%)	na	20 (100%)
Four category	1 (5%)	7 (35%)	9 (45%)	3 (15%)	20 (100%)

The distribution of the infants' attachment classifications was already outlined in Section 1A above. Examining now the two-way (secure vs insecure) concordance between mothers' AAI classifications and infant strange situation classifications, using the three-category system, it can be seen from Table 32 that, using Fisher's Exact Test, it is non-significant, with an observed two-way (secure-insecure) match of 35% versus 50% expected by chance alone. The three-way match was 30% Table 33 shows that, using the four-category system, the observed match is even lower, with an observed two-way (secure-insecure) match of 20%, and a four-way match 15% Thus, *Question* 10 is answered negatively, that is, the correspondence between infant and maternal attachment (assessed over 10 years later) is not significant.

Table 32

Concordance between mothers' AAIs and infant strange situation classifications (three categories)

Classification of mothers on the AAI

Infant SS classifications	Dismissing	Preoccupied	Secure	Total
Avoidant	0 (0%)	1 (5%)	2 (10%)	3 (15%)
Resistant	0 (0%)	0 (0%)	2 (10%)	2 (10%)
Secure	1 (5%)	8 (40%)	6 (30%)	15 (75%)
Total	1 (5%)	9 (45%)	10 (50%)	20 (100%)

Note: Observed match for two-way* (secure-insecure)35% vs 50% expected by chance alone. Fisher's Exact Test, one-sided, ns.
*2 cells have expected count less than 5. The minimum expected count is 2.50.

[3] Note that the distribution of the mothers' AAI classifications in this section refer to the 20 mothers whose infants were assessed in the strange situation.

Table 33

Comparison between mothers' AAIs and infant strange situation classifications (four categories)

Classification of mothers on the AAI

Infant SS classifications	Dismissing	Preoccupied	Secure	Unresolved	Total
Avoidant	0 (0%)	1 (5%)	1 (5%)	0 (0%)	2 (10%)
Ambivalent	0 (0%)	0 (0%)	2 (10%)	0 (0%)	2 (10%)
Secure	1 (5%)	6 (30%)	3 (15%)	3 (15%)	13 (65%)
Disorganised	0 (0(%)	0 (0%)	3 (15%)	0 (0%)	3 (15%)
Total	1 (5%)	7 (35%)	9 (45%)	3 (15%)	20 (1005)

Section 2B: The relationship between marital status at the time of the infant's birth and infant and mother attachment security: As was observed earlier, the distribution of attachment classifications among married and single mothers was quite different, with a higher proportion of insecure classifications found in the single-mother group. As can be seen in Table 34, for the 20 mothers whose infants had been assessed in the strange situation, eight (66.67%) of the married mothers were classified Secure while only two (25%) of the single were so classified.

Table 34

Relationship between marital status at time of child's birth and maternal AAI classification

Marital status	Dismissing	Secure	Preoccupied	Total
Married	0 (0%)	8 (66.67%)	4 (33.33%))	12 (100%)
Single	1(12.5%)	2 (25.00%)	5 (62.50%)	8 (100%)
Total	1 (5.00%)	10 (50.00%)	9 (45.00%)	20 (100%)

Looking now at the relationship of marital status at the time of the child's birth and infant attachment, an examination of Table 35 shows that, with respect to the 12 mothers who were married at the time of the child's birth, ten (83.4%) had secure infants. Of the eight mothers who were single at the time of the child's birth, five (62.5%) had secure infants. Over-all, the observed match of 65% versus 55% expected by chance alone, using Fisher's Exact Test, is non-significant. Thus, marital status, of itself, does not appear to be related to infant attachment. .

Examination of the relationship between marital status and mother-infant attachment concordance, shows that of the eight Secure married mothers, six (75%) had secure infants and two (25%) had insecure infants. All four of the insecure married mothers (100%) had secure infants. Of the five insecure single mothers, four (80%) had secure infants and one

(20%) had an insecure infant. Both Secure single mothers had insecure infants (see Table 35). Thus, the concordance between infant and maternal attachment is greater (50%) in the married mother group than the single mother group (12.5%) Using Fisher's Exact Test, however, the over-all observed concordance of 65% versus 47% expected by chance alone is non-significant. Thus, *Question* 11. is answered positively, in so far as the infant-mother attachment corcordance is greater in the married-mother group than the single-mother group, but negatively in so far as this does not reach significance.

Table 35

Relationship between marital status and infant attachment* and between marital status and concordance of mother-infant attachment**

Infant Attachment

Mother Attachment	Secure	Insecure	Total
Married Secure	6 (50%)	2 (16.6%)	8 (66.6%)
Married Insecure	4(33.3%)	0 (0%)	4 (33.3%)
Single Secure	0(0%)	2 (25%)	2 (25%)
Single Insecure	5 (62.5%)	1 (12.5%)	6 (75%)
Total	15 (75%)	5 (25%)	20 (100%)

Note: *Observed match between marital status and infant attachment 65% vs 55% expected by chance alone. Fisher's Exact Test, one-sided, ns.

** Observed match between maritalstatus and concordance of mother-infant attachment 65% versus 47% exected by chance alone. Fisher's Exact Test, one-sided, ns.

Section 2C: The relationship of life events to mother-infant attachment concordance:

Table 36 shows that the mean number of life changes for the 4 possible groupings of secure/insecure mother-secure/insecure infant. Although the differences between groups did not reach statistical significance, there were interesting patterns. Secure mothers who had secure infants experienced the least number of negative life change (M=11.50) and total life change (M=13.17) in the 18 months preceding the current assessment, and their children experienced the least number of life events since their fifth birthday (M=1.00). The highest number of life events (4) was experienced by the child who had been insecure in infancy and had an insecure mother, and the next highest (M=2.5) by children whose infant attachment classification did not correspond to their mother's. Insecure mothers of secure infants experienced the highest negative (M=6.25) and total life change (M=19.37). Thus, Question 12 is supported.

Table 36
Relationship of mean number of life events experienced by mothers and children and match between mother-infant attachment security (three categories)

	LES pos ch	LES neg ch	LES total ch	LEQ
SecM-SecI (N=6)	11.50 (5.24)	1.67 (1.03)	13.17 (5.71)	1.00 (1.09)
InsecM-InsecI (N=8)	13.12 (10.15)	6.25 (4.43)	19.37 (11.99)	2.5 (1.60)
SecM-InsecI (N=4)	11.75 (4.03)	4.75 (3.86)	16.50 (4.79)	2.5 (1.29)
InsecM-SecI (N=1)	14	2	16	4
Total=19*	12.37 (7.15)	4.26 (3.84)	16.63 (8.73)	2.11 (1.52)
F	n.s.	n.s.	n.s.	n.s.

Note: Standard Deviations appear in parentheses.
*Data available for 19 subjects only.

Section 2D: Themes and characteristics common in each of the four secure/insecure mother-secure/insecure infant groupings[4]

Secure mother-secure infant

There were six dyads in this grouping. These dyads were among the nine 'secure mother-secure child' dyads, and among the nine 'secure infant-secure child' dyads described in detail in Chapter 8 and above. Thus, many of the characteristics and themes already identified in those groupings apply to this grouping. Examining the mothers' and children's transcripts from the perspective of what light they might throw on conditions during the child's infancy, some additional themes emerged. The first theme to emerge was the *mothers' perceived support from their partners*. All the mothers in this group were married at the time of the children's birth (one has since separated and has a new partner) and all spontaneously described their partners as supportive. One mother **(Case 19-M)** described her husband as follows: 'He's a real family man, he's very big into his children and they have wonderful relationships with him, and you know, that is very important to me'.

However, the most striking theme to emerge was *the high value mothers placed on close attachments with their children*. These mothers seem to *intensely miss their children's physical presence* when they had to be apart. In some cases, mothers talked about their reactions to being separated from their children when they were smaller, in other cases, the mothers talked about current separations.

[4] The four groupings are based on the three category system.

Asked how she felt when she had to be away from her child when he was small, one mother **(Case 18-M)** said:

'Oh, it was terrible, terrible, I hated going away when he was small, you know, em. *(Did you go away much?).* No, not really so much when he was small. No, (name of husband) and I go off for a weekend, that would be it, you know *(laughs)*, and we'd be more upset going down the road for the first half hour, you know.'

Another mother **(Case 4 -M)** echoed these sentiments:

'I miss her a lot. I miss her terrible. I be delighted of the break but then I do miss her'.

Another mother **(Case 6-M),** described how she felt when she and her husband recently spent an overnight away from their children:

'(S)o that was an overnight and em, I thought up the next morning I'd never get and have my breakfast and go home. Even though I had left them with my niece and she's constantly with them I still - I don't like them being separated from me'.

(Case 15-M) describing her reaction to her daughter's absence for a few days said:

'Oh I missed her terrible. Because she's such a chatty person when she's at home. I know she's not like that with everybody, but, at home, she is. And it was like the house was just completely empty, like she wasn't there anymore...But, eh, - ah, she's brilliant'.

Another mother **(Case 19-M)**, speaking of her reaction to being away on holiday from her child some years ago expressed an almost physical longing for her child:

'We went, we, myself and my husband, we won a holiday away, that we couldn't bring the children on, em, for a fortnight and we went on it. And I have to say by the time the fortnight, you know, midway into the second week, I thought I would never get home to see them. *(Do you worry about him when you are away from him?).* It's not so much worry about him but I, I, there were times I needed to get a hug off him and it wasn't possible. You know, I missed his physical presence. Em, and when we got home, he, you know, he sat on the couch beside me for a cuddle, every night for a couple of weeks. That

sort of thing. Em, but I just missed seeing him'.

Insecure mother -insecure Infant

In this case **(Case 12-M)**, described earlier, the mother was single at the time of the child's birth. She had no support from the father, and had a difficult relationship with one of her parents with whom she and the infant were living. She and the infant lived with her parents until the child was in middle childhood when the mother moved out and the child stayed with grandmother. The child recently came to live with her, her husband and young half-sister. Speaking of the child's continuing unease since he came to live with her, this mother commented on him as a baby:

'I think he is feeling left out cause the baby is sitting on your knee half the day, she'll demand the attention, she'll say 'Give me hug, give me love, give me this' ... But I took him down and I talked to him, and I said 'If you are not getting enough love off me that you need' I said '(name of child)' he didn't, he never really looked for a lot of love off, you know, to be held, and he would hug me sister, and he never looked, he never, she seems to be there and he has moved in with us and with her there'. He seems to. I think he is feeling it. I think so, I am not sure, I think maybe, you will get more information out of him'.

Asked how he felt when he moved from his nanny's, and whether he liked the move to his mother's this child **(Case 12-C)** said:

'Sort of (. . . . . 5 secs). I sort of missed me nanny's and me aunty. *(Who is the person you are closest to, your nanny or your aunty?)* Me aunty. *(Who is the person you are closest to in the whole world?)* (. . 2 secs). Me aunty probably. .....*(So, tell me a little bit about her?).* She is kind (. . . . . 6 secs). I like her *(mumbles) (What?).* I like her (. . . . . 7 secs).

Asked if he was ever frightened or worried about anything as a small child child he replied: '(. . . 3 secs) I didn't know about anything when I was small'.

Insecure mother - secure Infant

There were nine dyads in this grouping. Four of the these mothers were married at the time of the infant's birth and five were single. All but one of the mothers was classified Preoccupied, that is, overwhelmed and over-involved in relationships and experiences in their own family of origin. Six of those secure infants were classified insecure at age 11. Thus, many of the themes and characteristics identified under 'secure infant-insecure child' in Chapter 8 may would also be relevant here. An examination of the transcripts revealed some additional themes. Six of the nine infants were reared for a part of their infancy in multiple-caretaker environments - with mothers and infants living in the maternal grandparent's home. In the case of three of the single mothers (see **Cases 3, 9, and 20**), the maternal grandmothers may well have been the major caretakers.

The most common reason advanced for the high involvement of grandmothers was to allow the mothers to go back to work. Most of these single mothers vividly described the often well-founded anxiety they experienced at the prospect of telling their parents about their pregnancy. However, although many of the parents were initially shocked and disapproving, the mothers described their profound relief when their parents began to support them after the baby was born, describing their parents as 'brilliant'. However, one mother **(Case 11-M)** struggled against this high involvement and refused to go back to work. Nonetheless, she still decided to continue to live with her parents for the first year of the infant's life, even though she and her future husband bought their own home a few months after the birth. Her account may throw light on the pressures operating on these young mothers to please their parents, and allow their mothers a significant role in the caretaking of the infant. It is interesting to note that, of the five insecure single mothers with secure infants, this is the only mother whose child remained Secure at age 11.

' We should have moved in together and started a life but because my parents and trying to, I suppose make up to them for making a mistake of getting pregnant I said well, I won't live with him until we get married'.

She also described her struggle to limit her mother's involvement in the rearing of the infant: ' And my Mam and me we had many arguments because I was doing everything wrong and she knew how to do everything right. And I didn't want her taking over and I didn't want my four brothers to be Dada, you know, I wanted my baby to have to have its proper

daddy. Em, I remember fighting for my corner and that thing, you know, I'm not a child anymore Mam, I'm a mother now too and you're the granny, you know, and you you have to let me make the mistakes I'm going to have to make, you know. I'll come to you when I need something and when I do have a problem I will be able to ask you. And she couldn't she couldn't let go and she couldn't understand, she wanted me back at work, she didn't want me there minding the baby because I didn't know how to do it right. So, em, when she realised after six months, oh, God, she really isn't going to back to work she's going to take on this role of motherhood, em, she became angry that, you know, I was suddenly not needing her the way she wanted me to need her anymore, you know'.

A second related theme that emerged was that *these first-born children were often the centre of attention of their parents and large extended families* . A married mother **(Case 1-M)**, describing her current relationship with her parents said:

'I love the way they get on with the kids and they think the world of the kids and they'd do anything for them, but especially (child) now, Mammy idolises (child). She might as well be her only grandchild like she just, I think Mammy and her just have a special bond and I like that'.

In another case **(Case 21-C),** the child was the first grandchild on his father's side and the mother described him as 'a bit spoiled by them'. The child himself described himself as very close to his grandparents and aunts: 'Every time I get a chance to, like, stay over, I stay'.

A third theme that emerged for the married mothers in this group was their substantial *experience as caretakers of their own siblings* . One mother **(Case 21-M),** from a family of 10 children, said simply: 'We reared each other, like I mean I looked after the smaller ones than me...' Another mother **(Case 7-M),** also from a family of 10 said: 'I would say each of us as children reared each other. The oldest one took over, I think that was the way it worked with us....we tended to look out for each other and bring each other up'. Another mother **(Case 1-M),** from a family of 8 children, attributed her confidence as a new mother to the experience she had caretaking her own siblings:

'(L)ike when I had (child) em, when I was in the hospital like, I noticed a lot of girls there, even older than me and they were very nervous with their babies but, I hadn't got that like,

we'd always, there's always been a baby in our family. Em, I'd no fear of looking after a baby, I knew I was quite capable of looking after a baby,and I suppose that, you know, with all the moaning I'd done about it, having to mind me sisters and look after them, sorta like, that experience was there for me like, I remember one girl in particular said to me in the hospital, 'Oh my God' she said, 'There's not a bother on you' she said you know, and I was delighted with this I have to say like you know but em, I just, I just get up and get on with it cause I knew I could do it'.'

Secure mother - insecure-infant

There were four dyads in this grouping. Three of these children were classified Secure at age 11-12. Thus, the characteristics and themes identified for the 'insecure infant-secure child' grouping above are relevant here. The main theme that emerged for this group was the *high levels of stress* that seemed to characterise these mothers' lives. Two of the mothers were married at the time of the infant's birth. In one case **(Case 2)**, the mother was experiencing severe marital stress in the early years of her marriage, in the other case **(Case 13)**, the mother was coping with chronic stress, arising from her earlier adverse childhood and her current life circumstances. This mother tried to care for her baby in a responsive way:

'(W)hen he was crying, say when he was a baby I'd an awful lot of, um, time for him, I wouldn't, I don't know, I can remember he was only a couple of days old I think at the time and people were saying , oh, he's spoiled rotten already and, you know, I don't like that, I don't, em, you know, I think babies should be hugged and should be lifted and should be, you know, and the same with night time, you know, coming into the bed, and um, -- it's natural there's something in me that says, you know, that's the way they are by nature, so you know, what do we know to change it or something'.

However, she perceived the infant to be difficult:

'I remember my first minder coming down before I went back to work and she was looking at him and he was like, oh wait til I get my hands on him, it will be a different child, and you know, she gave up after two weeks, she couldn't take anymore *(laughs).* And it was like that feeling that I'm never going to get anyone to mind him....because I had a couple of people and he was, I mean he vomited a lot he was awake a lot he was non-stop activity

even when he was tiny. *(Really?)* Yeah absolutely he was born, he was born I don't think he closed his eyes for about six hours after he was born, he was born like with, like a frightened rabbit. Uh, you know he wasn't an easy baby and that's what I used to be really worried that people would be hard on him I suppose'.

Two of the mothers were single at the time of the child's birth **(Cases 10 and 20).** These cases were discussed in some detail under 'insecure infant-secure children in Part One of the chapter. In one case **(Case 10),** the child's parents were very stressed by financial and relationship difficulties and separated in his second year. In the other case **(Case 20),** the child lived with his mother in the grandmother's home until he was nine months old, when his mother moved out. From then until he was aged four the child continued to live with his grandmother five days a week, staying with his parents at the weekends.

The themes and characteristics identified suggest that maternal stress and unstable family environment affects mother-infant attachment concordance; thus answering Question 12 positively. . However, some new factors that may have mediated the intergenerational transmission of attachment were also identified.

Concordance of infant attachment with maternal attachment 10 years later using the four-category system.

