THE CHILD ATTACHMENT INTERVIEW:
DEVELOPMENT AND VALIDATION

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The current thesis describes the development of the Child Attachment Interview (CAI), a new measure for the assessment of attachment representations in eight to twelve year olds.

The first part of the thesis presents an historical review of the foundations of attachment theory and examines recent theoretical and empirical developments within the attachment field. The measurement of attachment across the life cycle is subsequently presented and critically evaluated in light of empirical findings, highlighting the "measurement gap" in the assessment of attachment in middle childhood. A review of developmental considerations in the assessment of attachment in the aforementioned age range forms the theoretical and empirical foundation upon which the development of the CAI is subsequently described and piloted.

The second part of the thesis concerns the development of, and refinements to, the CAI protocol and classification system. Operational criteria for the identification of central narrative dimensions and guidelines for the classification of attachment patterns are presented. The study of the psychometric properties of the CAI follows with an examination of aspects of reliability including inter-rater and test-retest reliability. The validation of the CAI is subsequently determined focusing upon criterion, discriminant, predictive and concurrent validity.

The findings indicated that the CAI constitutes a reliable and valid measure for the assessment of attachment in the eight to twelve years age range. High inter-rater reliability was demonstrated across several samples and judges, in addition to satisfactory test-retest reliability. Attachment security constituted a significant predictor of clinical status and whilst it was not significantly associated with expressive language competence or intelligence, it was moderately associated with behaviour problems. Concordance with maternal attachment status, attachment

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security assessed concurrently and stability over a three-year period were finally demonstrated.

In the final chapter, the findings are discussed and limitations and consideration of the study are presented. The thesis concludes with a discussion of the theoretical and empirical implications of the study and considerations of future directions in the development and validation of the CAI.
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CHAPTER 1. THE FOUNDATIONS OF ATTACHMENT THEORY

Over the last few decades Bowlby’s (1969; 1973; 1980) attachment theory has generated a considerable body of literature examining the nature of attachment relationships, their stability, and the processes by which they are maintained. The appeal of attachment theory lies in its integration of concepts and ideas borrowed from diverse disciplines whilst remaining faithful to psychoanalytic theorising and in its compatibility with the principles of science. In the following sections, an outline of the historical development and central tenets of attachment theory is presented.

1.1 THEORETICAL BACKGROUND

Perhaps the first central point at which Bowlby’s theorising diverges from traditional psychoanalytic object relations theories is in the emphasis placed upon the external environment and the family system. Whilst Bowlby’s training was grounded in the object relations school of thought, in particular Kleinian, in which children’s emotional difficulties were viewed as originating from fantasies and intra-psychic conflicts between aggressive and libidinal drives, Bowlby considered the external reality and family environment to be at the root of emotional disturbance.

Bowlby’s (1951) first empirical study examined 44 cases of maladjusted children in which their manifest symptoms could be explained in terms of histories of maternal deprivation and separation. These findings were additionally supported by extensive naturalistic observations of hospitalised and institutionalised children separated from their parents. Based on these observations, Bowlby (1959) contended that the traditional object relations theories could not explain the intense attachment of children to their mother and their striking responses to separations. He further identified three phases of separation responses; protest, despair, and denial or detachment, which were subsequently also described in the behavioural responses of infants in the Strange Situation procedure (Ainsworth, Blehar, Waters, & Wall, 1978).
As alluded to above, attachment theory draws upon concepts from embryology, ethology, control systems theory and cognitive science (Bretherton, 1985). In his thinking, Bowlby was influenced by the concept of critical periods in embryology to clarify the role of the mother in the development of the child. He stated, “If growth is to proceed smoothly, the tissue must be exposed to the influence of the appropriate organiser at certain critical periods. In the same way, if mental development is to proceed smoothly, it would appear to be necessary for the undifferentiated psyche to be exposed to the influence of the psychic organiser - the mother” (1951, p53). Bowlby thus suggested that the child’s capacity for self-regulation develops initially through the mother performing these regulatory functions, the mother as a “psychic organiser”. The mother is thought to, “Orient him (the child) in space and time, provides his environment, permits the satisfaction of some impulses, restricts others. She is his ego and his superego. Gradually he learns these arts himself, and as he does, the skilled parent transfers the roles to him” (1951, p53). Bowlby’s underlying supposition was that a mother’s inability to fulfil this function at a critical period would lead to maladaptive development of self-regulation in the child. He thus concluded that, “The infant and young child should experience a warm, intimate, and continuous relationship with his mother (or permanent mother substitute) in which both find satisfaction and enjoyment” (1951, p13). Bowlby (1988) however later revised the notion of critical periods to explain the effects of maternal deprivation in favour of a model whereby individuals can progress along one of several potential developmental pathways. A myriad of contextual and relational factors will ultimately determine which pathway is followed (Rutter, 1989).

The influence of ethology is also evident in Bowlby’s attempts to draw parallels between imprinting as observed in animal species in critical periods and human attachment behaviour. Lorenz's (1935) observations of imprinting in geese and other precocial birds provided a good example of the formation of a social bond as a primary function with feeding as secondary. Ascribing primacy to proximity-seeking instinctual behaviours, Bowlby also rejected the psychoanalytic view in which need satisfaction was seen as primary and attachment as secondary. Attachment was
hence attributed a primary function and attachment behaviour was conceptualised as a motivational system, distinct from other motivational systems.

Whilst retaining Freud's (1953) concept of instincts, Bowlby (1958) conceptualised infant attachment behaviours such as those of sucking, clinging, following and smiling, as instinctual responses serving to form a bond between mother and child. The child's signals of proximity-seeking were considered by Bowlby to be activated in the service of calling forth caregiving behaviour and whilst these responses were initially activated indiscriminately, they were to become integrated and preferential to the maternal figure in the second half of the first year of life.

Further, Bowlby drew a distinction between attachment and social learning theory's concept of dependence. Two distinct differences between the approaches are noteworthy. Unlike dependence, attachment is not considered a personality trait but rather emphasises the relational nature of the bond to a preferred other. In addition, attachment behaviour, as distinct from dependence, is attributed a biological function of protection and hence survival and therefore put forward as a rival to other biological-motivational systems. Bowlby (1969) thus argued that the, "Behavioural equipment that protects from predators is of an importance co-equal to that of equipment that leads to nutrition or reproduction" (p226).

Bowlby (1973) subsequently defined the attachment of an infant to its primary caregiver as a bond developed with some other differentiated and preferred individual who is usually conceived as stronger and/or wiser. Bretherton (1985) points out that attachment as conceived by Bowlby was not meant to encompass all aspects of the parent-child relationship. Rather it refers to those aspects of the relationship pertaining to the regulation of the attached person's sense of felt security. The term attachment is therefore not synonymous with the term "social bond". The role of the attachment figure as a playmate is thus considered conceptually distinct from that of the caregiver. Whilst both are considered important, attachment in the narrow sense pertains to the latter.
1.2 THE ATTACHMENT BEHAVIOURAL SYSTEM

Because attachment holds a unique meaning and has a clear function, attachment behaviour was also defined in rather narrow terms as any form of behaviour that serves to attain or retain proximity to an attachment figure (Bowlby, 1979).

Two classes of behaviours were described by Bowlby (1973), those that serve to promote proximity to the attachment figure, and exploratory behaviours. These behaviours were considered conceptually distinct, antipathetic and governed by separate control systems. The notion of homeostasis or balance between the two systems is central to attachment theory and as Bowlby (1973) posited, children and adults alike are guided by the motivation to maintain homeostasis between attachment behaviour that is called forth when a sense of felt security is threatened, and exploratory behaviour when the threat of danger is lifted. In a similar vein, Ainsworth (1982) suggested that the two systems are mutually inhibitive but mutually facilitative. Thus, when the infant experiences a sense of felt security, he/she is able to explore and respond to stimulation from the external environment and consequently develop autonomy. Conversely, when felt security is threatened, the infant will withdraw and seek comfort from, and refuge in, the attachment figure as a “secure base”.

The notion of a secure base has a long history and can be traced back to security theory (Blatz, 1940). The central tenet of security theory is that, “Infants and young children need to develop a secure dependence on parents before launching out into unfamiliar situations” (Bretherton, 1992). This assumption is reflected in both Bowlby’s and Ainsworth’s formulation of the infant’s need for a secure base from which to explore the environment. The observed behaviour of children is viewed as the outcome of the interplay of the attachment and exploratory systems (Bretherton & Ainsworth, 1974).

Bretherton (1985) elucidated further the operation of the attachment system by suggesting a continuously active system, that is, never idle, which functions to
regulate a sense of felt security through the active appraisal of incoming sensory information. In line with the notion of attachment serving a protective function, events that are continuously monitored and appraised fall into two classes; those that indicate the presence of danger or stress, and those concerning the location and accessibility of the attachment figure. The outcome of the process of appraisal will determine the presence or absence of a threat and therefore whether proximity-seeking is called for. In reaching a decision the attachment system draws on the internal working models (IWMs) of the environment, the attachment figures and the self. For example, when incoming event information suggests no threat and sense of felt security is high, the set goal of the system is to explore the environment. However, when the environment is perceived as threatening, the “set goal” of the system may change and proximity-seeking behaviour will be activated. Bretherton (1985) in addition noted that, “Conflicted behaviour emerges when the exploratory system evaluates a stimulus as highly attractive while the fear system evaluates the same stimulus as threatening” (p11). Such behaviours can be observed when the attachment figure displays frightened or frightening behaviour.

### 1.3 THE ONTOGENY OF ATTACHMENT

Concurrent with his formulation of the nature and function of the attachment behavioural system, Bowlby (1969) described a large number of behavioural systems including fear/wariness, exploration, and sociable systems (Marvin & Britner, 1999). As noted previously, the maintenance of a complex balance between the abovementioned behavioural systems is fundamental in promoting the infant’s or child’s development of more sophisticated coping skills within a protective bond to the attachment figure. To illustrate, when the infant’s attachment and/or wary behaviours are minimally activated, its exploratory and/or sociable behaviour can be readily activated. When however, activation of the wary system occurs, this leads to the termination of exploration and sociable systems and in turn the activation of the attachment behaviour system.
Building on ideas from ethology, Bowlby (1969) proposed that behavioural systems differ both in their function and in their structural complexity. A step above simple reflex is “fixed action pattern” which is a highly stereotyped behaviour activated and terminated by specific stimuli whilst making use of feedback from the environment during its execution. Many of the basic attachment behaviours described by Ainsworth (1967), such as grasping, smiling and crying, can be considered fixed action patterns (Marvin & Britner, 1999). However, fixed action patterns are not “goal-directed”, purposeful on the part of the infant, but rather have in Bowlby’s terms a “predictable outcome” as long as the behaviour is executed in an environment similar to the one in which it has evolved. A more complex and sophisticated pattern of behaviour is a “goal-corrected” pattern. Goal-corrected behaviours also have activating and terminating conditions, and predictable outcomes although, outcomes are achieved through a more sophisticated process of appraisal and choice from a repertoire of behaviours that progressively bring the child closer to achieving the set goal, that is, proximity to the attachment figure. In order to engage in goal-corrected behaviour, the child must hold a complex and dynamic, internal representation of relevant aspects of the self, his/her behaviour, the environment, and the object or person toward whom the behaviour is directed. When a goal-corrected behaviour such as moving toward the caregiver in order to make physical contact is activated, the child continuously orients his/her behaviour and selects alternative behaviours, based in part on the feedback received from the effects of the behaviour. When the set goal is achieved, the perceived discrepancy between the set goal and the organism’s state is reduced to zero, and the behavioural plan terminates (Marvin & Britner, 1999).