The differences between the groupings of secure/insecure mother-secure/insecure infant generated by the three-category and the four-category systems were as follows. Using the three-category system, there were six secure-secure dyads. Using the four-category system, three of those dyads changed - in two cases the child's classification changed, and in one case the mother's. With regard to the children, **(Cases 5 and 19)**, both were classified disorganised/secure in infancy. In one case**(Case 5)**, the mother had suffered a miscarriage in traumatic circumstances before this child's birth. In the other case **(Case 19)**, the mother had suffered an extreme reaction to the death of her father at age 6. It is possible that both mothers were still Unresolved at the time of the children's' birth and in their early infancy. Both these cases were discussed in some detail earlier. In the case of the change in the mother's classification **(Case 15)**, this mother was classified Unresolved/Secure, with regard to both parental abuse and loss. It is interesting to note that although her child was classified secure in infancy, her scores on the disorganised scale were high enough to have her classified borderline disorganised. Similarly, although

classified Secure on the AAI, there was some ambiguity in her transcript with regard to her reaction to the loss of a grandparent.

CHAPTER 10

RESULTS: MOTHERS' AND CHILDREN'S SELF-REPORTED ATTACHMENT STYLES

This Chapter examines the mothers' and children's self-reported attachment styles on the RQ1, RQ2 and RSQ, as applied to the mother-child (ie their own) relationship; and as applied to general relationships. Section A1 examines the distribution of the mothers' and children's attachment styles and the concordance between the different measures. Section A2 examines the concordance between the self-reported attachment styles as applied to the mother-child relationship and as applied to general relationships. Section A3 compares the distribution of of the mothers' and children's attachment styles with the distributions in other samples. Section A4 examines the concordance between the self-reported attachment styles of the mothers and their children. Section B examines the concordance between mothers' and children's self-reported attachment styles and their AAI attachment classifications. Section C examines the relationship between mothers' self reported attachment styles and their children's AAI classifications and between the children's self-reported attachment styles and their mothers' AAI classification.

Section A: The self-reported attachment styles of mothers and children

A1: *The distribution of attachment styles and the concordance between the different measures :* First, the self-reported attachment style in the mother-child relationship was examined, using the RQ1, RQ2 and RSQ as categorical measures. Full self-report data sets were not available for all 22 mothers and children. In addition, some children reported themselves both secure and insecure on the RQ2, so a fifth category - 'other'- was created. Table 37 shows that on the RQ1, 13 of the 19 (68.4%) mothers reported their relationship with their child as secure, six (31.6%) as preoccupied, and none as fearful or dismissing. On the RQ2, much the same pattern emerged, with 13 of the 20 mothers (65%) reporting their relationship secure and seven (35%) preoccupied. On the RSQ, 16 (88.9%) of the 18 mothers reported their relationship to be secure, two (11.1%) preoccupied, and none fearful or dismissing.

Of the 22 children, 19 (86.4%) reported their relationship with their mother to be secure,

three (13.6%) dismissing, and none fearful or preoccupied on the RQ1. On the RQ2, 13 (59.1%) reported their relationship to be secure, four (18.2%) to be dismissing, none as fearful or preoccupied, and five (22.7%) as equally secure and insecure[1]. On the RSQ, 19 (86.4%) reported their relationship secure, three (13.6%) dismissing and none fearful or preoccupied. Thus, over all three measures, a majority of the mothers (between 65% and 88.9%) reported themselves secure in their relationship with the child, and between 11% and 35% reported themselves preoccupied. The highest proportion of secure styles was reported on the RSQ. A majority of the children (between 59% and 86%) reported themselves secure in their relationship with mother, and between 13% and 18% as dismissing. Over a fifth of the children reported themselves equally secure and insecure on one of the measures (RQ2).

Table 37
Mothers' and children's self-reported attachment style in the mother-child relationship

	Secure	Fearful	Preoccupied	Dismissing	Other*	Total
Mothers' RQ1	13 (68.4%)	0 (0%)	6 (31.6%)	0 (0%)	n.a.	19(100%)
Mothers' RQ2	13 (65%)	0 (0%)	7 (35%)	0 (0%)	n.a.	20(100%)
Mothers' RSQ	16 (88.9%)	0 (0%)	2 (11.1%)	0 (0%)	n.a.	18(100%)
Children's RQ1	19 (86.4%)	0 (0%)	0 (0%)	3 (13.6%)	n.a.	22(100%)
Children's RQ2	13 (59.1%)	0 (0%)	0 (0%)	4 (18.2%)	5 (22.7%)	22(100%)
Children's RSQ	19 (86.4%)	0 (0%)	0 (0%)	3 (13.6%)	n.a.	22(100%)

***Note**: Some children reported themselves both secure and insecure on the RQ2, so a fifth category - 'Other'- was created.

The concordance between each of the three measures was as follows. First, in relation to the mothers, a match was observed between self-reported attachment styles on the RQ1 and RQ2 in 18 of the 19 cases (94.8%); in 12 of the 18 cases (66.7%) on the RQ1 and the RSQ; and in 13 of the 19 cases (68.4%) on the RQ2 and the RSQ. In relation to the children, the match between self-reported attachment styles was observed in 16 of the 22 cases (72.7%) on the RQ1 and RQ2; 20 of the 22 cases (90.9%) on the RQ1 and RSQ; and 14 of the 22 cases (63.6%) on the RQ2 and RSQ. Thus, the answer to *Question* 13 is positive, that is, there is generally good convergence between the different self-report measures of the mother-child relationship - ranging from 94.8% -66.7% in the case of mothers and from 90.9%-63.6% in the case of children.

[1] On the RQ2, relationship style is assigned on the basis of the highest rating reported on the 4 relationship styles. When asked to rate each of the 4 relationship styles according to the extent that each corresponded to their relationship with their mothers, 5 children gave the same ratings to one of the insecure styles as they did to the secure style.

Table 38

Mothers' and children's self-reported attachment style in general relationships

	Secure	Fearful	Preoccupied	Dismissing	Other*	Total
Mothers' RQ1	9 (47.4%)	6 (31.6%)	2 (10.5%)	2 (10.5%)	n.a.	19(100%)
Mothers' RQ2	7 (36.8%)	5 (26.3%)	2 (10.5%)	1 (5.3%)	4 (21.1%)	19(100%)
Mothers' RSQ	8 (40%)	3 (15%)	2 (10%)	4 (20%)	3 (15%)	20(100%)
Children's RQ1	12 (54.5%)	2 (9.1%)	2 (9.1%)	6 (27.3%)	n.a.	22(100%)
Children's RQ2	6 (27.3%)	3 (13.6%)	2 (9.1%)	7 (31.8%)	4 (18.2%)	22(100%)
Children's RSQ	16 (72.7%)	0 (0%)	1 (4.5%)	5 (22.7%)	n.a.	22 (100%)

***Note**: Some children and mothers reported themselves both secure and insecure on the RQ2, so a fifth category - 'Other'- was created.

Next, mothers' and children's self-reported attachment styles in general relationships were examined, using the RQ1, RQ2 and RSQ as categorical measures. On the RQI, of the 19 mothers, nine (47.4%) reported themselves secure in general relationships, six (31.6%) fearful, two (10.5%) preoccupied, and two (10.5%) dismissing. On the RQ2, slightly fewer - seven (36.8%) - reported themselves secure, five (26.3%) fearful, two (10.5%) preoccupied, one (5.3%) dismissing, and four (21.1%) equally secure and insecure. On the RSQ, eight (40%) reported themselves secure, three (15%) fearful, two (10%) preoccupied, four (20%) dismissing, and three (15%) as equally secure and insecure[2]

Of the 22 children, 12 (54.5%) reported themselves secure on the RQ1, two each (9.1%) fearful and preoccupied, and six (27.3%) dismissing. On the RQ2, only six (27.3%) reported themselves secure, three (13.6%) fearful, two (9.1%) preoccupied, seven (31.8%) dismissing, and four (18.2%) as equally secure and insecure. On the RSQ, 16 (72.7%) reported themselves secure, none fearful, one (4.5%) preoccupied, and five (22.7%) dismissing.

Thus, over all three measures, between approximately 36% and 47% of mothers reported themselves secure in their general relationships, between 15% and 31% fearful, 10% preoccupied, and between 5% and 20% dismissing. A further 15% to 20% reported themselves equally secure and insecure in their general relationships. For the children, between 27% and 72% reported themselves secure, between 0% and 13% fearful, between 4% and 9% preoccupied, and between 22% and 32% dismissing.

The concordance between the three measures was as follows. First, in relation to the mothers, a match between the self-reported attachment styles on the RQ1 and the RQ2,

[2] On the RSQ, relationship style is assigned on the basis of the highest rating derived from items that measure the 4 relationship styles. In some cases, the scores on the secure and one of the insecure styles were the same.

and also on the RQ1 and RSQ, was observed in 13 of the 19 cases (68.4%). A match on the RQ2 and RSQ was observed in 10 of the 19 cases (52.6%). For the children, a match on the RQ1 and RQ2, and also on the RQ1 and the RSQ was observed in 12 of the 22 cases (54.5%). A match on the RQ2 and the RSQ was observed in 9 of the 22 cases (40.9%). Thus, *Question* 14 was not answered positively, with only modest convergence observed (ranging from 68.4% -52.6%) between the self-report measures of general relationships among the mothers, and even lower convergence (ranging from 40.9% -54.5%) among the children

A2: *The concordance between self-reported attachment styles in the mother-child relationship and in general relationships:* The self-reported attachment styles of mothers and children in general relationships was compared to their self-reported attachment styles in the mother-child relationship. For the mothers, on the RQ1, 55.5% were consistent in their self-classification across both domains; on the RQ2, 47.3% were consistent, and on the RSQ, 53% were consistent. For the children, on the RQ1, 50% were consistent across both domains; on the RQ2 31.8%, and on the RSQ, 68.1%. Thus, the over-all correspondence was relatively low (the relatively high 68.1% correspondence on the children's RSQ being largely due the high proportion self-classified secure in both domains). Thus, *Question* 15 was answered positively, that is, that there is weak convergence between self-reported attachment style across both domains. .

A3: *Comparison with other samples:* The distribution of mothers' and children's attachment styles was compared to that in other studies with much larger samples (Brennan, Shaver, & Tobey, 1992; O'Hearn & Davis, 1992; Scharfe & Bartholomew, 1994). Only relationship styles in general relationships as measured by the RQ and the RSQ could be directly compared, as no comparable data was available for the RQ2, or for any of the measures applied to the mother-child relationship. As can be seen from Table 39, the distribution of the mothers's attachment styles on the RQ1 applied to general relationships is comparable to those in much larger samples, and is quite similar to that in a study of 308 college students (O'Hearn & Davis, 1992). In addition, the distribution of the mothers' attachment styles on the RSQ as applied to general relationships is broadly similar to that found in a large longitudinal study of attachment styles in college students which used the RSQ as applied to romantic relationships. On both the RQ1 and the RSQ, the proportion of mothers classifying themselves as dismissing was higher than that found in the larger studies. This may be a function of the small size of the sample, or the age or

life-stage of the mothers in comparison to college students.

Turning now to the distribution of the mothers' attachment styles, as applied to their relationship with the child, it can be seen that it is quite different from the distribution of attachment styles as applied to general relationships in the larger studies. Specifically, on both the RQ1 and the RSQ, a much higher proportion of mothers classified themselves secure in their relationship with child than they or respondents in other samples did in their general relationships. None of the mothers classified themselves as fearful or dismissing in relation to the child.

The distribution of the children's attachment styles as applied to general relationships was somewhat different to that found in larger samples. More children classified themselves secure on the RQ1 and the RSQ and fewer classified themselves as fearful. In terms of their attachment styles in the mother-child relationship, the distribution of their responses showed the same pattern as their mothers' - that is, a very high proportion classified themselves secure and none classified themselves as fearful.

Table 39

Comparison of mothers' and children's attachment styles with other samples

	Secure	Fearful	Preoccupied	Dismissing	Total
Mothers' RQ1	9 (47.4%)	6 (31.6%)	2 (10.5%)	2 (10.5%)	19(100%)
Children's RQ1	12 (54.5%)	2 (9.1%)	2 (9.1%)	6 (27.3%)	22(100%)
Brennan et al.(1991)M RQ*	158 (30.6%)	164 (31.7%)	96 (18.6%	99 (19.1%)	517 (100%)
Brennan et al.(1991)F RQ	124 (38.4%)	139 (43.0%)	41 (12.7%)	19 (5.9%)	323 (100%)
O'H &Davis('92)RQ**	144 (46.8%)	120 (39%)	23 (7.5%)	21 (6.8%)	308(100%)
Dublin mothers RSQ-gen rel	8 (47.1%)	3 (17.6%)	2 (11.8%)	4 (23.5%)	17(100%)
Dublin children RSQ- gen rel	16 (72.7%)	0 (0%)	1 (4.5%)	5 (22.7%)	22(100%).
Sch.&Bar.('94)M RSQ-t1***	41 (56.95)	13 (18.1%)	6 (8.3%)	12 (16.7%)	72 (100%)
Sch.&Bar.('94)M RSQ-t2	43 (59.7%)	9 (12.6%)	5 (6.9%)	15 (20.8%)	72 (100%)
Sch.&Bar.('94)F RSQ-t	37 (51.4%)	15 (20.8%)	16 (22.2%)	4 (5.6%)	72 (100%)
Sch.&Bar.('94)F RSQ-t2	36 (50%)	15 (20.8%)	18 (25%)	3 (4.2%)	72 (10%)
Dublin mothers RQ -m/c rel	13 (68.4%)	0 (0%)	6 (31.6%)	0 (0%)	19 (100%)
Dublin children RQ m/c rel	19 (86.4%)	0 (0%)	0 (0%)	3 (13.6%)	22 (100%)
Dublin mothers RSQ-m/c rel	16 (88.9%)	0 (0%)	2 (11.1%)	0 (0%)	18 (100%).
Dublin children RSQ-m/c rel	19 (86.4%)	0 (0%)	0 (0%)	3 (13.6%)	22 (100%)

Note *Brennan, Shaver, & Tobey (1992) used the RQ as applied to general relationships on a sample of 840 students (Med age=19 years). **O'Hearn & Davis (1992) used the RQ as applied to general relationships on a sample of 308 college students (M age=20.6 years). ***Scharfe & Bartholomew (1994) used the RSQ as applied to romantic relationships on a sample of 72 young couples (M age=24.5 years) in an eight month longitudinal study relationship with each other for 2 years or more.

A4: *The concordance between the self-reported attachment styles of mothers and children:* In terms of their attachment style in the mother-child relationship, there was a correspondence of 52.6% between mothers and their children on the RQ1, a correspondence of 35% on the RQ2, and of 77.8% on the RSQ. In terms of their attachment style in general relationships, the correspondence between mothers and their children was 31.6% on the RQ1, 5.3% on the RQ2, and 47.1% on the RSQ. Over-all, the correspondence between mothers' and their children's self-report of attachment styles was low, with the large correspondence on the RSQ mother-child relationship largely due to the high proportion of secure self-classifications on this measure. The continuous ratings on each of the four attachment styles on the RQ2 and the RSQ for mothers and their children were also compared, using the Pearson product moment correlation coefficient. None were significantly correlated, except for the fearful scale on the RSQ (Pearson Correlation r=.002, 2- tailed). Thus, *Questions* 16 and 17- which asked if there would be high convergence between mothers and children in their self-reported attachment styles in both domains, were answered negatively.

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Section B: The concordance between mothers' and children's self-reported attachment and their AAI attachment classifications:

Since there is no exact correspondence between the four AAI classifications and the four self-report categories, the concordance will be examined in the following way. First, the relationship between the AAI and the self-report measures will be examined using all four AAI categories. Then, the comparison will be made between the secure category and the combined insecure categories for the four-category AAI system, using Fisher's Exact Test to determine significance. . Finally, since it could be argued that the AAI Unresolved category is not theoretically related to any of the self-report categories, the secure-insecure comparison will also be made using the three-category AAI system. Because of the small sample size, the secure-insecure comparison was considered the critical analysis.

First, using all four categories, the concordance between the mothers' classification on the AAI and their self-classification on the RQ1, RQ2 and RSQ, as applied to the mother-child relationship, was examined. Table 40 shows that of the nine mothers classified Secure on the AAI, seven (77.8%) classified themselves secure on the RQ1, and two (22.3%) preoccupied. Of the five mothers classified Preoccupied on the AAI, four (80%) classified themselves secure on the RQ1 and one (20%) preoccupied. The mother classified

Dismissing on the AAI classified herself secure on the RQ1. Of the three mothers classified Unresolved on the AAI, two classified themselves preoccupied on the RQ1, and one secure. The over-all secure-insecure attachment classification correspondence between the AAI and the RQ1, for the four and three-category systems, was 57.9% and 63.2%, respectively, both not significant The 63.2% correspondence (using the three-category system) compares to the 61.6% correspondence found for the AAI and the RQ as applied to general relationships in a sample of 52 mothers (Crowell et al., 1999).

On the RQ2, since the pattern of correspondence across the four categories was almost exactly the same as on the RQ1, it will not be reported in detail. The secure-insecure correspondence was 60% for the four-category system and 65% for the three-category system. On the RSQ, Table 41 shows that the secure-insecure correspondence was not significant: 47.4% and 52.6% for the four-category and three-category systems respectively. Again, as on the RQ1 and RQ2, the majority of the mothers classified Secure and Preoccupied on the AAI reported themselves secure in their attachment style with their child.

Table 40
Correspondence between mothers' AAI classifications (four categories) and their self-classification on the RQ1 (mother-child relationship)

	AAI classification				
RQ1-m/c rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	1 (5.3%)	4 (21.1%)	7 (36.8%)	1 (5.3%)	13 (68.4%)
Fearful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Preoccupied	1 (5.3%)	1 (5.3%)	2 (10.5%)	2 (10.5%)	6 (31.6%)
Dismissing	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	2 (10.5%)	5 (26.3%)	9 (47.4%)	3 (15.8%)	19* (100%)

* Complete RQ1 data sets available for only 19 of the 22 mothers.