In delineating the development of the attachment behavioural system, Bowlby (1969) proposed four phases briefly summarised below.

**Phase I: Orientation and Signals with Limited Discrimination of Figures**

Very soon after birth, babies show a propensity to respond to stimuli in a way that increases the likelihood of continued contact with other humans and use signals that
call forth the predictable outcome of caregiving behaviours including proximity, physical contact and warmth. However, during this phase infant discrimination ability is relatively poor and their IWMs are very simple and limited to experiences associated with the activation and termination of behaviours that are not as yet internally connected. In addition, in Phase I the attachment figure assumes most if not all responsibility for the maintenance of proximity and the protection of the infant. The initial interchange between the caregiver and infant lays the foundations upon which more stable patterns of interactions are established, with the result being a decrease in attachment behaviours such as crying, giving way to other behaviours such as smiling and visual orientation. Bowlby (1969) postulated that under favourable conditions Phase I lasts from birth to eight to twelve weeks of age.

**Phase II: Orientation and Signals Directed Towards One or More Discriminated Figures**

Marking the transition from Phase I to Phase II is the increasingly complex nature of behaviour systems. Simple behaviour systems thus become integrated into complex, chain-linked behaviour systems so that for instance, the infant’s visual system begins to activate the behaviour of reaching for an object (Marvin & Britner, 1999). Equally important is the shift from attachment behaviours that are directed fairly indiscriminately to the infant’s increased differentiation between the caregiver and others. Although differentiation becomes more developed during this phase, the infant has not yet developed a conception of the attachment figure as someone with a separate existence. Further, the infant assumes more responsibility for gaining and maintaining contact with attachment figures manifested in an increase in the initiation of attachment-caregiving interactions with the primary caregiver. Marvin and Britner (1999) suggest that it is during Phase II that differential patterns of attachment begin to emerge as captured in separation-reunion procedures\(^1\) conducted from twelve months of age.

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\(^1\) Separation-reunion procedures such as the Strange Situation procedure in infancy are reviewed in detail in Chapter 2.
Bowlby (1969) hypothesised that Phase II lasts from twelve weeks to six months but may be extended depending upon circumstances.

**Phase III: Maintenance of Proximity to a Discriminated Figure by Locomotion and Signals**

Phase III of the development of the attachment behavioural system is characterised by significant motor, cognitive and communicative changes (Marvin & Britner, 1999). The onset of locomotion ushers in a period of increasing exploration and an increased ability to control proximity to the attachment figure. Concurrent with the above change, the infant’s cognitive skills are further consolidated with an increased ability to internally operate on available behaviours, select behaviours that are likely to result in the achievement of a set goal, execute the plan, modify it as a function of feedback, and finally terminate the plan when the discrepancy between the set goal and the infant’s perception of his/her position is reduced to zero (Marvin & Britner, 1999). The infant is thus beginning to be able to organise attachment behaviour on a goal-corrected basis. Further, during this phase, the infant repertoire of goal-corrected communicative signals is expanded allowing the infant to more effectively regulate the behaviour of others. Although it is during Phase III that the infant is thought to have developed separate IWMs of caregivers and of the self that are ordered in a hierarchical manner, these IWMs remain fairly primitive in that they are limited to an understanding of the self and attachment figures only in terms of behaviours. In addition, increased wariness of unfamiliar adults is also considered a hallmark of Phase III. Bowlby (1969/1982) argued that the consolidation of infant-caregiver attachment during Phase III constitutes a sensitive period wherein the infant is ready to focus attachment behaviour and IWMs of attachment on one or a few familiar figures. It is during this phase that the dynamic balance between the four behavioural systems previously noted fully emerges as manifest in what Ainsworth (1990) considered the hallmark of an attachment; the infant’s use of the attachment figure as a secure base from which to explore. Bowlby (1969) suggested that Phase III begins at approximately six months and continues throughout the second year and into the third.
According to Bowlby (1969), during Phase IV a consolidation of the goal-corrected partnership occurs manifested in the preschooler’s increasing understanding that the attachment figure’s behaviour is organised around her own set goals with the implication that the preschooler is acquiring insight into his/her attachment figure’s feeling and motives. This new insight underpins the child’s ability to inhibit certain attachment behaviours and to insert the attachment figure’s plans into his/her own plans for proximity. The process begins with fairly primitive goal-corrected plans for changing the attachment figure’s behaviour (e.g. pushing the caregiver in certain directions) and becomes more sophisticated as the child’s conversational skills and his/her ability to inhibit certain behaviours develop. These changes thus afford the child increasingly to integrate his/her own goals, plans, and behaviour with those of the attachment figure. By the fourth year, with the newly developed ability internally to operate simultaneously on both his/her own perspective and that of the attachment figure, the child is able to function within a relationship that is no longer so dependent upon physical proximity. The child’s IWMs of the self and of attachment figures have developed so that he/she can maintain in a goal-corrected manner a relationship that is based upon shared goals, plans and feelings (Marvin & Britner, 1999). As Bowlby (personal communication, 1987, cited in Ainsworth, 1990) argued, once the ability to maintain the goal-corrected partnership has been achieved, the set goal shifts from the maintenance of physical proximity or contact to an appraisal of the attachment figure’s availability should a need arise. Availability then becomes the set goal for older children and adults alike.

1.4 INTERNAL WORKING MODELS

1.4.1 The Development of Internal Working Models

Perhaps the most important and central concept to attachment theory was that of internal working models (IWMs). However, as Bretherton (1991) emphasises, Bowlby (1969/1982) applied the notion of the working model to representations
more generally and not exclusively to IWMs of the self in relation to attachment figures. Bowlby (1973) drew parallels between the concept of IWMs and phenomena that have traditionally been referred to as “introjection of a good or bad object” and “self-image”. He further (1973; 1980) advanced that IWMs of the self and attachment figures are actively constructed in the course of repeated interpersonal interactions. With the acquisition of locomotion, infants increasingly interact with the external world, and it is these interactions which give rise to the development of IWMs of increasing complexity. Further, as Main, Kaplan and Cassidy (1985) suggested, IWMs of the infant-parent relationship are based upon, “A history of the infant’s actions, infant-parent interactions, and the fate of the infant’s ‘attempts and outcome’, that is, the fate or outcome of the infant’s efforts and intentions to regain the parent even in the parent’s absence” (p75). This conceptualisation is consonant with Piaget’s (1954) view of sensori-motor development, in which the child’s understanding of the world and his/her development and organisation of schemes is based upon interactions with, and actions on, persons and objects. Bowlby (1973) repeatedly stressed the role of actual experience postulating that, “The varied expectations of the accessibility and responsiveness of attachment figures that different individuals develop during the years of immaturity are tolerably accurate reflections of the experiences those individuals have actually had” (p235).

In the early development of IWMs, representations of the self and attachment figures are closely tied and thus are assumed to form a single representation of the relationship. The development of self-regulation marks the development of distinct and yet complementary and mutually confirming IWMs of the self and attachment figures (Bretherton, 1985). For example, a child who constructs IWMs of attachment figures as unloving and rejecting will in turn hold a model of the self as unloved and unworthy. By contrast, a child who holds IWMs of attachment figures as loving and sensitive to his/her needs will in turn hold a complementary model of the self as worthy of love. The infant thus develops individuated and complementary IWMs for each important attachment relationship. In keeping with the notion of complementary IWMs of the self and attachment figures, Sroufe and Fleeson (1986)
proposed that through repeated dyadic interactions, the child internalises both sides of the relationship. IWMs thus capture the dynamic interaction between the infant and the external world and are actively constructed and reconstructed (Bretherton, 1985).

1.4.2 The Function of Internal Working Models

In his formulation, Bowlby (1979) maintained that organisms of varying complexity regulate instinctual behaviours in distinct ways. As noted earlier, at the simplest level, reflex-like fixed action patterns are regulated and in the most complex organisms instinctive behaviours may be goal-corrected with continual adjustments. These complex behavioural systems can function with foresight in organisms that have evolved an ability to construct IWMs of the environment and of their own actions in it (Bretherton, 1992). Craik (1943) informed Bowlby’s conceptualisation of IWMs by arguing that, “If the organism 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 future and in every way to react in a much fuller, safer and more competent manner to emergencies which face it” (p61). In keeping with Craik’s (1943) notion, Johnson-Laird (1983) suggested that working models have a protective function in that they permit the organism “insightful and foresightful behaviour” (Bretherton, Ridgeway, & Cassidy, 1990). Their adaptational role necessitates that they closely mirror aspects of the world they represent so that they imitate the “relation-structure” (Craik, 1943) of the event they represent. It therefore follows that adaptive IWMs are those that afford the organism accurate prediction of the future, and those that have not been updated may lead to maladjustment. The development of IWMs is therefore considered as an inherent part of the development of the attachment system and plays a pivotal role in guiding behaviour and expectations.
1.4.3 The Nature of Internal Working Models

Main et al. (1985) further elucidated the nature of IWMs 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 regarding attachment-related experiences, feelings and ideations” (pp66-67). It is those rules that have been the subject of considerable theorising both within and without the attachment field.

The concept of an internal working model is by no means novel and is shared in common with other psychological theories. Theories of event representation have been particularly influential in considering the nature and properties of IWMs. Representational processes are postulated to be governed by what Mandler (1979) and Nelson and Gruendel (1981) termed “event schemata” and Schank and Abelson (1977) termed “scripts”. These are considered to contain abstracted information concerning repeated similar events. The idea is that on the basis of similar experienced episodes, for example, being breast fed, the infant begins to form a generalised episode or memory that contains expectations of how similar events are likely to unfold. As Stern (1985) points out, the generalised episode does not constitute a memory for a specific episode but is an abstraction of multiple similar and yet slightly different specific events. Schank (1982) subsequently argued that multiple interconnected hierarchies of schemata that are graded from the very general to the very specific are constructed and continually reconstructed and revised in accordance with new incoming information. Existing schemata govern the manner in which new experiences are processed and will determine whether new schemata are required when unfamiliar events are encountered and repeated. The information from existing schemata will be fed into other structures that represent generalised event information concerning agents, actions, intentions, goals and emotions (Bretherton, 1985).

Similarly, Nelson and Gruendel (1981) termed the above general schemes Generalised Event Structures (GESs) and viewed them as the basic building blocks of cognitive development and autobiographical memory. More recently, Nelson
(1996; 1999) coined the term Mental Event Representation (MER) to describe how a sequence of everyday actions that are situated in a particular time and place are represented in a generalised form and are implicit and thus not accessible to conscious reflection and manipulation. She suggested that through language or verbal construction, implicit knowledge can be made more explicit and transformed or distorted.