Table 41
Correspondence between mothers' AAI classifications (four categories) and their self-classification on the RSQ (mother-child relationship)

	AAI classification				
RQ1-m/c rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	2 (11.1%)	4 (22.2%)	7 (38.9%)	3 (16.7%)	16 (88.9%)
Fearful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Preoccupied	0 (0%)	1 (5.6%)	1 (5.6%)	0 (0%)	2 (11.1%)
Dismissing	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	2 (11.1%)	5 (27.8%)	8 (44.4%)	3 (16.7%)	18* (100%)

* Complete RSQ data sets available for only 18 of the 22 mothers.

Next, the concordance between the mothers classification on the AAI and their self-

classification on the RQ1, RQ2 and RSQ, as applied to general relationships, was examined. Table 42 shows that of the nine mothers classified Secure on the AAI, five (55.5%) classified themselves as having a secure attachment style in general relationships, three as fearful and one as preoccupied on the RQ1. Of the five mothers classified Preoccupied on the AAI, two classified themselves fearful, two dismissing and one preoccupied on the RQ1. One of the two mothers classified Dismissing on the AAI classified herself secure, and the other fearful on the RQ1. The secure-insecure correspondence was 57.9% and 63.2% for the four and three-category systems respectively, also not significant. Again, this is comparable to 61.6% correspondence found for the AAI and the RQ as applied to general relationships in a sample of 52 mothers (Crowell et al., 1999). With regard to the RQ2, the correspondence was 46.7% and 53.3% for the four and three -category systems. With regard to the RSQ, the secure-insecure correspondence was 47% and 52.9% for the four and three-category systems respectively, also not significant. As can be seen from Tables 42 and 43, the pattern of correspondence over the four categories was broadly similar to that described in relation to the RQ1.

Table 42

Correspondence between mothers' AAI classifications (four categories) and their self-classification on the RQ1 (general relationships)

AAI classification

RQ1-gen rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	1 (5.3%)	1 (5.3%)	5 (26.3%)	2 (10.5%)	9 (47.4%)
Fearful	1 (5.3%)	2 (10.5%)	3 (15.8%)	1 (5.3%)	7 (36.9%)
Preoccupied	0 (0%)	0 (0%)	1 (5.3%)	0 (0%)	1 (5.3%)
Dismissing	0 (0%)	2 (10.5%)	0 (0%)	0 (0%)	2 (10.5%)
Total	2 (10.5%)	5 (26.3%)	9 (47.4%)	3 (15.8%)	19* (100%)

* Complete RQ1 data sets available for only 18 of the 22 mothers.

Table 43

Correspondence between mothers' AAI classifications (four categories) and their self-classification on the RQ2 (general relationships)

AAI classification

RQ1-m/c rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	0 (0%)	2 (10.5%)	4 (21.1%)	2 (10.5%)	8 (42.1%)
Fearful	0 (0%)	2 (10.5%)	3 (15.8%)	0 (0%)	5 (26.3%)
Preoccupied	0 (0%)	0 (0%)	1 (5.3%)	1 (5.3%)	2 (10.5%)
Dismissing	0 (0%)	0 (0%)	1 (5.3%)	0 (0%)	1 (5.3%)
Other	2 (10.5%)	1 (5.3%)	0 (0%)	0 (0%)	3 (15.8%)
Total	2 (10.5%)	5 (26.3%)	9 (47.4%)	3 (15.8%)	19* (100%)

* Complete RQ2 data sets available for only 19 of the 22 mothers.

Table 44
Correspondence between mothers' AAI classifications (four categories) and their self-classification on the RSQ (general relationships)

	AAI classification				
RQ1-m/c rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	1 (5.3%)	2 (10.5%)	4 (21.1%)	2 (10.5%)	9 (47.4%)
Fearful	1 (5.3%)	2 (10.5%)	3 (15.8%)	0 (0)%)	6 (31.6%)
Preoccupied	0 (0)%)	0 (0)%)	1 (5.3%)	1 (5.3%)	2 (10.5%)
Dismissing	0 (0)%)	0 (0)%)	1 (5.3%)	0 (0)%)	1 (5.3%)
Other	0 (0)%)	1 (5.3%)	0 (0)%)	0 (0)%)	1 (5.3%)
Total	2 (10.5%)	5 (26.3%)	9 (47.4%)	3 (15.8%)	19* (100%)

* Complete RSQ data sets available for only 19 of the 22 mothers.

Next, the concordance between the children's classification on the AAI and their self-reported attachment styles on the RQ1, RQ2 and RSQ, as applied to the mother-child relationship, was examined. Table 45 shows that, over the four-categories, of the 12 children classified Secure on the AAI, ten (83.3%) also classified themselves on the RQ1 as having a secure attachment style in their relationship with their mothers, and two as dismissing. Of the seven children classified Dismissing on the AAI, six (85.7%) classified themselves secure on the RQ1, and the other as dismissing. The three children classified Unresolved on the AAI classified themselves secure on the RQ1. The secure-insecure correspondence between the AAI and the RQ1 for the four and three-category systems was 50% and 54.5%, which were not significant.

Table 45
Correspondence between children's AAI classifications (four categories) and their self-classification on the RQ1 (mother-child relationship)

	AAI classification				
RQ1-m/c rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	6 (27.3%)	0 (0%)	10 (45.5%)	3 (13.6%)	19 (86.4%)
Fearful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Preoccupied	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Dismissing	1 (4.5%)	0 (0%)	2 (9.1%)	0 (0%)	3 (13.6%)
Total	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)

Examining Tables 46 and 47, it can be seen that the correspondence between the AAI and the RQ2 and the RSQ shows the same pattern over the four categories, with the majority of children Secure and Dismissing on the AAI reporting themselves as having secure attachment styles in their relationship with their mothers. The four and three-category secure-insecure correspondence between the AAI and the RQ2 was 41.2% and 47.1% respectively, also not significant; and between the AAI and the RSQ was 59.1% and 63.6%

respectively, also not significant.

Table 46

Correspondence between children's AAI classifications (four categories) and their self-classification on the RQ2 (mother-child relationship)

AAI classification

RQ2-m/c rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	4 (18.2%)	0 (0%)	6 (27.3%)	3 (13.6%)	13 (59.1%)
Fearful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Preoccupied	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Dismissing	1 (4.5%)	0 (0%)	3 (13.6%)	0 (0%)	4 (18.2%)
Other	2 (9.1%)	0 (0%)	3 (13.6%)	0 (0%)	5 (22.7%)
Total	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)

Table 47

Correspondence between children's AAI classifications (four categories) and their self-classification on the RSQ (mother-child relationship)

AAI classification

RQ2-m/c rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	5 (22.7%)	0 (0%)	11 (50%)	3 (13.6%)	19 (86.4%)
Fearful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Preoccupied	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Dismissing	2 (9.1%)	0 (0%)	1 (4.5%)	0 (0%)	3 (13.6%)
Total	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)

Next, the correspondence between the children's classification on the AAI and their self-reported style attachment classification on the RQ1, RQ2 and RSQ, as applied to general relationships, was examined. Table 48 shows that of the 12 children classified Secure on the AAI, seven (58.3%) classified their attachment style in general relationships as secure, two as fearful and three as dismissing. Of the seven children classified Dismissing on the AAI, five (71.4%) classified themselves secure on the RQ1, and two as dismissing. The three Unresolved children classified themselves secure on the RQ1. The four and three-category secure-insecure correspondence was 54.5% and 50%, both not significant. As can be seen from Table 49, only three of the AAI Secure children reported themselves secure on the RQ2 and the four and three-category secure-insecure correspondence was 47.4% and 42.1% respectively.

Table 48

Correspondence between children's AAI classifications (four categories) and their self-classification on the RQ1 (general relationships)

AAI classification

RQ1-gen rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	4 (18.2%)	0 (0%)	7 (31.8%)	1 (4.5%)	12 (54.5%)
Fearful	0 (0%)	0 (0%)	2 (9.1%)	0 (0%)	2 (9.1%)
Preoccupied	1 (4.5%)	0 (0%)	0 (0%)	1 (4.5%)	2 (9.1%)
Dismissing	2 (9.1%)	0 (0%)	3 (13.6%)	1 (4.5%)	6 (27.3%)
Total	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)

Table 49

Correspondence between children's AAI classifications (four categories) and their self-classification on the RQ2 (general relationships)

AAI classification

RQ1-gen rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	3 (13.6%)	0 (0%)	3 (13.6%)	0 (0%)	12 (54.5%)
Fearful	1 (4.5%)	0 (0%)	2 (9.1%)	0 (0%)	2 (9.1%)
Preoccupied	0 (0%)	0 (0%)	1 (4.5%)	1 (4.5%)	2 (9.1%)
Dismissing	3 (13.6%)	0 (0%)	3 (13.6%)	1 (4.5%)	6 (27.3%)
Other	0 (0%)	0 (0%)	3 (13.6%)	1 (4.5%)	4 (18.2%)
Total	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)

Table 50 shows four and three-category secure-insecure correspondence between the AAI and the RSQ was 50% and 54.5% respectively, also not significant. Over two of the three self-report measures, the pattern of correspondence with the AAI was similar, that is, a majority of children classified Secure and Dismissing on the AAI classified themselves as having a secure attachment style in general relationships.

Table 50

Correspondence between children's AAI classifications (four categories) and their self-classification on the RSQ (general relationships)

AAI classification

RQ1-gen rel	Dismissing	Preoccupied	Secure	Unresolved	Total
Secure	7 (31.8%)	0 (0%)	7 (31.8%)	2 (9.1%)	16 (72.7%)
Fearful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Preoccupied	0 (0%)	0 (0%)	1 (4.5%)	0 (0%)	1 (4.5%)
Dismissing	0 (0%)	0 (0%)	4 (18.2%)	1 (4.5%)	5 (22.7%)
Total	7 (31.8%)	0 (0%)	12 (54.5%)	3 (13.6%)	22 (100%)

It can be seen from Table 51 that using the three-category AAI system yields a higher correspondence with the self-report attachment styles, suggesting that the AAI Unresolved classification has no equivalence in the self-report measures. An examination of the Table shows that, across the three self-report measures, the highest correspondence with the AAI was 65% for mothers and 63.2% for children. This pattern of findings suggest that, although there is variability across the three self-report measures, no one measure shows significant correspondence with the AAI. This is so even when the measures are applied to the mother-child relationship, which might be expected to show greater correspondence with the AAI than when applied to general relationships. Thus, *Question 18* is answered positively, that is, that the correspondence between the AAI and self-reported attachment in both domains is modest but not significant. *Question 19* is answered negatively, that is, the correspondence between the AAI and self-reported attachment style in the mother-child relationship is not greater than that between the AAI and self-reported attachment style in general relationships.

Table 51

Over-all secure-insecure correspondence between the AAI (three and four category systems) and self-report attachment styles*

Mothers	Mother-child rel	General rel
AAI & RQ1	57.9% (63.2%)	57.9% (63.2%)
AAI & RQ2	60% (65%)	46.7% (53.3%)
AAI & RSQ	47.4% (52.6%)	47% (52.9%)
Children		
AAI & RQ1	50% (54.5%)	54.5% (50%)
AAI & RQ2	41.2% (47.1%)	47.4% (42.1%)
AAI & RSQ	59% (63.6%)	50% (54.5%)

* Percentages in parentheses refer to correspondence with AAI three-category system

An examination of Table 52 throws further light on the relationship between the AAI and the self-reported attachment styles. For mothers classified Secure on the AAI, 77.8%, 87.5%, and 55.6% reported reported themselves as having a secure relationship style with child on the RQ1, RQ2 and RSQ respectively. Of those mothers classified insecure on the AAI, 40%, 10% and 60% reported themselves as having an insecure relationship style with the child. Thus, while the RQ2 successfully identifies Secure AAI mothers, it does not successfully identify AAI insecure mothers. Similarly, while the RSQ is the most successful in identifying insecure AAI mothers, it is less successful in identifying Secure AAI mothers. With regard to the children, it can be seen that none of the self-report measures of the mother-child relationship successfully identify insecure AAI children

Table 52

Percentage of respondents secure and insecure on the AAI with corresponding self-reported attachment styles in mother-child relationship

Mothers	Sec AAI/self-report	Insec AAI/self-report
AAI & RQ1	77.8%	40.0%
AAI & RQ2	87.5%	10.0%
AAI & RSQ	55.6%	60.0%
Children		
AAI & RQ1	83.3%	10.0%
AAI & RQ2	50.0%	30.0%
AAI & RSQ	91.7%	20.0%

An examination of Table 53 shows that for mothers classified Secure on the AAI, only 44.4% report themselves as having a secure attachment style in general relationships on the RQ1 and the RQ2, and 55.6% on the RSQ. For mothers classified insecure on the AAI, 60% report themselves as having an insecure attachment style in general relationships. Thus, all three self-report measures are relatively successful in identifying AAI insecure mothers. For those children classified Secure on the AAI, 58.3% report themselves as having a secure attachment style in general relationships on the RQ1 and the RSQ, but only 25% on the RQ2. Of those children classified insecure on the AAI, 50%, 70% and 10% report themselves as having an insecure attachment style on the RQ1, RQ2, and RSQ.

Table 53

Percentage of respondents secure and insecure on the AAI with corresponding self-reported attachment styles in general relationships

Mothers	Sec AAI/self-report	Insec AAI/self-report
AAI & RQ1	44.4%	60.0%
AAI & RQ2	44.4%	60.0%
AAI & RSQ	55.6%	60.0%
Children		
AAI & RQ1	58.3%	50.0%
AAI & RQ2	25.0%	70.0%
AAI & RSQ	58.3%	10.0%

Section C: The relationship between mothers' self report and their children's AAI classifications and between children's self-report and their mothers' AAI classifications.

The purpose of this section was to investigate whether mothers' self-report of attachment style had any relationship with their children's AAI classifications, and whether the children's self-report of attachment style had any relationship with their mothers' AAI classifications. Because of the variability of response of mothers and children across the three self-report measures, it was decided to take an aggregated self-reported secure attachment style across all three measures as a rough index of over-all security of attachment style. First, the self-report of mothers of children classified Secure on the AAI were compared to those of mothers' whose children were classified insecure (using the three category AAI system). Full data sets were available for 12 of the 13 mothers of children classified Secure on the AAI. The self-report of relationship with child for these mothers showed that 10 of the 12 mothers (83.3%) reported themselves as having a secure attachment style with child over all three measures, and only one reported herself as having an insecure style across all three measures. In terms of general relationships, only five (41.7%) reported themselves secure across all three measures. It is interesting to note that the two mothers who reported themselves as having an insecure style in their relationship with child and in general relationships over the three measures both had a child who was classified insecure on the strange situation in infancy. Two other mothers reported themselves insecure in general relationships across all three measures. One had a children classified Unresolved on the AAI (ie using the four-category system) and the other had a child whose passivity scores were very high.

Full self-report data sets were available for seven of the nine mothers of the AAI insecure children. Of those mothers, only two (28.6%) reported themselves secure with child on all three measures and none reported themselves secure in general relationships across all three measures. In fact, six (85.7%) reported themselves insecure across all three measures.

Next, the self-report of children whose mothers were classified Secure on the AAI were compared to those of children whose mothers were classified insecure (using the AAI three-category system). Of the 11 children whose mothers were classified Secure on the AAI, five (45.5%) reported themselves as having a secure attachment style with mother across all three measures. None reported themselves secure in general relationships across all three measures. Of the 11 children whose mothers were classified insecure on the AAI,

seven (63.6%) reported themselves as having a secure attachment style with mother across all three measures, and five (45.5%) as having a secure style in general relationships across all three measures.

Thus, using all three measures together seemed to discriminate between the mothers of children classified Secure and insecure children on the AAI, with 83.3% the former and only 28.6% of the latter reporting themselves as having a secure attachment style with the child, and 41.7% of the former and none of the latter reporting themselves secure in general relationships. In contrast, self-report measures did not as clearly discriminate the children whose mothers were classified Secure on the AAI from those whose mothers were classified insecure, with 45.5% of the former and 63.6% of the latter reporting themselves as having a secure attachment style with mother over all three measures. However, in terms of general relationships, they did discriminate between the children, with no children whose mothers were classified Secure on the AAI reporting themselves as having a secure attachment style in general relationships over all three measures, compared to 45.5% of those whose mothers were classified insecure on the AAI.

CHAPTER 11

SUMMARY AND GENERAL DISCUSSION OF RESULTS

***General summary*:**

The present study investigated an under-researched area in attachment - the attachment organisation of children at the transition to adolescence and its relationship to concurrent maternal attachment organisation. The results show a significant concordance in attachment of mothers and their 11-12 year old children, replicating the findings of significant concordance between mothers and their infants and adult women and their mothers. Thus, this research provides an important link in the chain of evidence on the concordance of 'state of mind with respect to attachment' between mothers and their children at different stages of development. This study also addressed an important lacuna in attachment research - the lack of a valid and reliable measure of attachment for children in late middle childhood and at the transition to adolescence The results indicate that the AAI is an appropriate measure of attachment for this age group. This study also addressed another under-researched area in attachment - the study of continuity of attachment from infancy to age 11-12, and the results indicate an interesting pattern of continuity and discontinuity, which appears related to theoretically meaningful factors. The study also investigated the concordance between infant attachment and maternal attachment over 10 years later, and the results suggest a number of 'contextual constraints' on the intergenerational transmission of attachment not previously identified in the literature.

Limitations of the study :

The limitations of the study were outlined in an earlier chapter. It is worth mentioning them briefly again, to provide an appropriately cautious context within which the pattern of results need to be understood. The study involves a small and non-representative sample. This has implications for the generalizability of the findings. This is particularly true for the findings with regard to the sub-groups in the study, for example secure mothers with insecure infants, which typically contain very small numbers. The possibility of measurement error cannot be ruled out, and in a small sample, even one misclassification can exert a disproportionate effect. This must be particularly borne in mind when

comparisons are made in terms of 'proportions', as the numbers underlying the proportions are often very small, and even one misclassification could radically change the 'proportion'.