In a similar vein, Stern (1985) proposed that what the infant’s developing representational world is concerned with are episodes that involve interpersonal interactions of different types which he termed Representations of Interactions that have been Generalised (RIGs). He contended that RIGs are flexible structures that capture several actual instances and form a prototype or average to represent them all. Stern suggested that RIGs could be conceived of as the building blocks from which IWMs are constructed.

Borrowing from Piaget (1954), the generalised nature of IWMs implies that new information is primarily assimilated into existing working models and that accommodation will only occur in cases where incongruence is clear. As noted earlier, the updating of IWMs is central in order not to compromise the relation-structure of the model to the external reality and consequently endanger the power of prediction it affords (Bretherton et al. 1990). In the course of adaptive development both external factors and cognitive development lead to the restructuring of, and necessary change to, existing IWMs.

1.4.4 Multiple Internal Working Models

As a way of explaining some forms of psychopathology, Bowlby (1973) introduced the term “multiple models” to refer to IWMs that are incompatible and contradictory and further suggested that the formation of multiple models was the result of unfavourable interactions with attachment figures. Early inconsistent and unsupportive attachment relationships were thought to underlie the child’s construction of two incompatible models, for instance, one model that is conscious
and thus accessible, representing the parent as loving and emotionally available, and another model, excluded from conscious awareness, that represents the parent as rejecting and unavailable (Bretherton, 1999). As Main (1991) pointed out, the term multiple models is not intended to capture the organisational hierarchy of models or the diversity of models constructed to represent aspects of reality that would be expected within individuals, but rather refers to the existence of contradictory models representing the same aspects of reality.

Bowlby (1973) further suggested that it is the fairly “primitive” model that has been constructed during an individual’s early years that exerts the greatest influence on his/her perceptions and predictions and thus guides his/her feelings and behaviour in a largely unconscious way. Simultaneously, a second more complex model that develops later and stands in contradiction to the early model, is much more accessible to conscious awareness and is mistakenly presumed to be the one guiding thoughts, feelings and behaviour.

In Bowlby’s (1988) later formulation, multiple models were also assumed to arise out of intra-psychic conflict between events that have been witnessed or heard, and the parent’s denial or distortion of the same traumatic event or interaction. In support of his hypothesis, Bowlby (1988) cited a study by Cain and Fast (1972) in which children’s psychiatric disturbances were explained as originating from the contradiction between witnessing one of their parent’s suicide and the surviving parent’s pressure to believe that the death was the result of an illness or accident.

In his attempt to further elucidate the development of multiple models, Bowlby (1980) drew upon Tulving’s (1972) distinction between semantic and episodic memory. Episodic memory was conceptualised as memory that contains real life experiences, autobiographical events that include perceptions, affects and actions, as distinct from semantic memory that refers to general knowledge that may be abstracted from direct experiences or acquired through instructions by others. Bowlby (1980) postulated that in response to inconsistent caregiving, some children may defensively exclude or restrict access to their autobiographical memories of
traumatic events, but maintain conscious access to parental verbal accounts that are stored in semantic memory.

1.5 RECENT THEORETICAL DEVELOPMENTS IN THE STUDY OF ATTACHMENT

The study of attachment during the period of infancy has in the last two decades provided a foundation for an emerging literature focusing upon attachment processes throughout the life span. Whilst considerable theoretical developments linked to methodological advances have been made, the current review only provides a very broad sketch of some of the central contributions to date, taking an historical perspective.

Amongst the most important contributions to the study of attachment beyond infancy has been what Main et al. (1985) termed the shift to the “level of mental representations” and the development of an interview-based method for identifying the parent’s state of mind with respect to attachment known as the Adult Attachment Interview (AAI: George, Kaplan & Main, 1985). Until that time, the study of attachment was dominated by examination of non-verbal behaviour as reflecting individual differences in parental caregiving. The shift to the study of representational processes coupled with the focus upon discourse processes has resulted in an extensive body of literature indicating significant correspondence between parent’s attachment status and their infants’ patterns of attachment behaviour. Furthermore, it has paved the way for the study of representational processes in early and middle childhood.

A further important development in the study of attachment has been the growing interest in the transformation, development and function of attachment in early childhood. Guided by the assumption that bonds formed in infancy will persist into the preschool years and beyond, a large body of work has concerned the stability and change of attachment relationships. The dominant approach has been one of

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2 The Adult Attachment Interview and related findings are presented in Chapter 2.
using the infant attachment patterns as the basis for the assessment and description of patterns of attachment at later ages (e.g. Cassidy & Marvin, 1989; Main & Cassidy, 1988). Crittenden (1992; 1995; 2000) has put forward an alternative model arguing for a dynamic interaction of maturation, with experience, leading to both change and continuity in patterns of attachment. In keeping with Bowlby (1973) and drawing on an information processing approach, Crittenden (1995) proposed that patterns of infant attachment be viewed as patterns of mental processing of information based on cognition and affect. Whilst Secure children are balanced with respect to the use of affect and cognition, Avoidant children depend heavily on cognition to the exclusion of affect, and Ambivalent children use a coercive strategy based predominantly on affect. Crittenden (1995) further postulated that changes in IWMs during the preschool years reflect the, “Increasingly sophisticated integration of affect and cognition in which both the causal relation between other people’s behaviour and one’s own feelings and also the communicative/predictive effect of affective signals on other people’s behaviour are recognised” (p372). Changes brought about by cognitive and affective maturation would according to Crittenden (1995) lead to lawful changes from one pattern and sub-pattern to another, in addition to changes in the array of possible strategies at each age under consideration.

An additional and exceedingly significant contribution to the study of attachment in infancy and beyond has been the study of attachment disorganisation. Bowlby (1973) postulated that defensive exclusion of attachment becomes more or less complete when the child’s attachment system and the feelings associated with it are strongly and chronically activated but not assuaged. Under such conditions an extreme and pathological form of exclusion, which functions to separate attachment information from consciousness, emerges. Building on his concept of multiple models, Bowlby termed these defensive processes “segregated systems” and proposed that they develop in response to separation from or loss of the attachment figure as well as punishment for the display of attachment behaviour and associated feelings.

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3 A fuller description of Crittenden’s (1992) attachment assessment for preschoolers is presented in Chapter 2.
Based upon extensive observations of separation-reunion behaviour patterns in infancy and early childhood, Solomon and George (1999) highlighted three sources of evidence in support of Bowlby’s (1973) notion of segregated systems: (i) the marked absence of attachment behaviour in circumstances where such behaviour would be expected, especially when active suppression of attachment behaviour, representations, and related affect is evident; (ii) out-of-context, dysregulated, and unpredictable attachment behaviour, representations and affect; (iii) the alternation of these two states.

In keeping with Bowlby’s (1973) formulation of defensive processes underlying disorganised attachment status in infancy, Main and Hesse (1990; 1992) proposed comparable defensive processes manifest in the verbatim responses of parents as revealed in their attachment related narratives. Parents who enter altered states of consciousness, such as dissociative states, either during discussions of trauma and/or loss, or during the Strange Situation procedure, have a proclivity to engage in inexplicably frightening and/or frightened behaviour with their child. The caregiver who simultaneously becomes the source of comfort and the source of the alarm leads to the infant experiencing inherently contradictory tendencies to both approach and flee from the caregiver resulting in what Main and Hesse (1990) described as “fright without solution” due to the attachment figure being “at once the source of and the solution to alarm” (p163). Under such paradoxical conditions a collapse of behavioural and attentional strategies will inevitably occur whereby the infant is likely to exhibit interrupted, mistimed and/or incomplete movements and expressions (Lyons-Ruth & Jacobvitz, 1999).

By way of elucidating further Main and Hesse’s thesis concerning the etiology of disorganisation, Solomon and George (1999) suggested that it is not only the presence of frightened/frightening behaviour that leads to the infant developing a disorganised attachment pattern, but of paramount importance is whether the attachment figure engaged in reparative behaviour once she has intentionally or inadvertently frightened the child. They suggest that mothers of disorganised children may be distinguished from mothers of children who show organised
attachment behaviour by their failure to “repair” their errors and thus by their “failure to terminate” the attachment system (Solomon & George, 1999). They conceptualise this failure to terminate as a form of maternal abdication of caregiving that may take one of two forms; controlling or helpless.

In keeping with Main and Hesse’ hypothesis of frightened/frightening behaviour and Solomon and George’s notion of the absence of reparation, Lyons-Ruth, Bronfman and Atwood (1999) have argued that unbalanced affective communications in the form of hostile or helpless infant-caregiver relationships constitute a primary source of dysregulated fearful arousal for the infant that is not resolved in the absence of favourable changes in the caregiving environment or significant new relationships. The general failure to respond to the infant’s attachment signals constitutes a failure to repair the relationship under stress and such a failure does not allow the infant to develop an organised or coherent attachment strategy. The caregiver’s own unresolved fear and the absence of an experience of comfort and safety coupled with her infant’s pain and fear will evoke her own unresolved fear and in turn will provoke fear in her infant. The caregiver will be unlikely to monitor and respond to her infant’s fear related attachment signals. To the extent that the parent’s regulation of affect related to her own unresolved fearful experience takes precedence over the modulation of fear-related affects in the infant, the interaction between parent and child becomes less balanced and regulated to meet the needs of both. Lyons-Ruth et al. (1999) suggested that inherent in a model of unbalanced relationships is an asymmetry of power in which one partner’s attachment-related initiatives are elaborated at the expense of the other’s initiatives. Hence, by definition one partner is more helpless in the relationship and the other more controlling of the relationship. The manner in which control may be exerted can range from active aggression through more subtle withdrawal, guilt-induction or self preoccupation. Lyons-Ruth et al. (1999) further proposed that the early existence of a hostile-helpless relational diathesis should predict inter-generational transmission of disorganised attachment patterns whether or not later loss or trauma occurs in the infant’s life.
A somewhat different formulation to the notion of disorganisation was propounded by Crittenden (1992; 1995). Adopting a dynamic-maturational approach, Crittenden (2000) suggested that maturation allows children to form more accurate internal representations and facilitates the reorganisation of internal representations that underlie more effective behavioural strategies. Crittenden (1992) further postulated that IWMs undergo continuous reorganisation as experiences and maturation interact to create new possibilities for perception, integration, and response. This is partly manifested in children who become increasingly aware of discrepancies between their IWMs of attachment figures and their attachment figures’ actual behaviour. Within secure relationships, children are better equipped to discover such discrepancies and reconcile new information with existing IWMs. However, for anxiously attached children, the process of revising existing models is likely to be more difficult due to both the degree of the discrepancy between model and reality, and the lack of experience with the process of integration. Crittenden (1995) suggests that in the process of revising existing models, both behaviour and internal representations may become disturbed reflected in children’s confused and uncertain behaviour. Such signs have been associated with the notion of disorganisation identified in infancy, preschool, and early school years. However, rather than viewing behaviours such as stilling or dazed expressions as indicative of disorganisation, Crittenden (1995) suggests that these behaviours reflect a developmental process of reorganisation. When children cannot control their behaviour and seem to be caught between inconsistent and often contradictory models that cannot be reconciled or integrated into a single model, disorganisation may constitute an appropriate explanation (Crittenden, 1992).