Comparisons of the sample with larger normal and clinical samples are not to be taken as claims that this sample is 'normal' or 'clinical'. This must be especially emphasised given that the sample was originally selected for heterogeneity in terms of infant security and mother's marital status at the time of the birth. In the event, with the new strange situation coding, the sample ended up containing 75% of children classified secure in infancy. Nonetheless, it is difficult to interpret the similarities and dissimilarities between the findings in this study and those of other larger, published studies. The absence of any Irish normative attachment data creates an added difficulty in interpreting the findings.

Finally, and importantly, it must be borne in mind that using marital status as a discriminating factor has many shortcomings, particularly given that the single-mother group differed from the married-mother group in other respects; they were younger, and, although broadly from the same SES grouping and as well educated as the married group, a smaller proportion were in the higher SES classes. No data on their their household income or housing tenure was available, so they may well have been more socially disadvantaged than the married group. In addition, no assessments of the quality of marital support were completed. Given these limitations, therefore, the results are best approached as hypothesis-generating rather than hypothesis-testing, and the findings, although interesting and meaningful within attachment theory, must be tested in a larger, more representative sample.

Nonetheless, these limitations must be set in the context of attachment research generally. Attachment researchers point out that:

> '(T)he AAI is one of the most time-consuming instruments in the area of developmental and clinical psychology. It requires extensive training and practice, careful verbatim transcription of 1-hour[1] interviews, and a laborious coding procedure' (van IJzendoorn & Bakermans-Kranenburg, 1996).

The average sample size in the meta-analysis conducted by those authors was 44.9 for normal samples and 31.3 for clinical samples. van IJzendoorn further notes that most

[1] As was pointed out earlier, the interviews in this study of Irish mothers were considerable longer, lasting an average of one and a half hours.

cross-cultural studies are 'rather small-scale, in-depth observational studies, often combined with a longitudinal component'. He argues however, that cross-cultural research 'is not meant to produce representative demographic data. Its most important contribution is the test of some core propositions of attachment theory' (van IJzendoorn, 1999, p.730). To date, cross-cultural studies have confirmed the basic tenets of attachment theory. However, an on-going question is the extent to which the development of attachment is sensitive to culture-specific influences and idiosyncrasies.

It is also important to reiterate that the psychometric properties of the AAI have been subjected to a series of rigorous psychometric tests of its stability and discriminant validity (see Bakermans-Kranenburg & van IJzendoorn, 1993). Studies have found between 70%-90% three-category stability for periods ranging from two months to four years. Across all four categories, the stability is somewhat lower. Inter-rater reliability has been found to be 80% (van IJzendoorn & Bakermans-Kranenburg, 1997). With regard to its discriminant validity, AAI classifications have been found to be independent of verbal and performance IQ, and other measures of intelligence; autobiographical memory not related to attachment; non-attachment related narrative style; social desirability; a general personality measure; interviewer effects; and only weakly related to retrospective measures of parenting-styles (see Hesse, 1999).

In addition, the scoring and analysis of the AAI is highly structured. Each carefully transcribed verbatim transcript is coded using 14 nine-point scales, with every second point on the scale having a specific operational definition. The final assignment to a classification depends upon the patterning of ratings already assigned, compared to the patterning of ratings that are theoretically expected to fit to the various classifications and sub-classifications. This assignment requires matching a particular case to a multidimensional, categorical template. The manual for classification (Main & Goldwyn, 1998) contains detailed written descriptions of those templates. Achieving competence in coding and classification of transcripts requires rigorous and intensive formal training.

The strange situation has also been subjected to many rigorous psychometric tests of its stability and discriminant validity. One of the most compelling aspects of the strange situation is the efforts made by Ainsworth and her associates to establish its validity in relation to detailed naturalistic observations of mother-infant interaction in the home. Inter-rater agreement is generally very high - ranging from 80% to 88% over four categories

with trained and experienced raters. Findings in relation to short-term and long-term stability have been mixed and related to experience of negative stress and instability in the environment over the course of development (see Chapter 2).

Bearing in mind the limitations inherent in the small sample size, this study attempted to adopt as rigorous a methodological approach as possible that was modelled on the 'best practice' of international attachment researchers. Thus, the AAIs of the mothers and children were each assessed by two raters, the author and an independent rater, blind to any information about the subject. In addition, the independent rater was different for the mothers and the children, to prevent any possible 'cross-over' effect in the rating, and to minimise the effect of any possible bias in the rater. Cases that were particularly difficult to rate, or where disagreements could not be resolved by conferencing, were referred to a third independent rater, again blind to any information about the subject.

Inter-coder conferencing of cases was conducted only when each independent coder had first completed the coding of all transcripts, to preserve independence in coding of each transcript, and to prevent any inadvertent inter-coder 'training effect' developing. The study was fortunate to secure the services of three experienced and highly trained raters who were exceptionally skilled. For example, Ruth Goldwyn, who coded the children's AAIs co-developed the AAI with Main. Transcribers were carefully trained, and each typed transcript draft was carefully checked by the author against the audio-recording of the interview. It was also arranged to have the strange situation tapes recoded by two independent coders, not just for the fourth disorganised/disoriented classification, but for the original three classifications as well.

Nonetheless, the following summary and discussion of results must be approached bearing in mind the limitations noted above. The summary will broadly follow the headings used in the Results chapters: findings in relation to the use of the AAI with 11-12 year old children; concurrent concordance between the attachment status of mothers and their children; the continuity of attachment from infancy to age 11-12; the concordance of infant attachment and maternal attachment ten years later ; and the concordance between AAI attachment status and self-reported attachment style.

The use of the AAI with 11-12 year old children:

The sample used in this study was specially selected for heterogeneity with regard to the attachment status of the children in infancy, mother's marital status at the time of the birth, and gender of the children. Nonetheless, it is interesting that the over-all secure-insecure distribution of the 22 children's AAIs resembled that found in normal samples. Using the three category system, the distribution was as follows: - 13 (59.1%) Secure and nine (40.9%) insecure - similar to that found in a meta-analysis of four samples of adolescents and young adults (van IJzendoorn & Bakersman-Kranenburg (1996). Using the four-category system, the proportion of Unresolved classifications - three (13.6%) - was lower than that found in other samples of adolescents and young people, but well within the range of proportion of Unresolved classifications found in the meta-analysis. However, the Dublin sample of children was striking in that, compared to other samples of adolescents and nonclinical adults, none were classified Preoccupied. This finding was all the more interesting in that a high a proportion of the mothers was classified Preoccupied - an issue that will be discussed below.

As expected, the proportion of children classified Dismissing (40.9%) was higher than that found in adult populations. In fact, it was higher than that found in other samples of adolescents and young people, and was nearest to that found - 35.5% - in a sample of 14 year olds (Ammaniti et al., 1998) and in a sample of economically-disadvantaged adolescents (mean age 16.5) - 51%- (Ward & Carlson, 1995). Both these studies attributed the prevalence of dismissing strategies to the adolescent developmental pressures of detaching from parents. This explanation was given some added support by the longitudinal nature of the Ammaniti et al study, which found an increase from 29% to 35.5% in the proportion of children classified Dismissing between age 10 and 14. The finding in the Dublin study gives some further weight to that explanation As against that, the finding of only 27% of Dismissing classifications in a meta-analysis of four samples of adolescents and young adults (van IJzendoorn and Bakermans-Kranenburg, 1996) did not support that hypothesis. However, it must be borne in mind that the meta-analysis included samples with an age range of between 18 and 28. A comparison of all of the available studies of adolescents and young adults suggests that the proportion of Dismissing classifications does tend to rise with the onset of adolescence, peaking at the end of that period and the beginning of young adulthood. This hypothesis will, however, have to be tested in larger cross-cultural samples, where the effect of different cultural

expectations of adolescence on the fate of attachment can be teased out.

An analysis of the coding of the children's AAI, as well as how each of the AAI scales contributed to the over-all classification, indicated that the method of coding and classification operates in the same way as it does for adults, confirming the theoretical assumptions underlying the measure. More striking, however, was the clear similarity between children classified Secure, Dismissing and Unresolved and their adult counterparts. Thus, the discourse of children classified Secure was characterised by the value they placed on attachment, and their autonomy with respect to attachment relationships and experiences - expressed in ways similar to how adults express them. This is all the more interesting, from a theoretical as well as a methodological point of view, in that these 11-12 year old children were only at the transition to adolescence, and the autonomy-seeking process from parents has yet to fully unfold. As their responses on the Self Interview showed, these children seemed to be still firmly in a world dominated by their struggle to do what their parents tell them, quarrels with younger siblings, schoolwork and hobbies. They were still substantially dependent on their parents for many of their needs.

In such a dependent relationship, negative feelings about, or objective evaluation of a parent, might be thought too threatening to acknowledge openly, given that the expression of such negative feelings and evaluations might have unhappy consequences for the child and parent-child interaction. In addition, these children have not yet fully developed the cognitive capacities of the older adolescent, including logical and abstract reasoning abilities (Keating, 1990). It might be expected that, unlike adolescents, children of this age could not as yet form a consistent view of the self as existing apart from day-to-day-interaction with parents. It might also be expected that it would require the advent of full formal operational thinking to allow for the potential to consider attachment relationships in the abstract, and to see how parents may not be meeting all one's attachment needs. The results of this study suggest that children of this age can form a view of themselves as distinct and autonomous from parents, and, while still treasuring closeness with their parents, can evaluate them as attachment figures freely and objectively, earlier than previously thought.

Similarly, the discourse of children classified Dismissing showed remarkable similarities to that of Dismissing adults. Even more interesting was the evidence in the transcripts of what Bowlby called 'repression in the making' (Bowlby 1969/1982). Bowlby and

Ainsworth (Ainsworth & Bell, 1970) linked avoidant behaviour in the strange situation with defensive process, which they conceptualised as a behavioural defense against expressions of attachment, distress and anger. Main (1999) stresses that avoidant behaviour is not simply the absence of attachment but an active process. The discourse of many of the children classified as Dismissing contained telling examples of the children's defenses of avoidance, idealisation, and repression. Even more interesting, their accounts provide glimpses of the process of defense formation. Given their age, these children could be conceptualised as, in some respects, being in transition between being an avoidant child and a Dismissing adult, between the action/script view of the self in relationships characteristic of early childhood and the enduring 'state of mind' with respect to attachment organisation of adulthood. Hence, they may be still putting their Dismissing 'state of mind' in place, and can still remember the behavioural strategies of avoidance and distraction they used earlier in childhood. Thus, one child described how, hospitalised after a road traffic accident, frightened and distressed, he turned to an object -his bed- and not his parents who were beside his bed, just as the avoidant infant turns to a toy, rather than his parent, to distract himself from his distress. Another child told of how he distracted himself from missing his parents - 'I just, like, kept my mind on where I was' and constructed in his discourse a fantasied, stereotyped account of his 'probable' reaction to being left by his parents and their 'probable' reaction to the reunion. Main (1981) described infant avoidance as 'an organised shift in attention'. What is not clear is how this organised shift in attention transforms itself from a behavioural to a representational phenomenon. The use of the AAI with children may well provide some clues as to how this process works.

Children classified Unresolved also showed the same lapses in reasoning and discourse as Unresolved adults, opening up the possibility of using the AAI in research tracking the effects of abuse and loss from childhood, through adolescence and into adulthood. The fact that no children were classified Preoccupied is intriguing and could be due to a number of factors. It may simply be a specific sample-effect. In most studies, the proportion of children classified resistant - the childhood analogue to the AAI Preoccupation classifications - is normally very low. Similarly, outside of clinical samples, the proportion of Preoccupied classifications is also very low. We thus know very little about the long-term developmental trajectory of resistant children. In a small sample like this one, there may not be enough subjects to 'capture' the hypothesised few cases of Preoccupied classifications at age 11-12. It may also be due to the failure of the AAI to correctly

classify the Preoccupied category in this age group. For example, those classified Preoccupied are characterised by, among other attributes, a weak sense of personal identity outside of the family; a vaguely hallowed view of childhood and the past, and rather child-like speech. For children of this age group, still embedded in the world of childhood, these Preoccupied characteristics may be too subtle to be reliably distinguished from the somewhat childish and sentimental discourse of some relatively immature children .

However, having said that, it did not prove difficult to rate passivity of speech or involving anger in the children's transcripts - both important markers of the Preoccupied classification. One child, classified Secure/Preoccupied, who also had a high passivity score, exhibited a puzzling degree of upset in the interview about an incident he would or could not explain. It is interesting to note that one study of adolescents and their mothers (Rosenstein & Horowitz, 1996) found that the Dismissing adolescents of Preoccupied mothers exhibited a unique feature in their interviews: they claimed a lack of memory for childhood, yet appeared to be holding back from discussing painful experiences that they wished they had forgotten. They were passively non-compliant with the interview, answering questions only minimally. The authors concluded that these adolescents may have a split combination of Dismissing and Preoccupied attachment. It may be that a small number of children in this study may also be exhibiting a split combination of Secure and Preoccupying attachment. It would be interesting to follow-up these children into early adolescence to see if the added pressures of that developmental period will have the effect of tipping them into a Preoccupied 'state of mind with respect to attachment'.

Concordance between the children's and mothers' AAI classifications:

The distribution of the mothers' AAI classifications:

Using the three-category system, the distribution of the 22 mothers' AAI classifications was 11 (50%) Secure, two (9.1%) Dismissing and nine (40.9%) Preoccupied. Using the four-category system, the proportion of mothers classified Unresolved was three (13.6%). Compared to a meta-analysis of non-clinical mothers, clinical samples, and low SES parents (van IJzendoorn & Bakermans-Kranenburg, 1996), the over-all secure-insecure distribution of the Dublin mothers was broadly similar to that of low SES parents. The proportion of Unresolved classifications was relatively low, but well within the range found in samples of non-clinical and low SES mothers in the meta-analysis. This relatively low proportion may

be an underestimate as, in a small number of the interviews, the mothers' reaction to loss was not sufficiently probed. However, the proportion of Preoccupied classifications is high, and the proportion of Dismissing classifications low and not comparable to any of the samples in the meta-analysis.

The distribution of classifications of the mothers who were single at the time of the child's birth was different to that of the mothers who were married. Using the three-category system, of the eight mothers who were single, only two (25%) were classified Secure, five (62.5%) Preoccupied, and one (12.5%) Dismissing. Of the 14 married mothers, nine (64.3%) were classified Secure, four (28.6% Preoccupied, and one (7.1%) Dismissing. Comparing each of those distributions to those in the meta-analysis, the proportion of Secure classifications among the married mothers is comparable to that found in samples of non-clinical mothers (58%) and the proportion of Preoccupied classifications is higher that found in such samples (46%). Among the single mothers, the proportion of insecure classifications is lower than that found in non-clinical samples (58%) and in low SES samples (48%), but higher than that found in clinical samples (13%).

While it is not correct to speak of the 'over-representation' of Preoccupied classifications and the 'under-representation' of Dismissing classifications in this veery small sample, the finding is interesting. It must, however, be emphasised again that since this sample is small and not randomly selected, interpretation of such results must be approached with great caution. One explanation may be that it is simply a sample-effect, specific to this group of mothers. Variations in the distribution of attachment classifications that are based on single samples do not necessarily reflect stable cross-national differences (van IJzendoorn & Kroonenberg, 1988). For example, one of the early studies on attachment in Germany (Grossmann et al., 1985) found that avoidant strange situations classifications were over-represented with respect to U.S. samples, a finding that was interpreted as due to German mothers' tendency to train their infants to become independent by discouraging bodily contact. A later cross-national study (Posada et al.,1995) actually found that German mothers valued physical contact more than mothers of other nationalities. And even then, as Bretherton (1995) noted, without a number of replications, it is not clear what to make of cross-national differences, without more 'emic' data on how specific cultures integrate parent-infant attachment into their over-all framework of social relationships and beliefs.

Another possibility that could be tested in a larger, more representative sample, is that the

Preoccupied classification is over-represented in Irish mothers in general. For example, several studies have now found that the resistant classification (the child analogue to the adult Preoccupied classification) is over-represented in samples of Israeli infants. Moreover, this finding has been replicated consistently across other Israeli samples with different child-rearing arrangements and different kinds of caregivers (Sagi et al., 1985, 1994, 1997). A number of explanations have been offered for this finding. It has been speculated, for example, that Israeli parents' preoccupation with continual threats to national and personal security may lead to exaggerated over-protectiveness of children and impaired sensitivity to their attachment signals. It has also been hypothesised that the over-representation of resistant attachment and the low representation of avoidant attachment may be attributed to a possible predominance of emotional reactivity in Israeli society (van IJzendoorn & Sagi, 1999). This latter explanation is based on some evidence that emotional reactivity may be more closely associated with resistant than with avoidant attachment (Belsky & Rovine, 1987; Vaughn, Strevenson-Hinde, Waters, Kotsaftis, Lefever, Shouldice, Trudel, & Belsky, 1992). However, other studies have not supported that emotional reactivity and avoidant attachment link (eg van den Boom, 1994). Assuming that the pattern of results found in this study were replicated, it might be speculated that there is also a high degree of emotional reactivity in Irish society. The fact that the AAI interviews were nearly 50% longer than the average interview conducted in the U.S. could be interpreted to mean that Irish mothers were prepared to readily engage in often animated discussions about their attachment-related experiences. However, to test this hypothesis would require empirical data on emotional reactivity in Irish society. Moreover, the concept of reactivity would need careful conceptual definition and its suggested links with attachment would need to be empirically specified.

It might also be speculated that the society in which these mothers grew up lent itself to an excessively involving style of child-rearing, that is, a style of rearing where the child is continually preoccupied by, or worried about pleasing the parent. Many of the mothers came from large, poor families, where fathers and mothers exerted powerful control of their children by inducing fear. In the case of their fathers (and sometimes their mothers) the fear inculcated was of often harsh physical punishment. In the case of their mother, the fear was of incurring her disapproval, or failing to please her. Some mothers described their mothers as overwhelmed by their own problems and, consequently, often moody and difficult to predict and please. One mother **(Case 8)** described her mother as follows: 'She was either very very loving or sometimes, em, very cross was probably the two words

because it was very much mood swings, with the whole problem that she had at the time. There still is a bit of mood swings I suppose as well, but eh. Fire and ice is the best way you could describe, at times, like'. Another mother **(Case 9)** described her father as follows: 'Mm, he really he really had a bad temper. Mm, the slightest little thing would set him off, you know'. Later she said; ' I was always frightened of getting into trouble, that was probably my number one'.