1.6 CONCLUSIONS

In his formulation of the bond between infants and their mothers, Bowlby incorporated ideas from diverse disciplines including embryology, ethology, control systems theory and cognitive science. He placed great emphasis upon the role of the mother as a “psychic organizer” in the development of the child and further emphasised the primacy of attachment as having a biological function co-equal to
other need satisfaction. Bowlby proposed that whilst initially fairly simple and non-discriminant instinctual responses of infants (e.g. following and clinging) function to attain and maintain a bond between mother and child, with development, they become increasingly complex and preferentially directed towards a particular attachment figure.

Within the attachment behavioural system, two classes of behaviours were identified by Bowlby; those that function to promote proximity to the attachment figure and call forth caretaking behaviour, and exploratory behaviours. The attachment system was subsequently described as a continuously active system which functions to regulate a sense of felt security and maintain homeostasis between these two conceptually distinct behaviour classes (Bretherton, 1985). Bowlby (1973) further postulated that through repeated interaction with attachment figures, complementary IWMs of the self and attachment figures develop. These models were thus conceptualised as actively constructed and reconstructed based upon interaction with attachment figures, having a central protective function for the individual and once organised, tended to operate outside conscious awareness and be resistant to change. The development of increasingly sophisticated IWMs further consolidates the emergence of the goal-corrected partnership between the child and the attachment figure allowing for the negotiation of plans and goals of both partners to occur.

More recent theoretical and methodological developments have extended the study of attachment, including the study of representational processes in adulthood, to the methodological and theoretical advances in the study of attachment in the preschooler, and in particular, the study of attachment disorganisation.

In the next chapter, measures developed in order to assess attachment across the life span will be presented along with a critical review of the psychometric properties of each of them.
CHAPTER 2. THE MEASUREMENT OF ATTACHMENT ACROSS THE LIFE CYCLE

Taking an historical perspective, this chapter will present an outline of current measures for the assessment of attachment patterns. Forms of assessment in infancy are presented focusing upon behaviourally derived instruments followed by a review of representational and behavioural assessment measures that have been widely employed in the study of attachment patterns beyond infancy. In the final section, conclusions are drawn concerning the reviewed measures in light of findings pertaining to the psychometric properties of each of the measures.

2.1 ATTACHMENT MEASURES

Attachment theory has been viewed as an appropriate theoretical framework for guiding research and as such has been the impetus for the development of measures intended to examine the way in which internal working models (IWMs) are manifested both in infancy and beyond (Ainsworth, 1990). Over the past two decades, the task for researchers has been the development of age appropriate measures, grounded in the principles of attachment theory, and with the aim of examining how attachments manifest themselves at each of the ages under investigation. In infancy, attachment status has been assessed through observations of behaviour patterns both in the presence and absence of parents. As the focus of study of attachment patterns has been extended beyond infancy, so a parallel shift has also occurred in the approaches to the measurement of attachment. In considering children's natural development and their growing social, cognitive and language skills, measures of attachment have moved from behaviourally derived classification systems to representational assessments that are based upon language.

Three strands of research have consequently emerged. The first constitutes a normative approach focusing upon the influence of developmental change on the nature of attachments, in particular during the transition from Bowlby’s (1969) third phase to the fourth phase of the formation of attachment. This fourth stage is
characterised by the development of goal-corrected partnerships, and is considered as developing in the preschool years. Under investigation within this approach have been changes in attachment as a consequence of developmental change and the study of the influence of major events in children's natural environment referred to as "crises of transition" (Marvin & Stewart, 1990).

The second approach has focused upon the correlates of attachment guided by the principle that IWMs influence subsequent development, as reflected in individual differences in response to phase-specific tasks.

The third and final approach concerns the continuity in attachment patterns and thus the manifest similarities in attachment organisation across time, guided by the principle that IWMs are relatively stable and once formed are resistant to change.

The current review is concerned with the latter and hence is not intended as an exhaustive review of attachment measures to date. Rather it presents those measures which have been employed in the study of individual differences in attachment organisation, the stability and predictability of attachment patterns across time, and which illustrate the need for the development of adequate representational measures for the assessment of attachment beyond infancy.

The development of instruments designed to assess attachment focused initially on infancy and subsequently on adulthood, but has only more recently focused on early and middle childhood and adolescence. For the sake of clarity, rather than adopting a developmental perspective the review will present attachment measures in order of historical development.

2.2 ATTACHMENT IN INFANCY

Bowlby's attachment framework formed the basis for the development of empirical instruments for the study of individual differences in attachment organisation as reflected by individual differences in behaviour patterns. The following section
introduces the Strange Situation procedure and presents studies that have addressed the validity, reliability and stability of the measure.

2.2.1 The Strange Situation Procedure

Ainsworth's early detailed observation of mothers and infants in Uganda (Ainsworth, 1963; 1967) and Baltimore (Ainsworth et al. 1978) constituted the foundations for the establishment of a structured laboratory procedure known as the Strange Situation (Ainsworth et al. 1978; Ainsworth & Wittig, 1969). The technique was developed in order to provide a standardised procedure for observing individual differences in the nature of dyadic parent-child interactions and more specifically to examine the strategies that children may employ in maintaining proximity to their parents both in their presence and in their absence. Different patterns of Strange Situation behaviour are assumed to illuminate differences in the way infant-mother attachment has become organised and thus to reflect the infant's IWMs of the self and the attachment figure. Because the Strange Situation constitutes a particularly pertinent and relevant measure to the current thesis, the procedure and corresponding coding and classification system will be described in considerable detail.

The Strange Situation Separation-Reunion Procedure

The Strange Situation consists of eight episodes of separation from and reunion with the parent, presented in a standard sequence and intended to activate or intensify the infant's attachment behaviour through the induction of mild distress. The episodes were chosen because they were postulated to approximate a situation that most infants would have encountered in real life and were ordered in a sequence from least to most stressful (Ainsworth et al. 1978).

Ainsworth (1982) described the procedure thus, "An infant and mother are brought into a comfortable laboratory room; a stranger enters and sits talking to the mother and then to the infant; the mother leaves the room unobtrusively; the mother returns
and the stranger leaves them together; the mother leaves the infant alone in the room; the stranger returns; the mother returns once more. Each of these eight episodes lasts three minutes unless the infant is more than mildly distressed”.

**The Strange Situation Coding System**

In describing normative trends across the four samples reported by Ainsworth et al (1978) three types of measures were recorded: 1) incidence of specific behaviour or combination of behaviours in specific episodes, indicated by the percentage of infants who manifested each; 2) various frequency measures; and 3) special scores for dimensions of interactive behaviour. In addition, classification of infants according to the patterning of their attachment behaviour was employed as a method of assessment that would more readily reveal individual differences in Strange Situation behaviour.

Two types of frequency measures were extracted: 1) simple frequency count of the number of times a particular behaviour was emitted in a given episode used for smiles and vocalisations; and 2) frequency measure based on 15 second time intervals into which the narrative records were divided. In coding Strange Situation behaviour at 15 second intervals, the coding instructions draw a distinction between the infant’s movements that are directed toward objects and thus constitute exploratory manipulations of the immediate environment, and those movements that are directed towards a person and are thus identified as social. The behaviours coded comprised the mode and objective of locomotion including: avoidance behaviour, body movements that do not involve locomotion, body posture in which neither locomotion nor body movements are recorded, hand movements, visual regard and the location of the baby in the room with reference to the squares marked on the floor. In addition, other behaviours for each 15 seconds time interval were recorded and these include: “contact adult” in which the adult action leads to contact with the baby in any time interval; “contact baby” indicating the baby's action in any time interval in which he/she is in physical contact with an adult; six different degrees of crying; “vocalisation” in which the baby emits any vocalisation that is
not considered crying; “oral” that included any oral behaviour such as chewing, mouthing or sucking and finally, the baby's “smiles”. Tabulation of the frequency coding presented above yielded eight measures for each episode of the Strange Situation; exploratory locomotion, exploratory manipulation, visual exploration, visual orientation, crying, smiling, vocalisation, and oral behaviour. As noted above, in addition to frequency measures, scoring of interactive behaviours was undertaken. Of particular importance were those interactive behaviours observed in the reunion episodes that were considered most informative in discerning individual differences in infants' attachment organisation. Six behavioural scales were identified as briefly summarised in Table 2.1.

Table 2.1 Strange Situation Scales

<table>
<thead>
<tr>
<th>Strange Situation Scales</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity/Contact Seeking</td>
<td>The degree to which the infant actively seeks and initiates physical contact or proximity to another person.</td>
</tr>
<tr>
<td>Contact Maintaining</td>
<td>The extent to which the infant actively initiates in order to maintain contact with another person. High ratings are assigned to infants who consistently resist release from the parent in their attempt to maintain close proximity.</td>
</tr>
<tr>
<td>Resistance</td>
<td>The infant’s manifest anger and/or resistant behaviour to an adult. Infants who push or reject the contact offered by an adult and show intense angry behaviour would score high on this scale. Demonstration of resistant behaviour that lacks negative affect would receive a lower score. As Ainsworth et al (1978) note, resistant behaviour is not antithetical to proximity-seeking behaviour and both may be observed.</td>
</tr>
<tr>
<td>Avoidance</td>
<td>The extent to which infants exhibit avoidance upon reunion with parents. Infants who systematically avoid or actively ignore the parent and who continue to play without acknowledging the mother’s presence are rated high on this scale. Infants who mix greeting responses with avoidant type responses such as looking or moving away are given lower scores on the avoidance scale.</td>
</tr>
<tr>
<td>Search</td>
<td>Any behaviour that was initiated in an attempt to regain proximity to the mother in her absence through means other than crying. Infants who score high on this scale typically show active search behaviour such as going towards the closed door and attempting to open it so as to find the mother throughout the separation episode.</td>
</tr>
<tr>
<td>Distant Interaction</td>
<td>The extent to which infants initiate proximity-seeking upon reunion from a distance. Infants who show heightened interest in interacting with the mother through smiling or vocalisation are rated high on the scale.</td>
</tr>
</tbody>
</table>
The Strange Situation Classification System

Based upon ratings on the above scales, a classificatory system was developed yielding three distinct main attachment classifications and further sub-classifications. Main et al. (1985) subsequently identified a further pattern to capture infants who showed separation-reunion behaviour that did not fall neatly within the classification system of the Strange Situation. The four main attachment classifications are presented in Table 2.2.