The higher proportion of Preoccupied classifications among the mothers who were single at the time of the child's birth may also be an effect peculiar to this particular (and very small) sub-sample of single mothers. Thus, any generalizability beyond this sample to the single mothers as a group is not warranted. It must be remembered that in 1986, when these children were born, in the large maternity hospital where this sample was recruited, only 12.8% of deliveries were to single mothers (Wieczorek-Deering, 1993). The higher proportion of Preoccupied classifications - associated in the literature with clinical samples - may reflect the stressful and worry-inducing environment in which they were reared. In addition, their opportunity to become independent of their parents and thus re-evaluate their attachment relationships may have been severely compromised by their becoming pregnant.

Many of these mothers vividly described their often well-founded fear of how their parents were going to react to the news of their pregnancy, and / or their intense relief and gratitude when their parents supported them. It is interesting to note that a large study of adolescent mothers in the U.S (Ward & Carlson, 1995), found a quite different distribution of attachment: 39% Secure, 51% Dismissing, and 10% Preoccupied. These U.S.mothers were mostly single (98%) and from an economically disadvantaged background, but were women of colour and younger than the single mothers in the Dublin study (mean age 16.5 versus 20.2). It would be interesting to investigate a larger sample of Irish single mothers, who now represent a significantly larger proportion of the population than they did in 1986, to see if the low Security - high Preoccupation distribution of attachment is replicated.

Mother-child attachment concordance

As was mentioned earlier, the expected secure-insecure concordance between the children's and mothers' attachment status was found in 16 of the 22 cases. This statistically significant level of concordance - 72.7% - parallels the 75% concordance found in a meta-

analysis of parents and their infants (van IJzendoorn, 1995), and mothers and their adult daughters - 75% - (Benoit & Parker, 1994). Thus, this finding represents an important link in the chain of evidence supporting the concordance between generations. The finding in relation to children at the transition to adolescence is of added importance in the light of recent findings that show that maternal-offspring concordance may be significantly affected by adolescence. For example, mother-adolescent attachment appears to be lower for older than for younger adolescents (Allen, Land, Liebman, Bell, & Jodl, 1997). It has been suggested that this could be interpreted as meaning that adolescent attachment organisation may be disrupted, at least temporarily, by the stresses of early adolescence (Allen & Land, 1999). The finding of high concordance between mothers and their 11-12 year old children in the present study would appear to lend support to this hypothesis, that is, that concordance is high before the onset of adolescence proper. Testing of this hypothesis, however, would require a longitudinal follow-up of these children in adolescence to establish if the concordance was lower then it was at age 11-12.

Although mother-adolescent concordance generally appears somewhat modest over-all (Zimmerman et al.,1995), one study (Rosenstein & Horowitz, 1996) found a mother-adolescent concordance of over 80% in a sample of psychiatrically-disturbed adolescents, suggesting that higher than average mother-adolescent concordance may be found under some extreme conditions. Higher concordance has also been found for adolescents living with both biological parents than for adolescents living in other family structures (Allen et al., 1997). It is therefore interesting to note, in that context, that mother-child concordance was found in seven of the eight cases (87.5%) for the single mother group, and in nine of the 14 cases (64.3%) for the married group. This high concordance for the single-mother group might indicate that many of these mothers and children have experienced enough loss, disruption and other stresses to constitute 'extreme conditions'. This interpretation is lent some support by the finding that in the 18 months preceding the AAI assessments, the single mother-group had experienced significantly more negative life change than the married mother-group, and that, since their fifth birthday, their children had experienced significantly more life events than the children of married mothers. However, given the very small number in the single-mother group, it remains to be seen whether this very high mother-child concordance would be found in a larger, more representative sample of single mothers and their children.

Turning now to the three-way match between the attachment status of mothers and their

children, this was found in ten cases - 45.45%. This was lower than expected, and is largely attributed to the fact that while nine (40.9%) of the mothers were classified Preoccupied, none of the children were. Of the 11 mothers classified Secure, nine (81.8%) had children classified Secure; of the two mothers classified Dismissing, one had a child classified Dismissing and one Secure (although the latter was given a Secure/Borderline Dismissing classification). Of the nine mothers classified Preoccupied, six (66.7%) had children classified Dismissing. Main (personal communication, 1998) has found the same pattern in her follow-up study of the original Bay Area sample, that is, that at age 19 the children of Preoccupied mothers tend to be themselves Dismissing. Another study (Rosenstein & Horowitz, 1996) also found that maternal Preoccupied status was the least predictive of adolescent status. An analysis of their mismatched mother-adolescent pairs included four adolescents classified Dismissing who had mothers classified Preoccupied. Similarly, in another study (Fonagy et al., 1991), the largest number of mismatched mother-infant pairs occurred for mothers classified Preoccupied (only 20% of whom had resistant infants) and resistant infants (only 27% of whom had Preoccupied mothers). Although these findings are not replicated in all studies, they are interesting, and may suggest a systematic mismatch between maternal Preoccupied status and child Dismissing status.

A qualitative analysis of the six Preoccupied mother-Dismissing child dyads showed that three of the mothers had suffered parental abuse in childhood, and were still unresolved about that abuse. They had also experienced more maternal and paternal rejection in childhood than the other secure/insecure mother-child dyads and they, in turn, were moderately rejecting of their own children's bids for attachment. Four of the six mothers were single at the time of the children's birth and in three of these cases, they had delegated substantial care of the child to their own mothers. One child has not lived with his mother for many years and another only recently moved in with his mother. It might be speculated that the effect of the mothers' preoccupied attachment strategies on the children were over-riden or moderated by the other conditions of their lives -the disruption of caretaking, the effects of childhood abuse - such that the children's predominant experience was one of rejection - the childhood experience most often associated with the Dismissing classification. In addition, the exposure to the mothers' attachment strategies would have been limited in the case of those children who were substantially cared for by others. This 'limited exposure' hypothesis is consistent with findings in other studies that, for example, the extent to which a child experiences care by a depressed mother may be the critical factor in mediating the effect of maternal depression on infant security (see Belsky, 1999).

However, until sufficient data sets have accumulated to merit meta-analysis of this combination, caution must be exercised in interpreting the psychological meaning of such findings.

Turning now to mother-child concordance using the four-category system, the mother-child match was found in nine cases (40.8%). The low correspondence in the Dublin study is not altogether surprising, given the sample size, combined with the small absolute number of Unresolved classifications (three mothers and three children). However, it is interesting to note that of the three Unresolved mothers, one had a child classified Unresolved, one a child classified Borderline/Unresolved, and in the third case, there was some ambiguity in the child's response to loss that raised questions about her reactions to a loss which were unable to be clarified in the interview. In the case of the three children who were classified Unresolved, one had a mother classified Unresolved, one was Unresolved in relation to abuse suffered at the hands of his father and therefore a child-mother Unresolved match would not necessarily be expected, and in the third case, further probing might possibly have raised the mother's Unresolved Loss scores.

However, some researchers of mother-adolescent attachment (e.g. Rosenstein & Horowitz, 1996) do not even calculate the four-category match, as they consider that the timing of the trauma or loss producing lack of resolution in either mother or adolescent would not necessarily occur within the period in which mother-child transmission of attachment is thought to take place. This may explain why a significant 70% parent-infant four-category match was found in Van IJzendoorn's (1995) meta-analysis, but only a 49% match between adult women and their mothers (Benoit & Parker, 1994). This latter weak concordance between generations was attributed by the authors to the fact that the Unresolved status was found to be quite unstable within some individuals over a period of 12 months, and in addition, that an exceptionally high proportion of Unresolved classifications (54%) was found in the older generation - perhaps a function of the stage-specific losses they were more likely to experience. These authors conclude that unless the specific event (loss or trauma) about which one member of the dyad is Unresolved was shared and similarly experienced by the other, one should not expect that the Unresolved status per se will be transmitted across generations. It is also possible that the effect of a mother's Unresolved status on her caregiving, and consequently on the transmission of attachment to her child, might be quite different during the child's infancy and early childhood than it would be at later stages. The question of whether and how parental

disorganisation differentially predisposes a child to Unresolved attachment status at different stages of the life-cycle should be addressed in future research.

A qualitative analysis of the four possible secure/insecure mother-child groupings revealed some interesting trends. Of particular interest was the finding that the actual experience of mothers with each of their parents seemed to influence the likelihood of their own children being classified Secure. As a group, the mothers did not seem to have experienced high levels of loving support from their mothers - below the average levels recorded in a middle-class U.S. sample (Main & Goldwyn, 1998) and experienced moderate rejection. Many described their mothers as always busy with often very large families. However, the role of their fathers in childhood seemed to play a moderating influence in how these mothers subsequently cared for their own children. For example, mothers in the secure mother-secure infant group experienced somewhat higher levels of affectionate support from their fathers than their mothers, and higher than any of the mothers in the other groupings. In fact, most selected their father as the person to whom they were closest in childhood. It is interesting to note that the children of these mothers now enjoy the highest level of loving support from both parents - suggesting perhaps that the close relationship these mothers enjoyed with their own fathers in childhood may have made it more likely that they would choose a life partner who could also take that role in their children's life. However, while mothers in the secure mother-insecure child grouping experienced the highest level of paternal loving support and the lowest levels of paternal rejection in childhood of all the groupings, this seems to have been off-set by their experience of maternal rejection - the highest in all the four groupings.

Mothers in the insecure mother-insecure child grouping experienced very low levels of loving support from either parent in childhood and moderately high rejection from both parents. Thus, their childhood was unleavened by compensatory support from either parent. In contrast, insecure mothers whose children were classified Secure experienced levels of loving support from both parents that were mid-way between those experienced by the mothers in the secure mother-secure child and the insecure mother-insecure child groupings, and experienced even less maternal rejection than the mothers in the Secure mother-Secure child group. Bowlby argued that 'there is a strong causal relationship between an individual's experiences with his parents and his later capacity to make affectional bonds', particularly in relation to caring for children. (Bowlby, 1979, p. 135). The effect of these experiences is believed to be mediated by the individual's 'internal

working model', and attachment research has therefore tended to concentrate on the adult's mental construction of these experiences, rather than on the experiences per se.

However, a small number of studies have revealed associations between the AAI scales of probable experience in childhood and parent's own parenting behaviour. For example, one study found a strong correlation between a mother's experience of rejection by her own mother and her infant's avoidance in the strange situation but found no associations between infant security and the mother's early experiences with their own fathers (Fonagy et al., 1991). The qualitative analysis of the mothers probable experience in childhood in this study (nonewithstanding the very small numbers in each of the groupings) are intriguing and highlight the need for attachment researchers to examine the relative influence of childhood experience with both mothers and fathers on an individual's own subsequent parenting. This may throw further much-needed light on why some insecure mothers have secure children, and some secure mothers do not.

Finally, it is interesting to note that, in terms of the AAI scales measuring probable experience of childhood, in comparison to the childhood experience of their own mothers, the children in this study were significantly more likely to have experienced more affectionate caretaking from their mothers, less neglect from both their mothers and fathers, less maternal pressure to take on adult-like responsibilities (household and child-minding duties) and a less involving (mainly worrying) relationship with their fathers. This may reflect their own mothers' determination that their children would have happier childhoods than they did, and may also reflect a secular change in childrearing attitudes in Ireland. It is interesting to note that when their children were infants, the mothers in the DCDS sample reported a high level of dependence on the use and threat of corporal punishment and that, at 18 months, 93% of the infants had been smacked at least once, with 27% being smacked once or twice a week. Mothers were also very concerned about not 'spoiling' their children and 'worried a great deal' about this (Greene et al., 1995). A number of the mothers in this present study themselves reported quite severe beatings in their own childhood. In contrast, only one child reported a severe beating by his father, although a number reported being slapped occasionally by their parents.

The stability of attachment from 18 months to age 11-12:

Using the three-category system, of the 20 children on whom strange situation data was

available, 15 (75%) were classified secure, three (15%) avoidant, and two (10%) resistant. Using the four-category system, three (15%) were classified disorganised. Comparing the distribution of classifications to a large meta-analysis of normal and clinical samples showed that the distribution of the Dublin sample was similar to the normal samples, but with an above-average proportion of secure classifications. Given the predominantly low SES composition of the sample, associated with a lower proportion of secure classifications (Belsky, 1996; Belsky & Isabella, 1988; Egeland & Farber, 1984), this relatively high proportion of secure attachment classifications was even more unexpected. One possible explanation may be the timing of the strange situation assessment. A number of studies have shown that infants are more likely to become secure between 12 and 18 months (Egeland & Sroufe, 1981) or to be classified secure because they are less stressed by the separations at 18 months. However, as against that, Waters (1978) in a study of 60 mothers and their infants found a high degree of stability in infant attachment from 12 to 18 months of age.

The two-way secure-insecure and three-way concordance between the children's attachment status as measured by the strange situation at 18 months, and their attachment status as measured by the AAI at age 11-12 was 55%. Using the four-category system, the infancy-childhood match was observed in eight (40%) of cases. The over-all trend was for a lower proportion of children to be classified secure in childhood than in infancy: a reduction from 75% to 60% for the three category system and from 65% to 55% for the four category system. Both infants classified resistant in infancy were classified Secure in childhood. The finding of 55% concordance for both the two-way (secure versus insecure) and three-way analysis compares to the 72% secure-insecure and 64% three-way concordance found between infant attachment (with mother) and age 21 security (Waters et al., 1998); the 77% secure-insecure and 63% three-way concordance found between infant attachment (with mother) and age 17 security (Hamilton, in press); the strong concordance between infant attachment (with mother) and age 19 attachment status (Main & Hesse, 1998); no significant concordance between infant attachment (with mother) and age 18-19 security (Weinfield et al., in press) and between infant attachment (with mother and father) and age 16 security (Zimmermann et al., 1998).

It is also important to bear in mind that the discrepant findings of the longitudinal studies that have tracked individuals from infancy to adolescence/young adulthood described above make more sense when sources of lawful discontinuity are identified. For example, the

Waters et al. (1998) study found 72% two-way infancy-age 21 concordance in their sample, but when individuals who had undergone major life events were excluded, the concordance rate rose to 78%. For those whose lives had been disrupted, on the other hand, the concordance rate was only 44%. Similarly, the Hamilton (in press) study found that negative life events were associated with maintenance of an insecure attachment. In the Weinfield et al. (in press) study of a high risk poverty sample, only 39% of the sample were classified insecure in infancy, but this rose to 68% at age 18-19, 60% of whom were classified Dismissing - a pattern similar to that reported in this study. In the Weinfield et al. study, child maltreatment, maternal depression and other family problems were identified as sources of lawful discontinuity.

Over-all, the mixed results of these infancy-adolescence/young adult longitudinal studies echo the findings with regard to more short-term continuity of attachment in infancy and early childhood, that is, that continuity is very high in stable middle-class samples (Easterbrooks & Goldberg, 1990) and less evident in economically deprived samples, characterised by single-parent families or unstable family relationships (Vaughn et al., 1979); van IJzendoorn, 1995).

Only one of the longitudinal studies used the four-category system (Main & Hesse, 1998) which found strong predictability from attachment in infancy to age 19. None of the 12 infants classified disorganised in infancy was classified Secure at age 19. However, some studies have reported low short-term stability rates for the disorganised classification (see Lyons-Ruth & Jacobitz, 1999) and in the Unresolved classification (Benoit & Parker, 1994). Using the four-category system did not improve infancy-age 11-12 concordance in the present study - in fact, it added more variability. However, given the very small number of children who classified disorganised/Unresolved, it is not possible to make any generalisations in this regard. The rest of the discussion will concern the three-category system of attachment only.

The low concordance found in this study between attachment status in infancy and childhood must be interpreted with some caution, and some limitations of the study must be kept in mind. First, the low concordance may be at least partly attributable to the possible over-representation of secure classifications in infancy because of the timing of the assessment. Second, it is possible that at least some of the changes in classification from infancy to childhood could be attributed to coding errors. Intercoder reliability for the

strange situation and the AAI was high in this study and in line with that found in published studies. In the case of a small number of the strange situation assessments, however, because of deterioration in the quality of the tapes and some procedural errors, classifications could not be made with the desired level of confidence. Nonetheless, the highest agreement between the original DCDS coders and the new independent coders was 75%, which is just slightly below the average 80% inter-laboratory intercoder agreement found in one study (Carlson & Sroufe, 1993). Although that agreement is high, it still leaves room for the possibility of a sizable number of misclassifications. In a small sample, even one misclassification can exert a disproportionate effect. Third, the normal short-term stability of the strange situation is estimated to be between 50% to 96%, with lower stability in disadvantaged samples (see Solomon & George, 1999). In the case of the AAI, short-term stability is estimated at between 78% to 90% (Bakermans-Kranenburg & van IJzendoorn, 1993; Sagi et al., 1994). In in a small sample, 'normal instability' in even a few cases would exert a disproportionate effect on the concordance rates.

Bearing in mind these limitations, possible sources of lawful discontinuity - or what some attachment researchers now refer to as 'principled discontinuity' (Crowell, Fraley, & Shaver, 1999) - were identified in this study. For example, when the infant-childhood concordance was calculated separately for children born to married and single mothers, the difference almost reached significance: 75% for the children born to married mothers and only 25% for the children born to single mothers. It is of course possible that the high continuity observed in the children in the married group is an artifact of the skew towards the largest secure classification - most of the children of the married-mother group were classified secure in infancy and childhood. However, other results point towards another explanation: that the low continuity in attachment status from infancy to childhood in the children of single mothers is attributable to the general instability and stresses that characterised their family lives. Only two of the eight children born to single mothers retained the same classification in childhood as they did in infancy. Four of the five children classified secure in infancy were classified insecure at age 11-12; two of the three classified insecure in infancy were classified secure at age 11-12. As was reported earlier, the mothers who were single at the time of their children's birth experienced significantly more negative life change in the 18 months preceding the current study, and their children had experienced significantly more life events than the married mothers and their children.

When the data with regard to life events was analysed in terms of the four different

secure/insecure infant-secure/insecure child groupings, the influence of life stability and stress on continuity of infant-child attachment was evident. In particular, the different groupings of children were significantly different in terms of the negative life events experienced by their mothers, with the mothers of children classified secure in infancy but insecure in childhood having experienced the most recent negative life change. Their mothers also reported the least positive changes in their current lives, and reported their children as having experienced the second highest number of life events since their fifth birthday. In addition, four of the children had mothers who were single at the time of the child's birth. Two of these children had experienced significant changes in caretaking arrangements since infancy and two experienced losses of significant family members - in one case of both grandparents with whom the child lived and who were the major caretakers. In contrast, the children classified secure in both infancy and childhood had mothers who reported having experienced the most positive changes in their current lives, and reported their children having experienced the least number of life events since their fifth birthday. The two children classified insecure in both infancy and childhood experienced the most life events.

Negative stress has been shown in most studies to affect parent-child interaction and contemporaneous child security (see Belsky, 1996, 1999) as well as short-term stability (Lyons-Ruth et al., 1991) and long-term stability of attachment (see Waters et al., 1988; Weinfield et al., in press). However, it was also interesting to note that the three children who were classified insecure in infancy and secure in childhood had mothers who reported the second highest recent negative life change (although their children experienced the second lowest number of life events since their fifth birthday) suggesting that the effect of stress on the stability of infant-child security may be mediated by other factors. In that regard, the most likely factor identified by this study is maternal attachment security. Thus, six of the nine children (66.7%) classified secure in both infancy and childhood had mothers classified Secure on the AAI; all three children (100%) who were classified insecure in infancy and Secure in childhood had Secure mothers. In contrast, all six children (100%) classified secure in infancy and insecure in childhood had mothers classified insecure. This finding is consistent with those in a wide variety of studies which have found that a mother's representation of attachment is closely related to her responsiveness during the child's childhood as well as infancy and thus is also closely related to the continuity of attachment security (Cohn, Cowan, Cowan, & Pearson, 1992; Grossmann et al., 1988).

Taking both those factors - life stress and maternal attachment security - it is likely that, in combination, they influenced mother-child interaction in the years intervening between infancy and childhood. In general, studies have shown a strong association between infant security of attachment and positive parent-child interaction during the second year of life but a less enduring association in later years (see Thompson, 1998). Thus, whilst the most likely outcome of secure attachment in infancy is a harmonious parent-child relationship in later childhood, this outcome can be altered by intervening events: most likely, instability in life circumstances and poor capacity of family members to adjust to changing life demands as they occur. In turn, a mother's flexibility and capacity to respond to change and stress may be mediated by her own representation of attachment which may affect how she responds to the child's stress (Thompson, 1999). Thus, secure maternal attachment may be construed as a protective factor against her own and her child's stress and insecure maternal insecurity construed as a risk factor.

Thus, it is likely that Secure mothers were able to provide their children with the necessary structure and support to promote security in the preschool period immediately succeeding infancy (Cohn et al., 1992; Das Eiden, Teti, & Corns, 1995) and in the school age period (Crowell, O'Connor, Wollmers, Sprafkin, & Rao, 1991). Eight of the these nine children secure in both infancy and childhood (88.9%) had mothers who were stably married and spoke of their partners positively - a factor that is also likely to have a positively moderating effect on child functioning in the preschool period (Cohn et al., 1992; Das Eiden et al., 1995). On the other hand, the insecure mothers of the children classified secure in infancy and insecure in childhood may have experienced difficulty in the appropriate regulation of their children's negative affect during the preschool years (van den Boom, 1995) and in dealing competently with stressful challenges (Carew, 1980).

Another factor to be borne in mind is that as children grow and develop, they and their mothers face different developmental challenges. According to Bowlby, (1973), a child's continuing security will be put at risk if the child's and the parent's complementary working models are not adapted in step with the child's developing physical, social, and cognitive abilities. Thus, the developing complementary models of self and parents, as a whole, represent both sides of the developing parent-child relationship (Bretherton, 1999; Sroufe & Fleeson, 1986). In particular, as they enter the preschool years, children shift from the goal-directed behaviour of infancy to the goal-corrected partnership of childhood. To effect this change, the child has to learn to understand the desires, intentions and

emotions of others. That in turn depends on the parent's capacity to encourage and support the child's increasing autonomy and 'by the frank communication by parents of working models - of themselves, of child and of others - that are not only tolerably valid but are open to be questioned and revised' (Bowlby, 1972, p.322-323). A parent's capacity to talk coherently about a child's emotionally relevant experiences has been hypothesised as playing 'an important if not essential role' in that process (Grossmann et al., 1999, p.781). Some of the examples of incoherent discourse in this study shows how mothers who have themselves insecure and incoherent representations of attachment are likely to have particular difficulty in this regard, and thus, a child secure in infancy may experience insecurity in a new way at later stages of development (Bretherton, 1999).

The concordance of infant attachment with maternal attachment assessed over 10 years later

With regard to the concordance between infant-attachment and maternal attachment over 10 years later, using the three-category system, the observed two-way (secure versus insecure) match between mother-infant attachment was 35%, and the three-way match was 30%. Over four categories, the match was 15%. These findings compare to the 75% two-way, 70% three-way, and 63% four-way concurrent, predictive and up to five-years retrospective mother-infant attachment concordance found in a meta-analysis (van IJzendoorn, 1995). The low concordance found in this study could be partly attributed to the much longer time-interval between the infant and mother assessments of attachment in this study than in others. In addition, there are no studies available on the stability of the AAI for periods greater than 4 years. It is possible that the 20% short-term instability normally found would be greater over a span of over 10 years. However, as against that, one study found that adolescents' attachment representations on the AAI were significantly related to their mothers' attachment representations on the AAI 10 years earlier (Zimmermann et al., 1995). This finding does not speak directly to the stability of the mothers' AAIs over that period, but could be interpreted as indirect evidence that the mothers' attachment classifications have remained stable enough over the 10 years as to be still significantly concordant with their adolescents' current attachment.

In addition, even assuming that up to 30% of the mothers might have been classified differently over ten years ago, it is unlikely that the difference would all have been in a direction that significantly increased mother-infant concordance. Given the high proportion

of infants classified secure, and the fact that so many of the insecure mothers are currently Preoccupied by their difficult childhoods and early relationships, it is all the more unlikely that many of the Preoccupied mothers were classified Secure 10 years ago. It is also possible, of course, that the possible over-representation of secure infant classifications, discussed above, may have, to some extent, artificially depressed the mother-infant concordance rates. However, a more detailed exploration of the data provides other possible explanations. For example, mother-infant concordance was higher in the married mother group (50%) than it was in the single mother group (12.5%). Most probably this reflects the fact that mother-infant concordance is higher in stable middle-class families than in more high-risk families.

Another possible explanation of the low mother-infant concordance is that six of the infants were reared in multiple caretaker environments, most actually living with their mothers (and in one case both parents) with the mother's family during their first 18 months year, and in some cases for many years after.

In the case of the largest discordant mother-infant grouping - insecure mother-secure infant - four of the nine infants were living in multiple-caretaker environments. One explanation of the low infant-mother concordance in this grouping may be that in multiple-caregiver environments, attachment relationships may interact in such a way that the predictive power of individual relationships (e.g. mother-infant) is weaker than that of their combination (Howes, Rodning, Galluzzo, & Myers, 1988; Tavecchio & van IJzendoorn, 1987). Another explanation may be that living with and/or receiving support from a grandmother enhanced attachment security between these mothers and their children - a finding in one study of adolescent mothers and their children (Spieker & Bensley, 1977) - at least for that particular developmental stage of mother-infant interaction. In addition, the support of maternal grandmothers may have been augmented by the interested involvement of the often large extended families of one or both parents. This is consistent with the findings in some (not all) studies that the level of a mother's social support significantly predicts secure attachment in her infant (see Belsky, 1999). Even when social support is not shown to directly predict infant security, it may do so indirectly by increasing maternal role satisfaction and thereby quality of maternal care and infant security (Isabella, 1994).

In this respect, it is interesting to note that previous research on the larger DCDS sample

did not find a relationship between maternal perception of support from the social network to be predictive of infant attachment. However, it did find that while single mothers were more depressed than their married counterparts during pregnancy and received less family and social support, they were not more likely to be depressed than their married counterparts at three-weeks postpartum. Furthermore, the pattern of their observed interactions with their infants was indistinguishable from those of the married mothers, and in some respects they demonstrated higher levels of reciprocal interaction (Nugent et al., 1993). The authors considered these unexpected findings to reflect the Irish cultural context at that time - whereby pregnancy outside of marriage was still historically disapproved of, but there was a positive and accepting attitude to the mother-infant dyad once the baby actually arrived.

Another possible factor was that many of the mothers themselves came from large families and had extensive experience in caring for younger siblings. This may have provided them with a set of maternal competencies important for this early stage of childrearing. Although secure attachment is not a function of competent practical caretaking, it could be argued that a new mother who is not nervous about caring for a young infant is less likely to be stressed, and more likely to form a secure bond with that infant. This explanation is consistent with the finding that mothers' psychological well-being affects the attachment-related quality of care that they provide to their children (Belsky, 1984, 1999). This argument is also consistent with earlier research into the larger DCDS sample, where maternal self-confidence at 18 months discriminated significantly between secure and insecure infant attachment (Wieczorek-Deering et al., 1991).

In the case of the other discordant mother-infant dyads, the four secure mother-insecure infant pairs, the main characteristic of the grouping was the high levels of stress that seemed to characterise these mothers' lives in the early years of childrearing, including conflict in relationship with partner, financial difficulties, an infant whose temperament was perceived to be difficult, and extended mother-infant separation. This explanation is given support by the finding that, in three of those cases, these stresses appeared to have substantially reduced in the intervening years, and that those children were classified Secure at age 11-12.

In the case of the concordant mother-infant dyads, the six secure mother-secure infant dyads appeared to be characterised by a generally positive and stable environment. All of

the mothers were married at the time of the infant's birth and five have remained married. All five spontaneously described their husbands as supportive. Their descriptions of their relationship with their children (currently and in some cases as infants) were characterised by the high value they placed on close bonds with them, and their intense missing of them when they had to be apart. Such warmth, involvement and responsiveness is associated with maternal sensitivity in the first year of the infant's life (Bates et al., 1985; NICHD 1997) itself a major determinant of infant security (Ainsworth et al., 1978). The only insecure mother-insecure infant dyad was characterised by a high stress early environment and the mother and child currently exhibited striking incoherence of discourse in the AAIs.

Using the four-category system, no correspondence was found been the mother's current Unresolved status and their infant's disorganised status. This is not altogether surprising given the small number of cases, the relative instability of the disorganised/Unresolved category and the long interval between the infant and mother assessment. For example, one of the mothers was Unresolved about losses that occurred relatively recently. Thus, her Unresolved status would not be expected to be linked to her infant's classification. In addition, classification of the disorganised category is made on the basis of fleeting and often subtle infant movements, gestures and facial expressions. In some cases, the quality of the tapes made this classification difficult. In two cases, for example, the infants of mothers classified Unresolved were classified borderline/disorganised in infancy.

Mothers' and children's self-report of attachment styles:

On each of the three-self report measures, the RQ1, the RQ2 and the RSQ, the majority of the 19 mothers on whom full data sets were available reported their relationship style with their child to be secure,(68.4%, 65% and 88.9% respectively). The remaining mothers reported their relationship to be preoccupied (ie. desiring more closeness with the child but finding the child reluctant to get as close as they would like). None endorsed the fearful and dismissing styles. The concordance between the three measures ranged from 94.8% to 66.7%.

A majority of the 22 children also reported their relationship style with their mothers to be secure on the three measures,(86.4%, 59.1% and 86.4% respectively). The remaining children (other than five who endorsed a mixture of secure and insecure styles on the RQ2) reported their relationship style with mother to be dismissing (i.e.feeling comfortable

without a close emotional relationship with their mothers, and desiring more independence). The concordance between the three measures ranged from 90.9% to 63.6%.

With regard to attachment styles in general relationships, a much lower proportion of mothers and children reported themselves secure on the RQ1, RQ2, and RSQ than they did in their own mother-child relationship: in the case of mothers, 47.4%, 36.8%, and 40% respectively; in the case of children 54.5%, 27.3% and 72.7% respectively. They also used the whole range of classifications to describe their general relationship style. In the case of mothers, the concordance between the three measures ranged from 52.6% to 68.4% and for the children from 54.5% to 40%. Over the three measures, the consistency of self-reported attachment style across the mother-child and general relationship domains was low, ranging from 47.3% to 55.5% in the case of mothers, and from 31.8% to 68.1% (the latter figure mainly attributable to the high proportion self-reported secure in both domains) in the case of children.

One explanation of the low correspondence between self-reported attachment style in the mother-child relationship and general relationships may be that an individual's domain-specific attachment styles can be substantially different (Bartholomew & Shaver, 1998; Griffin & Bartholomew, 1994). However, a more plausible explanation is that the security of mother-child relationship is particularly susceptible to self-reported bias. There is mixed evidence for this interpretation. On the one hand, it is not supported by the findings of a study of 52 mothers using the RQ (called RQ1 in this study), where 69.2% reported themselves secure in general relationships. This closely resembles the 68.4% of mothers in this study who reported themselves secure on the RQ1 in the mother-child relationship, but is much higher than the 47.4% who reported themselves secure on the RQ1 in general relationships (Crowell et al., 1999). On the other hand, it is supported by the findings of studies with much larger samples. For example, although this was a very small sample, the distribution of mothers' self-reported attachment styles in general relationships was comparable to that of much larger samples of college students (O'Hearn & Davis, 1992; Scharfe & Bartholomew, 1994). The distribution of the children's attachment styles was somewhat different, with a higher proportion of the children reporting themselves secure in general relationships and a lower proportion fearful than the college students in the larger samples.

Although not directly comparable, the distribution of the relationship styles in the mother-

child relationship was also quite different - with a much higher proportion of both mothers and children reporting themselves secure than they or college students did in their general relationships. These results confirm previous findings that the secure attachment style is particularly susceptible to self-report bias (Bartholomew & Horowitz, 1991) and suggest that self-report of the security of mother-child relationship may be even more susceptible to that bias. These findings raise a question about the applicability of the self-report measures in assessing relationship styles in the mother-child relationship.

Over-all, the correspondence between the mothers' and children's self reported attachment styles was low, ranging from 35% to 77.8% (this last figure largely due to the very high proportion of both mothers and children who endorsed the secure style in the RSQ) in their own relationship, and from 5.3% to 47.1% in general relationships.

With regard to the concordance between the self-report measures of the mother-child relationship and AAI classifications, the results show very variable levels of correspondence, with somewhat higher correspondence registered when the AAI three-category system was used, suggesting that the Unresolved AAI classification has no equivalent in the self-report measures. For mothers the correspondence between secure/insecure self-reported attachment style on the RQ1, RQ2 and RSQ and secure/insecure AAI (four-category) classification was 57.9%, 60% and 47.4% respectively, in the case of the mother-child relationship; and 57.9%, 46.7% and 47% respectively in the case of general relationships. These results compare to the 61.6% correspondence between the AAI and the RQ (called RQ1 in this study) as applied to general relationships found in a study of 52 mothers and the lack of significant correspondence found between the AAI and self-reported style in own mother and own father relationships (Crowell et al., 1999).

From the perspective of the mothers' AAI classification, 77.8%, 87.5% and 55.6% of AAI Secure mothers also reported a secure attachment style in the mother-child relationship on the RQ1, RQ2 and RSQ respectively; and 44.4% reported a secure style in general relationships on the RQ1 and RQ2, and 55.6% on the RSQ. It is interesting that the AAI-RQ1 correspondence of 77.8% in the mother-child relationship (but not the 44.4% in general relationships) compares closely to the 81% of AAI Secure mothers who also reported themselves secure in general relationships on the RQ in the Crowell et al. (1999) study. On the other hand, of those mothers classified insecure on the AAI, 40%, 10% and

60% also reported themselves insecure in the mother-child relationship on the RQ1, RQ2, and RSQ respectively; and 60% insecure in general relationships on all three measures. The AAI-RQ1 correspondence of 40% in the mother-child relationship (but not the 60% in general relationships) compares closely to the 42% of AAI insecure mothers who reported themselves insecure in general relationships on the RQ in the Crowell et al. (1999) study.

The pattern of findings suggest that, although there is variability across the three self-report measures, no one measure shows significant concordance with the AAI. This is so even when the measures are specifically applied to the mother-child relationship, which might have been expected to show more correspondence with the AAI than when applied to general relationships. Attachment researchers who use self-report measures (eg Bartholomew & Shaver, 1998) often explain the low correspondence between the AAI and self-report measures as partly attributable to the domain difference, that is, that the AAI focuses on the parent-child relationship domain and the self-report measures on the adult relationship domain. However, the findings in this study which used self-report measures as applied to current mother-child relationship and the findings of the Crowell et al. (1999) study which used self-report measures as applied to own parent relationship style in childhood do not appear to support this explanation.

The lack of significant concordance between the AAI and self-reported attachment styles raises the question as to what precisely each measures. The AAI's validity was established by its ability to predict an adult parent's infant's strange situation classification. It assesses, at the level of mental representation, the behavioural patterns assessed in the strange situation, particularly attachment security, defined as the ability to use the attachment figure as a 'secure base'. The validity of the self-report measures, on the other hand, was established by their ability to empirically reproduce a network of correlations that are predicted by, or consistent with, attachment theory. In addition, the self-report measures were developed to assess adult attachment relationships, which of their nature are reciprocal (Weiss, 1982). Self-report measures are worded in a way that include direct and implied references to the reciprocal nature of the attachment relationship, with the partner both eliciting and providing support and care (Bretherton, 1999). Thus, the self-report measures include reciprocal elements of a relationship that the AAI does not.