Table 2.2 The Strange Situation Main Attachment Classifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure (B)</td>
<td>Demonstrate signs of missing the parent in response to separation and actively greet and seek proximity upon reunion.</td>
</tr>
<tr>
<td></td>
<td>If distressed in response to separation, quick to settle upon reunion and will return to exploratory and play behaviour, often involving the parent.</td>
</tr>
<tr>
<td>Avoidant (A)</td>
<td>Display indifference and appear self-contained during separations. Upon reunion, both consistently ignore and avoid the parent or mix avoidance with proximity-seeking behaviour.</td>
</tr>
<tr>
<td>Ambivalent/Resistant (C)</td>
<td>Show strong distress upon separations but are not easily settled or soothed upon reunion and may alternate proximity-seeking with angry rejection or may appear passive. May also demonstrate fear or anger with the stranger.</td>
</tr>
<tr>
<td>Disorganised/Disoriented (D)</td>
<td>Show considerable confusion and behavioural disorganisation upon mother’s return. A mixture of strategies is indicated with some avoidance, some resistance and often frightened behaviour including self-protective gestures, frozen posture and stereotypical movements.</td>
</tr>
</tbody>
</table>

Each of the main classifications as presented in Table 2.2 yield further sub-classifications that capture in a more fine tuned manner distinct attachment strategy. Secure (B) infants can be further assigned to one of four sub-classifications. Infants assigned a B1 sub-classification tend to demonstrate little or no distress during separations but show some avoidance during the first reunion episode giving way to proximity-seeking in the second reunion episode. Infants falling within the B2 sub-classification resemble B1 infants but are more likely to exhibit proximity-seeking
behaviour upon reunion. Infants classified as very Secure (B3) demonstrate heightened attachment behaviour in reunion episodes reflected in active proximity-seeking and contact-maintaining behaviour and show resistance to the mother’s attempts to release them, this being most pronounced in the second reunion episode. B3 infants in addition show little or no signs of avoidance or resistance to interactions with the mother, are easily settled and resume play. Finally, infants falling within the B4 sub-classification show preoccupation in maintaining contact with the mother throughout the procedure and exhibit distress in separation, particularly in the second separation episode. Whilst these infants show strong proximity-seeking behaviour, they also show some resistance and avoidance and therefore give an impression of ambivalence. Secure infants are typically found in 50-60 percent of non-clinical samples and observed relatively less in clinical samples (Fonagy, Steele, & Steele, 1991).

Avoidant (A) infants can be further assigned to one of two sub-classifications. Extremely Avoidant (A1) infants show no distress during separation and conspicuous avoidance, ignoring the mother upon reunion, in addition to little or no contact-maintaining behaviour. Moderately Avoidant (A2) show a combination of moderate proximity-seeking behaviour with strong avoidant behaviour. A2 infants thus show some tendency to greet or approach the mother upon reunion but this is intermingled with a marked tendency to avoid, ignore or move away from the mother. In non-clinical samples, approximately 25 percent of infants are classified as Avoidant, with higher percentages found in deprived samples (Steele & Steele, 1994).

Two further sub-classifications are derived for infants classified as Resistant (C). Whilst infants classified as C1 display high distress in separations and strong proximity-seeking and contact-maintaining behaviour upon reunion, they also show marked angry resistant behaviour towards both mother and stranger. Infants may actively demand contact but fail to be soothed in reunion with anger being a notable characteristic. Unlike the angry quality of C1 infants, C2 infants are distinguished by their passivity upon reunion. Although distressed during separation, upon
reunion C2 infants tend to use signalling behaviour rather than active approach in their attempts to regain proximity to, and contact with, the mother. Resistant behaviour is marked but signs of anger are weak. The distribution of C infants is found to be 10 percent in most samples (Steele & Steele, 1994).

Lastly, the Disorganised/Disoriented (D) classification is assigned together with a best-fitting alternative classification. This classification is shown in a small minority of normative samples (Main & Solomon, 1990), 15-35 percent of low income or moderate risk samples (O'Connor, Sigman, & Brill, 1987), and in approximately 50 percent of low income, high risk and/or maltreated samples (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Lyons-Ruth, Connell, Grunebaum, & Botein, 1990).

2.2.1.1 External validity

Ainsworth et al (1978) conducted a detailed naturalistic study of infant-mother interaction in the home environment in an attempt to examine whether discernible patterns of infant attachment as identified in the Strange Situation were related to behaviour observed in the home environment. Indeed, children classified as Secure in the Strange Situation were readily distinguished from Avoidant and Ambivalent/Resistant infants, in terms of the patterning of behaviour they displayed in the home setting. Moreover, specific classes of Strange Situation behaviour were significantly related to specific classes of behaviour at home, in particular, manifestations of infant-mother conflicts as reflected in resistant and avoidant behaviour. These observed associations have been supported by subsequent findings. For example, Vaughn and Waters (1990) found significant associations between one-year-old’s security of attachment classification and quality of secure-base behaviour at home as assessed by Attachment Q-sort reports of home observations. Similarly, Pederson and Moran (1996) found 84 percent concordance (in distinctions) between two-way, that is, secure versus insecure classifications (B versus A, C, & D) of the mother-infant relationship made at twelve months through home observations and in the Strange Situation.

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4 The Attachment Q-sort methodology is described in greater detail in Section 2.2.2.
2.2.1.2 Stability of Strange Situation classifications

The extent to which Strange Situation behaviour reflects the attachment relationship and the infant's IWMs of attachment has been examined in terms of the stability of attachment classifications assigned in the Strange Situation. Based upon Bowlby's notion of continuity of attachment patterns, attachment organisation should remain stable over time in the absence of major life events, and show less stability in the face of major stresses. Waters (1978) investigated the stability and reliability of individual differences in infant-mother attachment at 12 and 18 months. Whilst the reliability of discrete behaviour variables was very low, stability of attachment classifications across the six months interval was very high (48 out of 50 infants were assigned the same classification). In a review of nine studies, Lamb, Thompson, Gardner and Charnov (1985) found an average of 77.1 percent concordance for middle-income families and families rated as providing excellent care. More recently, Bar-Haim, Sutton, Fox and Marvin (2000) found significant stability of attachment classifications from 14 to 24 months in a middle-class sample. By contrast, Belsky, Campbell, Cohn and Moore (1996) reported markedly lower stability rates of 53 percent and 46 percent between 12 and 18 months in two middle-class samples. However, poorer stability rates have been repeatedly demonstrated in studies of low socio-economic status (SES) families. Vaughn, Egeland, Sroufe and Waters (1979) found only 62 percent concordance with observed changes from secure to anxious attachment associated with occurrences of stressful life events impinging upon stability of caretaking (see also Egeland & Farber, 1984; Thompson, Lamb, & Estes, 1982). Furthermore, Egeland and Sroufe (1981a; 1981b) compared two sub-samples identified as providing excellent or inadequate care; concordance rates were markedly different for the two sub-samples, with 81 percent for the excellent care sample and 48 percent for the inadequate care sample.
2.2.1.3 Cross-cultural validity

Addressing Bowlby’s (1980) argument for the universal nature of attachment behaviour, a plethora of studies have explored attachment behaviour across diverse cultures. Gardner, Lamb, Thompson and Sagi (1986) investigated the cross-cultural validity of the Strange Situation classification system drawing on American, Swedish and Israeli samples, and found significant differences in the patterning of individual differences in Strange Situation behaviour. In a study of Japanese infants, Takahashi (1986) demonstrated a similar classification distribution of secure versus insecure to other countries (68% and 32% respectively), although the insecure group consisted of only Resistant type. In a subsequent study, Nakagawa, Lamb and Miyaki (1992) found 75 percent of Japanese infants were classified as Secure, 21 percent as Resistant and 4 percent were unclassifiable. In keeping with the above findings, Sagi, Lamb, Lewkowicz, Shoam, Dvir and Estes (1985) in a sample of Israeli Kibbutz-reared children; and more recently Zevalkink, Riksen-Walraven and Van Lieshout (1999) in an Indonesian sample, reported an increase in the proportion of Resistant attachment type relative to the proportion typically observed in US samples. Further, in a West German sample, a higher proportion of insecure attachment was obtained than in comparable US samples (Grossmann, Grossmann, Huber, & Wartner, 1981). Van IJzendoorn and Kroonenberg (1988) examined meta-analytically cross-cultural patterns of attachment in eight countries with the findings highlighting substantial intra-cultural differences and a distinct pattern of cross-cultural differences. Avoidant classifications were more prevalent in Western European countries and Resistant classifications were more prevalent in Israel and Japan. However, intra-cultural variation was nearly one-and-a-half times the cross-cultural variation (Sagi, van IJzendoorn, & Koren, 1991). In an attempt to uncover possible reasons for the observed cross-cultural differences, van IJzendoorn and Kroonenberg (1990) tested whether cross-cultural differences in attachment classification could be explained in terms of systematic differences in coding practices, however they found consistent coding practices across countries. Corresponding observations of maternal behaviour in the home suggest that differences in the distribution may reflect systematic cultural differences in maternal
behaviour and differences in the frequency of exposure to brief separations (Takahashi, 1986).

2.2.1.4 Attachment patterns across caregivers

The notion of the independence of infants' IWMs of primary caregivers based upon the accumulated history of interactions with each attachment figure has received considerable attention. Several studies have demonstrated concordance rates above those expected by chance for classification assigned for infant-mother and infant-father attachment status (Belsky, Garduque, & Hrncir, 1984; Lamb, 1978). Further, Fox, Kimmerly and Schafer (1991) found associations between security of attachment to mother and to father for both main classification and subclassifications in a meta-analysis of eleven studies. Possible determinants were parenting styles and/or infant temperament. Notwithstanding the associations reported in the above studies, the majority of studies are consistent with the view of the independence of mother-infant and father-infant attachment relationships, and have found no significant relationship between the two classifications (Lamb, 1977; Grossmann et al. 1981; Main & Weston, 1981; Sagi et al. 1985). The independence of attachment status across caregivers was most convincingly supported by Main et al. (1985) in which zero correlations were reported.

2.2.1.5 Attachment versus temperament

A central debate that has generated a considerable body of literature pertains to whether individual differences in Strange Situation behaviour capture the nature of the mother-infant relationship or rather reflect endogenous temperamental variation. Endorsing the latter position, Kagan (1982) has maintained that an infant's own predisposition to respond to separation from and reunion with parents, regardless of the status of the relationship with the caregiver, may be the primary determinant of the attachment classification assigned in the Strange Situation. Vaughn, Lefever, Seifer and Barglow (1989) failed to find significant associations between temperament, behavioural styles and Strange Situation classifications. A recent
review of studies addressing the link between temperament and attachment in infancy and early childhood suggested that security of attachment is not strongly related to behavioural-style indices of temperament (Vaughn & Bost, 1999) thus supporting the interpretation of Strange Situation behaviour as an outcome of the infant-parent relationship (Sroufe, 1985). In keeping with this view, Belsky and Rovine (1987) suggested that infant temperament influences the manner in which security or insecurity is expressed rather than whether or not the infant develops a secure or insecure attachment.

2.2.1.6 Conclusions relating to the Strange Situation procedure

The bulk of the findings reviewed above concerning the stability of attachment status, the cross-cultural validity and the independence of attachment patterns across attachment figures are consistent with the view that Strange Situation patterns of attachment are the product of the infant-caregiver relationship. Studies that have reported low stability have shown this to be associated with less stable home environments as a consequence of stressful life events. In addition, whilst clear cross-cultural variations in the distribution of attachment classifications have emerged, in particular for the Insecure-Resistant and Insecure-Avoidant attachment patterns, substantial intra-cultural variations have also been demonstrated. Furthermore, the view that Strange Situation behaviour reflects the infant-parent attachment relationship and not infant temperamental variations has also been supported.