Self-reported attachment styles have been empirically associated with many relationship-

specific, personality and general adjustment variables (see Crowell et al., 1999). For example, security of attachment style has been linked to seeking support from partner when distressed and providing support to a distressed partner, as well as making attributions about a partner's intentions that help alleviate conflict situations. It has also been linked to many personality and general adjustment variables, including high self-esteem and being judged better adjusted, warm and nurturing by peers. Self-reported insecurity has been associated with depression and a variety of personality disorders. A recent study has identified two bipolar dimensions - security-anxiety and closeness-avoidance - that are considered to best capture what the self-report measures actually assess (Brennan, Clark & Shaver, 1998).

The lack of significant concordance between the AAI and the self-report measures could then be interpreted as meaning that the self-report measures assess general personality, adjustment and aspects of psycho-social functioning rather than attachment security. However, other studies suggest that the attachment dimensions assessed by the self-report measures, although correlating with the five-factor model of personality (neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness), are not redundant with those major personality variables (Shaver & Brennan, 1992). Examined from this perspective, it is possible that AAI attachment may over-lap in complex way with self-reported attachment style, and that, in turn, representational and self-reported attachment may each over-lap in complex ways with self-esteem and interpersonal orientation.

To some extent, the pattern of results in this study could be used to support this view. 0f the AAI insecure mothers, only 30% reported themselves secure in their relationship with child on all three self-report measures and only 10% secure in general relationships. In addition, nine of the 11 AAI insecure mothers were classified Preoccupied, itself associated with higher levels of internalising problem behaviours (Allen et al., 1998), elevated depression (Kobak et al., 1993) and Axis 11 psychopathology in nonclinical samples (Lee, Polan, & Ward, 1998) and affective disorders in clinical groups (Rosenstein & Horowitz, 1996). The pattern of results reported above suggest that aspects of AAI insecurity, particularly Preoccupation, may over-lap with a lack of positive self-worth and positive interpersonal orientation, particular in general relationships, and that these latter aspects of psychological functioning are 'captured' by the mothers' self-report data.

In contrast, of AAI Secure women, 80% report themselves secure in their relationship with child on all three measures, while only 40% report themselves secure in general relationships. This again suggests that the self-report measures, particularly of general relationships, may be tapping into a more general insecurity. With regard to the children, a somewhat different pattern is evident. Approximately the same proportion of the AAI Secure and insecure children reported themselves secure in their relationship with mother on all three measures - 53.8% and 55% respectively. However, a much lower proportion of AAI Secure and insecure children reported themselves secure in general relationships on all three measures - 15.4% and 33% respectively. What is interesting here is that the AAI Secure children report themselves as more insecure in general relationships. One possible explanation of this finding is that all of the AAI insecure children were classified Dismissing, itself associated with the under-reporting of distress, psychological symptoms, or problems in interpersonal relationships compared to the reports of others who know them well (Kobak & Sceery, 1988).

In addition, the mother's AAI classification and self-reported attachment style may interact in subtle ways with their child's AAI classification. For example, it was noted earlier that the only insecure attachment style in the mother-child relationship reported by mothers was preoccupied (ie. seeking more closeness) and by children was dismissing (i.e.desiring more independence). This might plausibly have been interpreted as possibly reflecting a reciprocal tension in specific mother-child relationships. However, that was not the case. An inspection of the responses showed that of the seven mothers who reported a preoccupied attachment style in their relationship with their child on any of the three measures, only three of their children reported a dismissing style on any of the three measures. Similarly, of the nine children who reported a dismissing style on any of the three measures, only three of their mothers reported a preoccupied style.

It is also interesting to note that inspecting the AAI classification of the mothers who reported themselves preoccupied and the children who reported themselves dismissing, the three dyads where both the mother reported a preoccupied style and the child reported a dismissing style were the only dyads where the mother was also classified Preoccupied and the child Dismissing on the AAI. All the other children, and all except one of the other mothers, were classified Secure on the AAI. A possible interpretation of these findings is that the majority of AAI Secure children with Secure mothers who report a dismissing style are simply reflecting an age-appropriate desire to become more independent of their

mothers, and a small number (three) of Secure AAI mothers with Secure AAI children are expressing some concern about their closeness to their children. It is interesting to note that of those three mothers, two had children who were classified insecure in infancy, and one had a child classified Unresolved/Secure on the AAI. Thus, the self-report measures, in the case of children, may be identifying both developmental and relationship-specific anxieties, and in the case of mothers may be identifying maternal anxiety that, during particularly stressful periods, interfered with their ability to respond sensitively to their children's needs.

Over-all, although it is expensive and time consuming to become proficient in using and coding the AAI and to use it as a research tool, it does not seem likely, at least at this stage, that self-report measures can be used as a substitute. The AAI, because of its structure, affords opportunities for revealing apparent contradictions, distortions, and omissions in the representation of childhood and attachment figures, and can reveal the dynamics of attachment and defense, particularly defensive exclusion, that direct report measures cannot. Thus, self-report cannot reliably predict AAI attachment classifications, and maternal self-report cannot reliably predict her child's attachment security. However, there is much to be gained in including self-report measures of attachment style (and of more general psychological and psychosocial functioning) in studies of inter-generational attachment. Such multi-method assessments may enable researchers to construct an attachment profile of a parent, with the possibility of identifying the primary attachment strategies used in the caretaking relationship with the child, and perhaps the secondary and even tertiary attachment strategies used in other close relationships. Alternatively, the self-report measures could be used to identify aspects of behaviour, affect regulation and cognitive processes in both parents and children, that together with the parent's AAI status, would increase the power to predict attachment outcome in children, as well as aspects of parent-child interaction.

Conclusion

This study set out to address one of the most obvious gaps in the research on attachment across the life-span - the very few studies of attachment at the end of middle childhood and transition to adolescence. Moreover, research with this age group has been significantly hampered by the lack of a valid and reliable measure of attachment status that can be anchored in the strange situation and AAI body of attachment research (Goldberg et al.,

1995). The reason this is important is that the strange situation categories were themselves based on naturalistic observations of infants' 'secure-base' behaviour, and therefore constitute what has been called the 'gold standard for the AAI's validity' (Crowell et al., 1999, p.453). A second major aim of the study was to determine if the concordance between the concurrent attachment status of mothers and their children in this age group was similar to the concordance observed between the concurrent attachment status of mothers and their infants, and mothers and their adult daughters. Finding such concordance would provide one type of external validity for the use of the AAI with this age group.

This study was the first to use the AAI - unmodified from its normal adult use - with 11-12 year old children. The results indicate that the AAI appears to be applicable to this age group. In addition, the 73% secure versus insecure concordance found between mothers and their 11-12 year old children in this study is remarkably similar to the 75% concurrent concordance generally found between mothers and their infants, and between mothers and their adult daughters (Benoit & Parker, 1994; van IJzendoorn, 1996). It seems likely that the whole range of classifications will be required to describe the 'state of mind with respect to attachment' of this age group. However, since no children were classified Preoccupied in this study, a question remains about how the Preoccupied category will apply to them.

Establishing the validity of the AAI as a measure of attachment security for this age group will enable researchers to address the acute dearth of information on the behavioural, cognitive and affective correlates of attachment security and insecurity at the end of middle childhood and the transition to adolescence. This will provide a much stronger empirical and theoretical basis for understanding the workings of the attachment system at this stage of the life-span. It will also enable researchers to address an often neglected aspect of attachment beyond infancy, that is, to ground the classifications of attachment representation in interaction-based measures of attachment security, (Solomon & George, 1999). For example, it is important to establish just what constitutes secure and insecure attachment at the end of middle childhood, as evidenced in the communication of affect, behavioural expression of attachment, strategies for emotional regulation and belief systems about current relationships both with parents and peers. As Kobak (1999) points out, the continued need for the observational study of on-going attachment relationships in older children and adults is consistent with the transactional model of attachment, in which internal working models of attachment interact with the quality of interaction in current

attachment relationships in a dynamic and reciprocal way (Bowlby, 1973).

The very few studies that have tried to combine assessment of representation of attachment with observation of current interaction have yielded interesting results. For example, AAI secure adolescents have been observed to be better able to communicate more constructively with their identified primary attachment figure (usually their mother) about potentially stressful and contentious attachment-related issues than AAI insecure adolescents were (Kobak et al., 1993). Such studies have led some attachment researchers to hypothesise that the successful balancing of efforts to attain autonomy and maintain closeness to parents, particularly during disagreements, could be considered a stage-specific expression of attachment security in adolescence (Allen, Kuperminc, & Moore, 1997).

In this respect, it must be noted that the validity of the AAI as a measure of attachment for this age group could be more firmly established if it is shown to be related in a theoretically meaningful way with behavioural, cognitive and emotional aspects of the child's functioning in the past and in the future. The larger DCDS study has collected extensive data on many of the children (and their motheres) who participated in the present study. Thus, there will be an opportunity in future resarch projects to investigate if the children's current AAI status can be retrospectively predicted by some of these variables, and it willbe of some importancy. Similarly, if their current AAI status is found to reliably predict meaningful aspects of their functioning in mid and late adolewcence, this will also be of considerable interest.

A third major objective of the study was to investigate the continuity of the children's attachment status from infancy to age 11-12. The results show that this was just 55% for the secure-insecure split. Moreover, the pattern of results suggest that attachment continuity from infancy to late childhood seems to be mediated by the mother's marital status at the time of the child's birth, intervening life events and changing life circumstances for the mothers and children. Even though these results are based on a very small sample, nonetheless, given the absence of any other reported longitudinal studies that assesses continuity of attachment in infancy (based on the strange situation) and attachment at the end of middle childhood (based on the AAI), this is potentially an important finding for a number of reasons.

First, it provides some data on the fate of attachment before the changes of early

adolescence which are hypothesised to potentially disrupt adolescent attachment organisation or at least the capacity to assess it (Allen et al., 1997). Second, the results challenge a simple continuity hypothesis. While the over-all infant-child concordance was 55% - the concordance for the children of the married mother-group was 75% and only 25% for the children in the single mother group (although this was not significant). Moreover, compared to the married-mother group, the mothers and children in the single-mother group experienced significantly more life change in the intervening years. Almost half the children in this study were classified differently at age 11-12 than they were in infancy. The pattern of results seem to indicate sources of lawful discontinuity, including disruptions in caretaking arrangements, family stress, loss of important attachment figures, as well as improvement in family circumstances, and children establishing a 'secure base' with alternative attachment figures. In general, the findings also suggest that having a Secure mother may act as a buffer against stress and help both children and mothers to negotiate the challenges of different stages in the parent-child relationship. Similarly, having an insecure mother may act as a risk factor, such that she may be unable to respond effectively to the different developmental challenges of an older child or cope effectively with life-change and stress.

A fourth and related objective of this study was to investigate the concordance between the infants' attachment status and their mothers' over 10 years later - which was found to be just 35% for the secure-insecure split. The pattern of other results in the study suggests that this lack of significant concordance is lawfully related to a number of variables, including the mother's marital status at the time of the birth; the rearing of a number of the children in multiple-caretaker environments during early infancy; life changes; social support and perhaps, to stage-specific maternal ability to provide a 'secure base' for the child. The presence in this study of such an unusually high proportion of mothers classified Preoccupied was, in itself, an interesting finding. The finding that eight of the nine Preoccupied mothers had secure infants but only three had secure children at age 11-12 raises interesting questions about the responsiveness of such mothers at different stages of their child's development and confirms observations made in other studies that predictions of child attachment on the basis of a mother's Preoccupied classification is uniquely difficult. Once again, however, it is important to underline that the factors identified as possible sources of continuity and discontinuity were established on the basis of comparing very small sub-groups. In addition, in the case of factors not directly measured (eg mother's previous experience of caretaking) it is important to note that they were

selected by this researcher on the basis of examination of the AAI transcripts. Although every effort was made to do this systematically and carefully, there was no reliability check on her selection and interpretation by a second researcher.

Thus, over-all, this study found continuity in infant-child attachment for children from stable caretaking environments and low continuity for those in unstable environments confirming the findings in other studies. It is important to stress that both sets of findings - of continuity and discontinuity - are important. Attachment theory does place special importance on infancy and an over-emphasis on stability, continuity and prediction from infancy could lead to the legitimate concern that the theory is deterministic. On the other hand, an over-emphasis on the multiple sources of instability and discontinuity would render the theory fragmented and unable to make any useful predictions of later psychological functioning on the basis of early experience. Attachment theory has always assumed that both continuity and change in adaptation are possible (Ainsworth, 1990; Bowlby, 1969/1982). In fact, Bowlby cautioned that 'too much of prognostic significance must not be read into the statement that at the first birthday a couple is likely to have established a characteristic pattern of action. All that it means is that for most couples a pattern that is likely to persist is by that time present' (Bowlby, 1969/1982, p.343).

However, the identification of such sources of lawful discontinuity must be speculative. It is possible, for example, that unidentified factors may have operated to simultaneously affect family functioning, susceptibility to stress, and attachment status of children (and mothers) such that the apparently causal relationships invoked in this study are false. For example, no data was available on the attachment status of the children's fathers. Finally, while there is now some evidence that being reared in a multi-caretaker environment in infancy can attenuate the effect of parental attachment organisation and caretaking style, little is yet known about how an infant 'selects' the primary attachment figure, on what basis this selection takes place, or whether these selections are based on what Bowlby (1969/1982b, 1987) called 'social interactions'. As Main (1999) points out, 'an embarrassing poverty of information in what is a critical area for our field' (p. 849) apart from the pioneering work of Ainsworth (1967) in Uganda and Schaffer and Emerson (1964) in the city of Glasgow, Scotland. .

Those studies indicated that the main attachment figure is normally, although not always or inevitably, the person with whom the infant lives and who provides primary care. This

person is usually the mother - but may not be so in, for example, the multiple-caretaking environments that characterised the early infancy of some of the children in this study who were living with their mothers in their grandparents homes and being mostly cared for by their grandmothers while their mothers worked. Schaffer and Emerson also pointed out that the role of other family members as attachment figures may be underestimated. As Rutter (1995) has argued: 'There is a need to consider dyadic relationships in terms that go beyond attachment concepts and to consider social systems that extend beyond dyads' (p. 556).

A final objective of this study was to investigate the concordance between the AAI and self-report measures of attachment style. Although these measures included self-reported attachment style in the mother-child relationship, as well as in general relationships, no significant concordance between the AAI and any of the self-report measures was found. However, it was argued on the basis of the pattern of findings, that there are interesting and complex links between attachment at the level of representation and self-report that merit the inclusion of a variety of measures in future studies. It is important to bear in mind that the attachment dimension, although important, is not the whole of the parent-child relationship. Other aspects of parenting, including fostering personal agency, social understanding, particularly the negotiation of conflict, and self-awareness in the child, although linked to attachment, may also be independent of it. Self-report measures of attachment as well as measures of more general psycho-social functioning may tap these other parenting dimensions and it would enrich attachment theory and research to incorporate these approaches.

Over-all, this study indicates that attachment theory and research have a useful and unique role to play in helping resolve one of the most enduring issues in child development - the relative importance of early experience versus stability of the caretaking environment for later psychological adaptation or what has been termed the early prototype hypothesis versus the stable environment hypothesis (van IJzendoorn, 1996). Data on the concurrent concordance of mother-child attachment, as well as data on the the continuity and discontinuity of attachment are relevant in investigating those competing hypotheses. The early prototype hypothesis, stated in its strongest form, is that the primary mother-infant attachment relationship serves as a prototype for later love relationships, and that the mental representations of actual attachment experiences formed in infancy underlie this continuity. The high concordance found between mothers and their children at different

stages of their lives; the apparently stronger influence the mother seems to have on child attachment organisation relative to father's; the high continuity found in some studies of attachment from infancy onwards - all these may be used to support the prototype hypothesis.

On the other hand, the discontinuity of attachment from infancy onwards in more high-risk and unstable samples, and the very high continuity in stable middle class samples may also be used to support the stable environment hypothesis. Stated in its extreme form, this hypothesis is that attachment only reflects the quality of the child-rearing environment at any one stage, or stability of parent's attachment strategies, in other words that attachment is simply 'an epiphenomenon, marking an adaptive response to a relatively stable pattern for handling affect on the part of the *parents* ' (Allen & Land, 1999, p. 329). However, as van IJzendoorn (1996) points out, while both hypotheses can be supported by the present body of findings, neither can be disconfirmed until attachment researchers pay more attention to the contextual dimension of developmental trajectories which have generally been deemphasised. He argues that what is required is longitudinal research that includes adequate measures not just of major negative life events but also smaller fluctuations in the sensitivity of the caretaking environment to the attachment needs of the developing child. If it can be shown that minor environmental fluctuations change attachment organisation, then the early prototype hypothesis can be rejected. On the other hand, if attachment organisation remains stable in the face of major changes in the environment, the stable environment hypothesis can be rejected.

These issues in turn raise a critical question for attachment researchers: When does attachment organisation become the property of the individual and not just a reflection of the qualities of ongoing parent-child attachment relationships? This is a critical question because it is the individual's 'state of mind with regard to attachment' that predicts their own future caretaking of their infants. The present study begs that question in a particularly acute way. To what extent is the attachment organisation of the 11-12 year old children a reflection of their relatively enduring 'state of mind with regard to attachment' and to what extent a reflection of their adaptation to their parents' (and particularly their mothers') attachment-related caregiving? Unlike infants, they are not dependent on their parents for survival in the same way. Unlike adults however, they are still substantially dependent on their parents for many aspects of their lives. If there are changes in the caregiving environment, to what extent will the attachment organisation of

the 11-12 year old follow suit? Or to what extent will it remain substantially stable over time like the attachment organisation of adults?