Nevertheless, studies reporting low short-term stability (Belsky et al. 1996) highlight the need to further evaluate the extent to which attachment security is a stable construct. In addition, many studies employing the Strange Situation have been restricted to an examination of the Secure/Insecure split due to small sample sizes thus preventing complete validation of the three-way and four-way classification system. Moreover, as Solomon and George (1999a) note, the relative robustness of the Strange Situation has meant that few attempts have been made to
establish new additional measures that may further illuminate individual differences in the quality of early relationships.

2.2.2 The Attachment Q-Sort

An alternative approach to the study of attachment in infancy and in the preschool years has been developed by Waters (1995). Although the Attachment Q-Sort (AQS) reflects a departure from other measures of attachment, a brief description of the measure and a review of its psychometric properties are presented below.

By contrast to the Strange Situation procedure, the AQS assesses the quality of the child's secure-base behaviour in the home setting. Secure-base behaviour is defined as the smooth organisation of an appropriate balance between proximity-seeking and exploration (Posada et al., 1995). The Q-Set for the AQS comprises 90 items designed to measure a diverse range of dimensions capturing the child's secure-base behaviour. Items are sorted by trained observers or by the caregivers into one of nine piles, indicating whether the item is considered characteristic or uncharacteristic of a child's behaviour. Both salient behaviours and the frequency of behaviours are taken into consideration with AQS data analysed in terms of individual items or summary scales. Further, AQS data permit comparisons to be drawn between an individual child's Q-Sort profile and a criterion sort.

Studies using the AQS have reported inter-rater agreement ranging from .72 to .95 between trained observers (see for example Teti & McGourty, 1996). Somewhat lower maternal and trained observer agreement has been reported ranging from .50 to .80 (Teti & McGourty, 1996; Waters & Deane, 1985). Indeed, several studies have demonstrated bias or measurement error in parental sorts, indicating that maternal sorts are more likely to be correlated with temperament measures (van IJzendoorn, Vereijken, & Riksen-Walraven, in press), and are subject to social desirability biases (Belsky & Rovine, 1990). With respect to short-term stability, findings vary markedly from study to study (ranging from .04 to .75) and as a function of maternal or observer sorts (Bretherton et al., 1990; Howes & Hamilton,
The findings pertaining to the association between AQS security scores and Strange Situation attachment patterns also present a somewhat mixed picture with some studies finding moderate relations (Belsky & Rovine, 1990; Sagi et al., 1995) and others failing to find significant associations (van Dam & van IJzendoorn, 1988).

Whilst the AQS holds considerable promise in measuring security of attachment in the home environment, the above findings highlight several issues that are noteworthy. Firstly, it is unclear whether mothers or trained observers are more appropriate informants on secure-base behaviour. Secondly, the low to moderate associations between Strange Situation and AQS security scores suggest that these measures may not be measuring the same construct (van IJzendoorn et al., in press). Solomon and George (1999a) argue that the absence of associations between the AQS and the Strange Situation classifications might be rooted in the different contexts of the home and laboratory separation-reunion, and in the degree of stress experienced by the child. Lastly, the above findings raise concerns relating to the validity of the criterion sorts themselves, suggesting that criterion sorts may confound attachment phenomena with other behaviours (Solomon & George, 1999a).

2.3 ATTACHMENT IN ADULTHOOD

Attachment theory was conceived by Bowlby (1969) as a life span developmental theory and as such has provided the framework for the study of attachment in adulthood. As noted in Chapter 1, the publication of Main, Kaplan and Casssidy’s (1985) seminal paper describing the development of an interview-based method, namely the Adult Attachment Interview (AAI: George et al. 1985), for the classification of parents’ state of mind with respect to attachment marked an important turning point in the study of attachment beyond infancy. Within the context of what Main et al. (1985) termed the “a move to the level of representations”, additional representational measures evolved and will be described
in later sections. In the following section, the Adult Attachment Interview will be presented and related findings reviewed.

2.3.1 The Adult Attachment Interview

By far the most robust adult attachment measure hitherto has been the AAI. It was conceived as a way of predicting infants' Strange Situation attachment classifications and was conceptualised as requiring individuals to recount and reflect upon early attachment related relationships and experiences whilst maintaining coherent and collaborative discourse without inconsistencies and contradictions (Main, 1995).

The AAI is a semi-structured interview comprising 25 questions designed to assess the subject’s view of early as well as present relationships and how these may have changed and developed over time. The interview has been devised so that questions are ordered chronologically from early childhood through adolescence and lastly into adulthood. Interviewees are required to provide five adjectives that describe their relationship to each parent and then offer specific episodic examples to support each adjective chosen. In addition, they are asked questions about whether they have experienced rejection, threat or abuse, and whether they have suffered any major and traumatic losses and separations. Interviewees are also required to reflect upon these memories and are asked why they think their parents behaved as they did and how do they think these early experiences have affected and shaped their adult personality. The AAI attempts to capture the subject’s “current state of mind” with respect to attachment, with emphasis placed on the nature of representations of attachment figures and relationships as reflected in the narrative rather than the actual/probable experiences, although these are also considered when assigning a rating. The technique has been thought of as “surprising the unconscious”.

The AAI attempts to identify analogues of attachment behaviour patterns in infancy with representational processes in adulthood as reflected most strikingly in the coherence of discourse (Stein, Jacobs, Ferguson, Allen, & Fonagy, 1998). The coding system relies predominantly upon a detailed psycho-linguistic analysis of
individual's descriptions of both early childhood and present relationships with parental figures. The classification system yields attachment classifications that are parallel to infant attachment patterns observed in the Strange Situation paradigm (Ainsworth et al. 1978).

**The AAI Coding System**

The analysis of the interview is conducted in three successive stages. In the first stage the probable childhood experience of the interviewee with each of his/her attachment figures is rated along five dimensions presented in Table 2.3.

<table>
<thead>
<tr>
<th>Probable Experience Scales</th>
<th>Description</th>
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<tbody>
<tr>
<td>Loving</td>
<td>The extent to which the individual felt parental figures to be emotionally supportive and available, in particular, in times of need.</td>
</tr>
<tr>
<td>Rejection</td>
<td>The degree to which attachment figures engaged in the shifting away and thus rejection of the child's expression of attachment, affection, dependence and need.</td>
</tr>
<tr>
<td>Involving/Role Reversing</td>
<td>The degree to which one or both attachment figures allocated the responsibility for their psychological and physical welfare to the child and thus demanded attention and parenting from the child.</td>
</tr>
<tr>
<td>Neglect</td>
<td>The degree of the individual's experience of one or both parents as inattentive, psychologically inaccessible and preoccupied as reflected by the absence of potential parent-child interactions.</td>
</tr>
<tr>
<td>Pressure to Achieve</td>
<td>The degree to which the individual was pushed to achieve and excel in childhood and was threatened with withdrawal of parental affection and care if failing.</td>
</tr>
</tbody>
</table>

Ratings on the above nine-point scales are combined in determining the individual’s probable experiences of caregiving. As stated above, ratings on these sub-scales reflect the judge’s inferences concerning parental behaviour during childhood based on the individual’s report. This process often highlights potential discrepancies between the individual’s own evaluation and presentation of childhood experiences.
and the judge's evaluation of the individual's experiences of parenting. Thus, a subject who provides generalised descriptions of her mother as loving but fails to support this assertion by specific autobiographical memories or alternatively offers episodes which actively contradict his/her general presentation will be rated at the lower end of the Loving scale. In the following stage, the present state of mind of the interviewee with respect to attachment is rated for both organised and disorganised attachment patterns. The scales are designed to evaluate the individual's mental representations of the self in relationship to attachment figures, attachment-related experiences and feelings and are thus instrumental in identifying individual differences in attachment organisation. Ratings are assigned on nine nine-point scales briefly outlined below in Table 2.4.
<table>
<thead>
<tr>
<th>“State of Mind” Scales</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealisation</td>
<td>The discrepancy between the overall view of the parent at the semantic level and the probable experience of the subject as inferred in other aspects of the narrative and through specific episodic information. Essentially, it seeks to assess the extent to which the subject attempts to retain an image of the parent as &quot;perfect&quot; that is unsupported by autobiographical memories, and hence ratings are assigned separately for mother and father.</td>
</tr>
<tr>
<td>Dismissing Derogation</td>
<td>The extent to which attachment experiences and relationships are subject to derogating dismissal. A transcript is considered to contain active dismissal when experiences of death, loss and separation are treated with contempt, are described as unimportant and is often marked by very brief responses. The degree to which attachment figures are described in derogating terms or with active dismissal is rated separately for mother and father.</td>
</tr>
<tr>
<td>Involved/Involving Anger</td>
<td>The extent to which the subject expresses current preoccupied anger with attachment figures. It is the nature and quality of anger (Managed versus uncontained) rather than the frequency that informs a rating on this scale and ratings are assigned to each parental figure.</td>
</tr>
<tr>
<td>Insistence on Lack of Recall</td>
<td>The degree to which the subject makes direct references to lack of memory in an attempt to block further queries or further discussion of a given topic. Both the frequency and the strength of insistence upon lack of memory are considered important alongside the context in which lack of memory is reported.</td>
</tr>
<tr>
<td>Passivity of Thought</td>
<td>The degree to which subjects manifest difficulties in completing sentences, lapses into long silences and show repeated intrusions of vague expressions that are all assumed to reflect passivity of discourse. This strategy is most strikingly observed in transcripts of parents of C2 infants in the Strange Situation.</td>
</tr>
<tr>
<td>Fear of Loss</td>
<td>Identifies individuals who experience and express fears of loss through death of their own child but are unable to connect these to the source and consequently act upon them (e.g. being unnecessarily over-protective of their child). The scale differs from all other scales in that it is based on the adult’s discussion of their own child rather than their childhood experiences but also because it was empirically derived to predict infant insecure-avoidant classifications.</td>
</tr>
<tr>
<td>Meta-cognitive Monitoring</td>
<td>The subject’s ability to both monitor and report on his/her own processes of thinking and recall whilst the interview is in progress. Meta-cognitive monitoring is distinguished from indications of psychological awareness or seemingly insightful remarks that may have been learnt in other contexts and hence refers only to instances where the descriptions reflect active and spontaneous thinking in response to the immediate demands of the task.</td>
</tr>
</tbody>
</table>
Table 2.4 AAI "State of Mind" Scales

<table>
<thead>
<tr>
<th>&quot;State of Mind&quot; Scales</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coherence of Mind</td>
<td>Constitutes the &quot;overall state of mind&quot; score with respect to adult attachment. Rating of this scale is therefore based on a consideration of all other state of mind scales and all types of incoherence identified. Whilst high correlations are expected between ratings of the Coherence of Discourse and Overall Coherence of Mind, some independence is also anticipated, particularly in considering beliefs that albeit unusual may be presented in a coherent and cooperative manner. In considering this rating a review of the transcript of discourse, fear of loss and indications of unresolved trauma and indications of irrational attachment-related beliefs is advocated in assigning this final rating.</td>
</tr>
<tr>
<td>Coherence of Transcript</td>
<td>Assesses the individual's ability to describe attachment-related experiences and feelings in a consistent and readily understood manner and takes into consideration both the form and the content of the narrative. Among the key aspects of coherence are the degree of collaboration of the interviewee in telling a story, the spontaneity with which episodes are retold as distinct from rehearsed stories or those originating from parents. In addition, the plausibility of the story is considered important, that is, does the narrative hang together and is it consistent throughout or do discrepancies arise between the individual's description and the rater's evaluation of probable experience. Furthermore, it focuses on whether the overall evaluation of attachment experiences is substantiated by specific episodes or whether contradictions are present.</td>
</tr>
</tbody>
</table>

The coherence of the transcript is considered most informative in establishing the overall attachment status of the adult and was found most predictive of infant attachment organisation (Main & Goldwyn, 1998).