Despite the large gaps remaining in our understanding of the influence of early experiences in attachment relationships on developmental trajectories over the life-span, attachment research has succeeded in exploring some of the most compelling general questions in child development. It has revealed what Main (1999) calls the the complexity of the phenomenon of attachment - how security in infancy once identified only with reference to behaviour towards a particular caretaker (itself influenced by that caretaker's mental representation of attachment) becomes transformed in later life into a secure/autonomous 'state of mind with respect to attachment' - no longer defined by reference to a specific person. In turn, that 'state of mind' is transformed into a caretaking style that transmits security to the next generation, such that the behaviour of the infant mirrors the behaviour of that parent in infancy. This series of transformations across different modalities, Main argues, is not simply 'stability' - it is development. The task remains of establishing more precisely the links between this complex development and other aspects of child development as well as the non-attachment dimensions of parenting - links which will ultimately help locate the place of attachment within the broader context of the developing parent-child relationship (Thompson, 1999). This constitutes a formidable, and exciting, empirical and conceptual challenge for the future.

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THE LIFE EXPERIENCES SURVEY

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. Please mark those events which you have experienced in the last 18 months by ✓ ; and by x if you have not experienced the event.

Also, for each item checked below, please indicate the extent to which you viewed the event as having either a positive or negative impact on your life at the time the event occurred. That is, indicate the type and extent of impact that the event had. A rating of -3 would indicate an extremely negative impact. A rating of 0 suggests no impact either positive or negative. A rating of +3 would indicate an extremely positive impact.

	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
. Marriage	-3	-2	-1	0	+1	+2	+3
. Detention in jail or comparable institution	-3	-2	-1	0	+1	+2	+3
. Death of spouse	-3	-2	-1	0	+1	+2	+3
. Major change in sleeping habits (much more or much less sleep)	-3	-2	-1	0	+1	+2	+3
. Death of close family member:							
a. mother	-3	-2	-1	0	+1	+2	+3
b. father	-3	-2	-1	0	+1	+2	+3
c. brother	-3	-2	-1	0	+1	+2	+3
d. sister	-3	-2	-1	0	+1	+2	+3
e. grandmother	-3	-2	-1	0	+1	+2	+3
f. grandfather	-3	-2	-1	0	+1	+2	+3
g. child	-3	-2	-1	0	+1	+2	+3
h. other (specify)	-3	-2	-1	0	+1	+2	+3
. Major change in eating habits (much more or much less food intake)	-3	-2	-1	0	+1	+2	+3
. Foreclosure on mortgage or loan	-3	-2	-1	0	+1	+2	+3
. Death of close friend	-3	-2	-1	0	+1	+2	+3

		extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately posibive	extremely rositive
9.	Outstanding personal achievement	-3	-2	-1	0	+1	+2	+3
10.	Minor law violations (traffic tickets, disturbing the peace, etc.)	-3	-2	-1	0	+1	+2	+3
11.	Male: Wife/girlfriend's pregnancy	-3	-2	-1	0	+1	+2	+3
12.	Female: Pregnancy	-3	-2	-1	0	+1	+2	+3
13.	Changed work situation (different work responsibility, major change in working conditions, working hours, etc.)	-3	-2	-1	0	+1	+2	+3
14.	New job	-3	-2	-1	0	+1	+2	+3
15.	Serious illness or injury of close family member:							
	a. father	-3	-2	-1	0	+1	+2	+3
	b. mother	-3	-2	-1	0	+1	+2	+3
	c. sister	-3	-2	-1	0	+1	+2	+3
	d. brother	-3	-2	-1	0	+1	+2	+3
	e. grandfather	-3	-2	-1	0	+1	+2	+3
	f. grandmother	-3	-2	-1	0	+1	+2	+3
	g. spouse	-3	-2	-1	0	+1	+2	+3
	h. child	-3	-2	-1	0	+1	+2	+3
	i. other (specify)	-3	-2	-1	0	+1	+2	+3
16.	Sexual difficulties	-3	-2	-1	0	+1	+2	+3
17.	Trouble with employer (in danger of losing job, being suspended, demoted, etc.)	-3	-2	-1	0	+1	+2	+3
18.	Trouble with in-laws	-3	-2	-1	0	+1	+2	+3

		extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
19.	Major change in financial status (a lot better or a lot worse off)	-3	-2	-1	0	+1	+2	+3
20.	Major change in closeness of family members (increased or decreased closeness)	-3	-2	-1	0	+1	+2	+3
21.	Gaining a new family member (through birth, adoption, family member moving in, etc.)	-3	-2	-1	0	+1	+2	+3
22.	Change of residence	-3	-2	-1	0	+1	+2	+3
23.	Marital separation from mate (due to conflict)	-3	-2	-1	0	+1	+2	+3
24.	Major change in church activities (increased or decreased attendance)	-3	-2	-1	0	+1	+2	+3
25.	Marital reconciliation with mate	-3	-2	-1	0	+1	+2	+3
26.	Major change in number of arguments with spouse (a lot more or a lot less arguments)	-3	-2	-1	0	+1	+2	+3
27.	Married male: Change in wife's work outside the home (beginning work, ceasing work, changing to a new job, etc.)	-3	-2	-1	0	+1	+2	+3
28.	Married female: Change in husband's work (loss of job, beginning a new job, retirement, etc.)	-3	-2	-1	0	+1	+2	+3
29.	Major change in usual type and/or amount of recreation	-3	-2	-1	0	+1	+2	+3
30.	Borrowing more than £10,000 (buying home, business, etc.)	-3	-2	-1	0	+1	+2	+3

		extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
31.	Borrowing less than £10,000 (buying car, TV, furniture, etc.)	-3	-2	-1	0	+1	+2	+3
32.	Being fired from job	-3	-2	-1	0	+1	+2	+3
33.	Male: Wife/girlfriend having abortion	-3	-2	-1	0	+1	+2	+3
34.	Female: Having abortion	-3	-2	-1	0	+1	+2	+3
35.	Major personal illness or injury	-3	-2	-1	0	+1	+2	+3
36.	Major change in social activities, e.g., parties, movies, visiting (increased or decreased participation)	-3	-2	-1	0	+1	+2	+3
37.	Major change in living conditions of family (building new home, remodeling, deterioration of home, neighbourhood, etc.)	-3	-2	-1	0	+1	+2	+3
38.	Divorce	-3	-2	-1	0	+1	+2	+3
39.	Serious injury or illness of close friend	-3	-2	-1	0	+1	+2	+3
40.	Retirement from work	-3	-2	-1	0	+1	+2	+3
41.	Son or daughter leaving home (due to marriage, college, etc.)	-3	-2	-1	0	+1	+2	+3
42.	Ending of formal schooling	-3	-2	-1	0	+1	+2	+3
43.	Separation from spouse (due to work, travel, etc.)	-3	-2	-1	0	+1	+2	+3
44.	Engagement	-3	-2	-1	0	+1	+2	+3

	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
45. Breaking up with boyfriend/ girlfriend	-3	-2	-1	0	+1	+2	+3
46. Leaving home for the first time	-3	-2	-1	0	+1	+2	+3
47. Reconciliation with boyfriend/girlfriend	-3	-2	-1	0	+1	+2	+3

Other recent experiences which have had an impact on your life. List and rate.

48._____	-3	-2	-1	0	+1	+2	+3
_____							
_____							
49._____	-3	-2	-1	0	+1	+2	+3
_____							
_____							
50._____	-3	-2	-1	0	+1	+2	+3
_____							
_____							

LIFE EVENTS QUESTIONNAIRE.

CHILD: (code)..... AGE..... DATE OF BIRTH: .....

MALE [ ] 1.

FEMALE [ ] 2.

Have any of the following events occurred in your child's life during the time since his/her fifth birthday?

If the answer is **YES** , place the number **1.** in the box beside the statement.
If the answer is **NO** , place the number **0.** in the box beside the statement.

(1) Birth of a brother or sister. ..... [ ]

(2) One parent seriously ill or hospitalised for two weeks or more..... [ ]

(3) Increase of conflicts between parents..... [ ]

(4) Job-loss of father..... [ ]

(5) Increased absence of father for eight hours or more per week..... [ ]

(6) Child seriously injured at home..... [ ]

(7) New partner moved into home..... [ ]

(8) Death of a brother or sister..... [ ]

(9) Increased absence of mother for eight hours or more per week..... [ ]

(10) Hospitalisation or serious illness of child for two weeks or more..... [ ]

(11) Parent left family..... [ ]

(12) Death of a parent..... [ ]

(13) Substantial decrease in income ..... [ ]

(14) A third adult moved into family..... [ ]

(15) Prison sentence for a parent..... [ ]

(16) Death of a friend of child..... [ ]

(17) Hospitalisation of brother/sister for two or more weeks..... [ ]

RQ1: RELATIONSHIP WITH YOUR CHILD QUESTIONNAIRE 1[1]

NAME:

ADDRESS:

[2]The following questionnaire is about your relationship with your child..... Take a few minutes to think about this relationship.

Below are descriptions of **four general relationship styles** that people often report.
Please read **each** description and **circle** one one description (i.e. **A** or **B** or **C** or **D**) that **best** describes your relationship with your child. **Circle only one letter**.

A.
It is easy for me to become emotionally close to my child. I am comfortable depending on my child and having my child depend on me. I don't worry about being alone or having my child not accept me.

B.
I am uncomfortable getting close to my child. I want an emotionally close relationship, but I find it difficult to trust my child, or to depend on him/her. I worry that I will be hurt if I allow myself to become too close to him/her. .

C.
I want to be completely emotionally intimate with my child, but I often find that he/she is reluctant to get as close as I would like. I am uncomfortable being without a close relationship with my child, but I sometimes worry that my child does not value me as much as I value him/her.

D.
I am comfortable without a close emotional relationship with my child. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on my child or have my child depend on me.

---

[1] In the version given to children, this questionnaire was entitled 'Relationship With Your Mother Questionnaire 1' and the phrase 'your child' was replaced with the phrase 'your mother' throughout. In all other respects, it was the same.

RQ2: RELATIONSHIP WITH YOUR CHILD QUESTIONNAIRE 2[3]

[4]Please read each of the following **relationship styles.** Then, rate **each** according to the **extent** to which you think the description corresponds to your general relationship with your child..... That is, **circle** a number between 1 and 7. (For example, if the description is **very much like** your relationship with your child, you could **circle** 6 or 7. If it is not **at all like your relationship, circle** 1 or 2. If it is only **somewhat like** your relationship style choose 3, 4 or 5.)

A. It is easy for me to become emotionally close to my child. I am comfortable depending on my child and having my child depend on me. I don't worry about being alone or having my child not accept me all the time.

Not at all like me			**Somewhat like me**		**Very much like me.**	
1	2	3	4	5	6	7

B. I am uncomfortable getting close to my child. I want an emotionally close relationship, but I find it difficult to trust my child completely, or to depend on my child. I worry that I will be hurt if I allow myself to become too close to my child.

Not at all like me			**Somewhat like me**		**Very much like me.**	
1	2	3	4	5	6	7

C. I want to be completely emotionally intimate with my child, but I often find that my child is reluctant to get as close as I would like. I am uncomfortable being without a close relationship with my child, but I sometimes worry that my child does not value me as much as I value him/her.

Not at all like me			**Somewhat like me**		**Very much like me.**	
1	2	3	4	5	6	7

[3] In the version given to children, this questionnaire was entitled 'Relationship With Your Mother Questionnaire 2' and the phrase 'your child' was replaced with the phrase 'your mother' throughout. In all other respects, it was the same.

D. I am comfortable without a close emotional relationship with my child. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on my child or have my child depend on me.

Not at all like me			**Somewhat like me**			**Very much like me.**
1	2	3	4	5	6	7

RSQ: RELATIONSHIP WITH YOUR CHILD QUESTIONNAIRE 3[5]

[6]Please read each of the following statements and **rate the extent** to which it describes your feelings about your child..... Think about your relationship with your child, past and present, and respond in terms of how you **generally** feel in that relationship.

		Not at all like me		**Somewhat like me**		**Very Much like me**
1.	I find it difficult to depend on my child.	1	2	3	4	5
2.	It is very important to me to feel independent of my child.	1	2	3	4	5
3.	I find it easy to get emotionally close to my child.	1	2	3	4	5
4.	I want to be completely at one with my child.	1	2	3	4	5
5.	I worry that I will be hurt if I allow myself to become too close to my child.	1	2	3	4	5
6.	I am comfortable without a close emotional relationship with my child.	1	2	3	4	5
7.	I am not sure that I can always depend on my child to be there when I need her/him.	1	2	3	4	5
8.	I want to be completely emotionally intimate with my child.	1	2	3	4	5
9.	I worry about being alone without my child.	1	2	3	4	5
10.	I am comfortable depending on my child.	1	2	3	4	5
11.	I often worry that my child does not really love me.	1	2	3	4	5
12.	I find it difficult to trust my child completely.	1	2	3	4	5
13.	I worry about my child getting too close to me.	1	2	3	4	5
14.	I want an emotionally close relationship with my child.	1	2	3	4	5
15.	I am comfortable having my child depend on me.	1	2	3	4	5
16.	I worry that my child does not value me as much as I value her/him.	1	2	3	4	5

---

[5] In the version given to children, this questionnaire was entitled 'Relationship With Your Mother Questionnaire 3' and the phrase 'your child' was replaced with the phrase 'your mother' throughout. In all other respects, it was the same.

		Not at all like me		Somewhat like me		Very Much like me
17.	My child is never there when I need her/him.	1	2	3	4	5
18.	My desire to be really close sometimes scares my child away.	1	2	3	4	5
19.	It is very important to me to feel self-sufficient of my child	1	2	3	4	5
20.	I am nervous when my child gets too close to me.	1	2	3	4	5
21.	I often worry that my child won't want to stay with me.	1	2	3	4	5
22.	I prefer not to have my child depend on me.	1	2	3	4	5
23.	I worry about being abandoned by my child.	1	2	3	4	5
24.	I am somewhat uncomfortable being close to my child.	1	2	3	4	5
25.	I find that my child is reluctant to get as close as I would like.	1	2	3	4	5
26.	I prefer not to depend on my child.	1	2	3	4	5
27.	I know that my child will be there when I need her/him.	1	2	3	4	5
28.	I worry about having my child not accept me.	1	2	3	4	5
29.	My child often wants me to be closer than I feel comfortable being.	1	2	3	4	5
30.	I find it relatively easy to get close to my child.	1	2	3	4	5

RQ1: GENERAL RELATIONSHIP QUESTIONNAIRE 1

NAME:

ADDRESS

The following questionnaires are about your **close relationships in general**, that is, your relationships with family, friends etc.

Below are descriptions of **four general relationship styles** that people often report.
Please read **each** description and **circle** one that best describes you in your close relationships.
Circle only one letter.

A.
It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

B.
I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

C.
I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D.
I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

RQ2: GENERAL RELATIONSHIP QUESTIONNAIRE

Please read each of the following **relationship styles.** Then, rate **each** according to the **extent** to which you think the description corresponds to your general relationship style. That is, **circle** a number between 1 and 7. (For example, if the description is **very much like** your relationship style, you could **circle** 6 or 7. If it is not **at all like your relationship style, circle** 1 or 2. If it is only **somewhat like** your relationship style choose 3, 4 or 5.)

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me all the time.

Not at all like me			**Somewhat like me**			**Very much like me.**
1	2	3	4	5	6	7

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Not at all like me			**Somewhat like me**			**Very much like me.**
1	2	3	4	5	6	7

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Not at all like me			**Somewhat like me**			**Very much like me.**
1	2	3	4	5	6	7

D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Not at all like me			**Somewhat like me**			**Very much like me.**
1	2	3	4	5	6	7

RSQ: GENERAL RELATIONSHIP QUESTIONNAIRE 3

Please read each of the following statements and **rate the extent** to which it describes your feelings about **close relationships**. Think about all of your relationships, past and present, and respond in terms of how you **generally** feel in these relationships.

		Not at all like me		**Somewhat like me**		**Very Much like me**
1.	I find it difficult to depend on other people.	1	2	3	4	5
2.	It is very important to me to feel independent.	1	2	3	4	5
3.	I find it easy to get emotionally close to others.	1	2	3	4	5
4.	I want to be completely at one with another person.	1	2	3	4	5
5.	I worry that I will be hurt if I allow myself to become too close to others.	1	2	3	4	5
6.	I am comfortable without close emotional relationships.	1	2	3	4	5
7.	I am not sure that I can always depend on others to be there when I need them.	1	2	3	4	5
8.	I want to be completely emotionally intimate with others.	1	2	3	4	5
9.	I worry about being alone.	1	2	3	4	5
10.	I am comfortable depending on other people.	1	2	3	4	5
11.	I often worry that others don't really love me.	1	2	3	4	5
12.	I find it difficult to trust others completely.	1	2	3	4	5
13.	I worry about others getting too close to me.	1	2	3	4	5
14.	I want emotionally close relationships.	1	2	3	4	5
15.	I am comfortable having other people depend on me.	1	2	3	4	5
16.	I worry that others don't value me as much as I value them.					

		Not at all like me		Somewhat like me		Very Much like me
17.	People are never there when I need them.	1	2	3	4	5
18.	My desire to be really close sometimes scares another person away.	1	2	3	4	5
19.	It is very important to me to feel self-sufficient.	1	2	3	4	5
20.	I am nervous when anyone gets too close to me.	1	2	3	4	5
21.	I often worry that other people won't want to stay with me.	1	2	3	4	5
22.	I prefer not to hve other people depend on me.	1	2	3	4	5
23.	I worry about being abandoned.	1	2	3	4	5
24.	I am somewhat uncomfortable being close to others.	1	2	3	4	5
25.	I find that others are reluctant to get as close as I would like.	1	2	3	4	5
26.	I prefer not to depend on others.	1	2	3	4	5
27.	I know that others will be there when I need them.	1	2	3	4	5
28.	I worry about having others not accept me.	1	2	3	4	5
29.	Other people often want me to be closer than I feel comfortable being.	1	2	3	4	5
30.	I find it relatively easy to get close to others.	1	2	3	4	5