Main and Goldwyn (1998) proposed applying Grice's maxims (Grice, 1975) in establishing the coherence of transcript. Grice formulated a general, overriding principle of conversation, termed the "co-operative principle", which participants in conversation are expected to adhere to. As Grice (1975) states, "Make your conversational contributions such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged". This principle incorporates four maxims:

Quality: Be truthful and have evidence for what you say.
Quantity: Be succinct yet complete.
Relation: Be relevant, presenting what has been said so that it is understood.
Manner: Be clear and orderly.

The maxim of quality is considered most important with optimal discourse defined as truthful and collaborative (Main & Goldwyn, 1998). Violations of these maxims are permitted when appealing to the overriding co-operative principle but otherwise indicate incoherence. Furthermore, individuals may gain credits for coherency when re-telling a complex and difficult history despite existing violations.

Main and Goldwyn (1998) clearly describe what constitutes violations to each of the Gricean maxims:

**Quality:** Contradictions between general level of description and specific episodes, logical contradictions, factual contradictions and rapid oscillations of viewpoint all represent violations to the maxim of quality.

**Quantity:** Detail of information is unwarranted and may reflect a sense of being lost in thoughts and memories. Responses may often be very brief and/or refused without indicating a co-operative attempt, for example, “I don’t know”. And finally, run-on sentences indicating inability to shift attention to the following topic all constitute violations to the quantity maxim.

**Relation:** Violations of this maxim include wandering from topic to topic or substituting topics that can occur as a direct avoidance to the question, “canned” speech using jargon and slogans, and losing track of questions.

**Manner:** Violations of this maxim may be manifest in invasions or intrusions of information to speech, lapses into professional jargon, substitution of nonsense words, slips of the tongue, identical phrases inserted into the speech very frequently, entangled sentences that cannot be readily understood, oscillations in view points without an explanation and unfinished sentences.
Other milder forms of incoherence include distancing and dysfluency, in particular pauses and hesitations, and are also considered when assigning a rating for coherence. Individuals falling within different classifications tend to display distinct violations of Gricean maxims. Dismissing individuals exhibit predominant violations of quality and often of quantity. Preoccupied individuals demonstrate violations of quantity, relevance and manner.

Two additional scales to those outlined in Table 2.4 are employed in rating extreme experiences of state of mind including unresolved experiences of loss through death and unresolved abusive experiences. Both scales are concerned with the identification of disorganisation manifested in three central forms; a) lapses in the monitoring of reasoning, b) lapses in the monitoring of discourse, and finally c) reports of extreme behavioural reactions.

From ratings on all of the above scales adult attachment classifications are subsequently derived. The AAI yields five distinct main attachment patterns with further sub-classification. In what follows, a brief characterisation of each of the main adult attachment classifications is presented.

*The AAI Classification System*

Ratings on the above scales yield five distinct adult attachment classifications and further sub-classifications that are considered analogous to those identified in the Strange Situation in infancy. A brief outline of the main classifications is presented in Table 2.5.
Table 2.5 The AAI Main Attachment Classifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
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<tbody>
<tr>
<td>Secure/Autonomous (F)</td>
<td>Secure adults value attachment relationships and experiences whilst remaining objective in their evaluation and reflective upon their influence. The interview on the whole is coherent and fluent and reflects little preoccupation with, or idealisation of attachment figures. Generalised descriptions of relationships with parents are consistently supported by illustrative autobiographical memories.</td>
</tr>
<tr>
<td>Dismissing (Ds)</td>
<td>Dismissing adults may adopt several strategies in minimising the impact of attachment relationships and experiences. They may idealise and normalise past experiences failing to support or actively contradicting generalised descriptions with specific memories. They may actively devalue and derogate attachment figures and experiences and may present themselves as invulnerable and self-sufficient. They frequently exhibit restrictions of attachment-related feelings, insistence on lack of memory for childhood and consequently are brief in their responses.</td>
</tr>
<tr>
<td>Preoccupied (E)</td>
<td>Preoccupied adults exhibit passive, angry or fearful preoccupation with attachment figures and experiences. Discourse is often marked by incoherence, irrelevancy, childlike speech and pseudo-psychological terminology. Preoccupied adults may exhibit overwhelming fear and confusion by past traumatic experiences and blame excessively and inappropriately parental figures for all difficulties. Interview transcripts of Preoccupied individuals tend to be long and not readily understood.</td>
</tr>
<tr>
<td>Unresolved/Disorganised (U)</td>
<td>Adults classified as Unresolved are characterised by having experienced attachment-related traumas such as physical or sexual abuse or the loss/death in childhood of an attachment figure that has clearly not been resolved in adulthood. Lack of resolution is evident in lapses in monitoring of reasoning, discourse and expressions of extreme behavioural reactions to trauma. Disbelief regarding death, irrational guilt associated with sense of being causal in death, unusual attention to detail on the one hand and prolonged silences on the other may are all indications of unresolved attachment status. These may be present throughout the interview but are most striking in passages that relate to queries regarding traumatic experiences.</td>
</tr>
</tbody>
</table>

The Secure (F) adult attachment classification parallels the Secure classification in infancy and five sub-classifications are derived based upon the aforementioned rating scales. Adults classified as F1 typically demonstrate some setting aside of attachment and retain a sense of early support from parents, although unexamined. Individuals classified as F2 show some detachment manifested in lack of memory,
idealisation of parents, fear of loss, or mild derogation often followed by overt valuing of attachment. Very Secure adults (F3) are highly coherent in the re-telling of attachment-related experiences and feelings and demonstrate little or no idealisation or angry preoccupation with attachment figures. Transcripts of F4 adults are marked by slight preoccupation, that is more angry and conflicted in those classified as F5 where although moderately coherent, preoccupation with parental failing and some present anger is evident. Typically, 58 percent of both mothers and fathers are classified as Secure (van IJzendoorn & Bakermans-Kranenburg, 1996).

The Dismissing (Ds) adult attachment classification corresponds to the Strange Situation Avoidant infant attachment classification with four Ds sub-classifications further identified. Adults classified as Ds1 normalise experiences, describe parents in highly favourable terms that are unsupported and often block further queries by insisting on lack of memory. In contrast, Ds2 adults actively devalue at least one attachment relationship and its importance and emphasise self-reliance. Adults classified as Ds3 are marked by a restriction in feeling and whilst recognition of rejection may be present, the self is described as unaffected and experiences are normalised. The final Ds4 sub-classification is assigned very rarely and marks adults who are cut off from the source of fear regarding possibilities of loss as relating to their own child. Across 33 studies employing the AAI, 24 percent of both mothers and fathers were classified as Dismissing (van IJzendoorn & Bakermans-Kranenburg, 1996).

The Preoccupied (E) adult attachment classification corresponds to the Ambivalent/Resistant infant attachment classification with adults assigned one or more of the three sub-classifications. Passivity of thought processes regarding experiences of childhood intermingled with subtle indications of anger is characteristic of adults classified as E1. In contrast, E2 adults can be distinguished by their angry preoccupation with one or both parents, the use of pseudo-psychological terminology and the presence of run-on sentences. The final E3 sub-classification is assigned very rarely to adults who exhibit overwhelming/fearful preoccupation with past traumatic experiences. Approximately 18 percent of
mothers and fathers are classified as Preoccupied (van IJzendoorn & Bakermans-Kranenburg, 1996).

The Unresolved (U) adult attachment pattern parallels the Disorganised/Disoriented infant attachment pattern and as in the Strange Situation classification system adults classified as U are invariably assigned to a best fitting alternative attachment classification. About 19 percent of mothers and fathers are classified as Unresolved with respect to loss or trauma (van IJzendoorn & Bakermans-Kranenburg, 1996).

Rarely (except in clinical samples) adults will show an unusual mixture of mental states that does not appear to fall within any of the above attachment patterns and will thus be assigned as Cannot Classify (CC). This classification marks a breakdown in a coherent strategy. Similar to the Unresolved category, adults who cannot be readily classified will also receive a best fitting alternative classification.

2.3.1.1 Stability and reliability of the AAI

Studies examining three-way stability for Dismissing, Preoccupied and Secure classifications have repeatedly demonstrated high stability across 1 to 18 month periods ranging from 77 percent to 90 percent (Bakermans-Kranenburg & van IJzendoorn, 1993; Benoit & Parker, 1994; Crowell, Waters, Treboux, O'Connor, Colon-Downs & Feider, 1996; De Hass, Bakermans-Kranenburg, & van IJzendoorn, 1994; Sagi, van IJzendoorn, Scharf, Koren, Joels & Mayseless, 1994; Steele & Steele, 1994). In examining four-category stability for Dismissing, Preoccupied, Secure and Unresolved across a twelve month period, Benoit and Parker (1994) found 77 percent stability. Further, inter-rater reliabilities for the AAI are reported as high (Sagi et al. 1994; Steele & Steele, 1994) with an average of 80 percent across 18 studies (van IJzendoorn & Bakermans-Kranenburg, 1997).
2.3.1.2 Discriminant validity of the AAI

Recent studies have turned to the study of the discriminant validity of the AAI. The three main attachment classifications; Dismissing, Preoccupied and Secure have been found to be independent of various measures of IQ (Bakermans-Kranenburg & van IJzendoorn, 1993; Rosenstein & Horowitz, 1996; Sagi et al. 1994; Ward, Botyanski, Plunket & Carlson, 1991). However, in a recent study Crowell et al (1996) found modest associations between AAI classifications and IQ. More specifically, significant differences were observed between secure and insecure mothers on a measure of intelligence, with the variance carried by the Preoccupied group. Adult Attachment Interview classifications have also been found to be independent of non-attachment-related autobiographical memory, both short-term and long-term (Bakermans-Kranenburg & van IJzendoorn, 1993; Sagi et al. 1994). Social desirability was further found unrelated to AAI classifications (Bakermans-Kranenburg and van IJzendoorn, 1993; Crowell et al. 1996) as were interviewer effects (Bakermans-Kranenburg and van IJzendoorn, 1993; Sagi et al. 1994), personality measures (Fonagy et al. 1991), and general discourse styles (Crowell et al. 1996). More recently however, AAI classifications have been found to be associated with psychiatric symptomatology reported on the Minnesota Multiphasic Personality Inventory, with Preoccupied individuals reporting more symptoms and Dismissing individuals reporting fewer symptoms (Pianta, Egeland & Adam, 1996). Further, a recent study of the relation between attachment status, psychiatric classification and responses to psychotherapy indicated that psychiatric patients were more likely to classified as Preoccupied and Unresolved (Fonagy, Leigh, Steele, Steele, Kennedy, Mattoon, Target, & Gerber, 1996)

2.3.1.3 Predictive validity of the AAI

Studies establishing the relation between caregivers' classifications as assessed by the AAI and their infants' attachment organisation as assessed by the Strange Situation can be divided into three types: retrospective studies where infants' Strange Situation classifications were collected prior to the parents' AAI
classifications; concurrent studies where Strange Situation and AAI classifications were assessed concurrently; and finally, prospective studies where AAI classifications were obtained prior to the birth of the child and Strange Situation behaviour was subsequently assessed. The findings from each are reviewed in the following section.

Main et al. (1985) investigated retrospectively the correspondence between mothers’ and fathers’ attachment classification and their infant’s attachment status as assessed through the Strange Situation. Whilst a strong correlation was reported for mother-infant dyads, only a modest correlation was obtained for father-infant dyads (see also Grossmann, Fremmer-Bombik, Rudolph, & Grossmann, 1988).

In a sample of 45 mother-infant dyads, Ainsworth and Eichberg (1991) examined the concurrent relationship between mothers’ current state of mind with respect to attachment and their infants’ attachment status at twelve months. Concordance rates were high with 90 percent agreement for three-way classifications (A/B/C) and 80 percent for four-way classifications (A/B/C/D). Lending further support for the validity of the AAI, Zeanah, Benoit, Barton, Regan, Hirschberg and Lipsitt (1993) concurrently assessed 60 mother-infant dyads and found 75 percent concordance for three-way classifications. Whilst, the majority of studies have reported high concordance rates for mother-infant dyads, similar to Main et al. (1985), van IJzendoorn, Kranenburg, Zwart-Woudstra, van Busschbach and Lambermon (1991) failed to find significant correspondence between paternal AAI classifications and infant Strange Situation classifications, although this could be partly explained by the small sample size (only 27 dyads).

Findings from prospective studies also support the predictive validity of the AAI and thus the inter-generational transmission of attachment patterns. Fonagy et al. (1991) conducted a prospective study correlating the attachment status of first time middle-class parents (100 couples), as measured by the AAI, with the attachment organisation of the first born child at twelve months with respect to mother and at 18 months with respect to father. Fonagy et al (1991) reported a concordance rate of
75 percent between attachment status of the mother and the attachment status of the child but observed a weaker association for father-child dyads. In a subsequent retrospective study of an Australian sample, the secure/insecure correspondence for father-infant dyads was 77 percent (Radojevic, 1994). Benoit and Parker (1994) examined the inter-generational transmission of attachment patterns across three generations in a middle-class sample of 96 infants, mothers and maternal grandmothers. The AAI was completed by mothers during pregnancy and the infants were observed at twelve months in the Strange Situation procedure. The mothers’ AAI classifications during pregnancy were highly predictive of the infants’ attachment status at twelve months both for three-way and four-way classifications (81% and 68% respectively). Furthermore, mothers’ AAI classifications predicted the maternal grandmothers’ AAI classifications in 75 percent (three-way) and 49 percent (four-way) of cases. Convergent evidence also comes from studies of high-risk samples (Ward et al. 1991; Ward & Carlson, 1995; Zeanah, Hirschberg, Danis, Brennan, & Miller, 1995).

In a recent meta-analysis, van IJzendoorn (1995) identified 18 studies that have found high concordance rates between infant and parent attachment classifications. A combined effect size of 1.06 in the expected direction was obtained for the two-way, secure versus insecure split (75% match). Concordance between infant and parent classifications for the three-way cross-tabulation was 70 percent.

More recently, Sagi et al. (1997) highlighted the influence of ecological factors upon the inter-generational transmission of attachment patterns in Israeli Kibbutzim. Marked differences in mother-infant concordance rates between those infants experiencing communal sleeping (40% secure/insecure match) and those sleeping at home (76% match) were demonstrated. Other recent studies of Italian and Canadian mother-infant dyads have also reported similar concordance rates to those reported in previous studies (80%-85%: Ammaniti, Speranza, & Candelori, 1996; Pederson, Gleason, Moran, & Bento, 1998)
With the advent of methodologies for the assessment of attachment in the preschool and middle childhood years, several recent studies have reported significant associations between children's attachment status and their mothers' mental state with respect to attachment. In the preschool years, DeKlyen (1996) reported a four-way match of 70 percent between mothers' AAI status and their three to five-year-old children's attachment as assessed by the Cassidy and Marvin (1989) separation-reunion procedure. In early to middle childhood, George and Solomon (1996) demonstrated a four-way match of 82 percent between mothers' AAI status and their 6-year-olds' attachment. Similarly, Ammaniti et al. (1996) reported a 95 percent match for the Secure/Insecure dichotomy between mothers' AAI status and their six-year olds' attachment. More recently however, Goldwyn, Stanley, Smith and Green (1999) examined the correspondence between mothers' state of mind with respect to attachment and their children's attachment status at five to seven years of age, using the Manchester Child Attachment Story Task (MCAST). Whilst mothers' AAI status was not predictive of the child's attachment status at five to seven years, a significant association between mothers' Unresolved status and their children's Disorganisation with respect to attachment was demonstrated (77% match).

2.3.1.4 Conclusions relating to the AAI

Taken together, the findings reviewed above from published studies clearly support the validity and reliability of the AAI as a measure of attachment in adulthood. However, several concerns are noteworthy.

Conceptually, the AAI identifies a single current state of mind with respect to attachment, unlike the Strange Situation Procedure where an infant's attachment status is classified separately for mother and father. Some transcripts however may present separate states of mind with respect to attachment to mother and father that would inevitably lead to a CC classification. It is unclear whether adults do in fact hold a singular, integrated state of mind with respect to attachment or whether different IWMs of mother and father are in place.

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5 Measures of attachment in preschool and middle childhood are reviewed in Section 2.4.
In addition, the system has been developed based on normative populations, primarily of white, middle-class background where 58 percent of samples are typically classified as Secure. The applicability of the system to other populations is therefore unclear and it is possible to envisage that the insecure categories identified thus far may not adequately capture the diversity of attachment patterns observed in those populations.

Further, although the AAI has been relatively widely applied, it is nevertheless a labour intensive measure and thus has had somewhat limited use.

Finally, access to childhood memories is clearly influenced by mood states and these states may thus colour the general state of mind with respect to attachment and lead to an Insecure attachment classification.

2.4 ATTACHMENT IN PRESCHOOL AND MIDDLE CHILDHOOD

Approaches to the study of the quality of attachment relationships beyond infancy have been guided by the assumption of continuity between infancy and older ages, whilst taking into consideration the developmental transformations in the actual behaviours or representations reflecting a particular type of relationship. The development of the Strange Situation procedure in infancy has paved the way for the extension of the procedure for use with preschool and school-aged children. Concomitantly and following the development of the AAI, many investigators have turned their attention to the establishment of representational measures designed to assess symbolic representations of attachment relationships in the aforementioned years. In the following sections, separation-reunion procedures will be reviewed followed by representational measures developed for preschoolers and school-aged children.
2.4.1 Separation-Reunion Procedures

Main and Cassidy (1988) provided the first comprehensive account of such transformations in their classification system for six-year-olds. This was followed by the development of a comparable system for the assessment of attachment in 2.5 to 4.5-year-olds by Cassidy and Marvin and the MacArthur Working Group on Attachment (1989). An alternative approach was advocated by Crittenden (1992) in developing the Preschool Assessment of Attachment (PAA), arguing for a "dynamic-maturational approach" to the study of attachment beyond infancy. Crittenden (1992) placed emphasis upon the interaction between maturation and current experience as underlying dynamic changes in attachment relationships suggesting that periods of greater maturational change (e.g. during preschool and adolescence) would be associated with changes in patterns of attachment (Crittenden, 2000). According to this view, change rather than continuity in the quality of attachment relationships is to be expected.

The following section will briefly describe the development of the abovementioned systems and review findings pertaining to the psychometric properties of the instruments.

2.4.1.1 The Cassidy and Marvin and the MacArthur Working Group on Attachment system (1989)

Cassidy and Marvin and the MacArthur Working Group on Attachment (1989) describe the development of a system for classifying attachment organisation of children in the 2.5 to 4.5 year age range based upon children's separation-reunion responses. The development of the system was based upon reunion assessments of 300 children pooled from a variety of studies and using divergent procedures6 though all have been variants of the original Strange Situation procedure (Ainsworth et al. 1978). The classification system is based upon the identification of particular

6 Some studies report coding a single separation-reunion procedure varying in length from three to 20 minutes. Others report the original Strange Situation procedure consisting of two separation-reunion episodes, a short and a long one.
behavioural strategies focusing on five central modalities: 1) physical contact and/or seeking or maintenance of physical proximity; 2) body positioning; 3) content and style of parent-directed speech; 4) looking behaviour directed to the parent; and 5) verbal and non-verbal indices of affect. The relevance and centrality of the above modalities for coding vary across attachment patterns.

In developing the classification system, analogous attachment patterns to those observed in infancy were established. Secure children were shown to use the parent as a secure base for exploration and reunion behaviour was open and positive. By contrast, Avoidant children showed detachment and avoidance, whilst Ambivalent children were shown to protest upon separation and maximise proximity-seeking. Controlling/Disorganised children were characterised by either punitive or caregiving controlling behaviours. Behavioural strategies indicating insecurity that did not fall within the aforementioned classifications and sub-classifications were designated Insecure/Other. Table 2.6 presents a brief description of the classification criteria for each of the main attachment categories. In addition to the classifications system, separation-reunion responses were rated on a nine-point scale for security of attachment and a seven-point rating scale for avoidance. Ratings were hypothesised to reflect degrees of security and avoidance within each of the discrete classificatory sub-groups allowing more fine-grained distinctions to be drawn within a given sub-group.
<table>
<thead>
<tr>
<th>Classification</th>
<th>Cassidy &amp; Marvin</th>
<th>Crittenden (PAA)</th>
<th>Main &amp; Cassidy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure/Balanced (B)</td>
<td>Use the parent as a secure base for exploration and reunion behaviour marked by open, warm, and positive interactions.</td>
<td>Direct expressions of feelings and desires and an ability to negotiate conflicts.</td>
<td>Relaxed upon reunion. Initiates positive interactions, proximity, and conversations.</td>
</tr>
<tr>
<td>Avoidant/Defended (A)</td>
<td>Detachment and avoidance of physical or psychological intimacy. Little or no protest during separation from parent.</td>
<td>Reduction of emotional involvement or confrontation by focusing upon exploration at the expense of interpersonal communication.</td>
<td>Increase in physical or communicative distance upon reunion. Continuing engagement with objects and activities in place of interactions.</td>
</tr>
<tr>
<td>Ambivalent/Coercive (C)</td>
<td>Protest upon separation and strong proximity-seeking upon reunion coupled with coy, babyish behaviour.</td>
<td>Maximisation of psychological involvement with parent and exaggeration of problems and conflicts.</td>
<td>Exaggeration of intimacy with, and dependency upon, parent mixed with moderate avoidance or hostility.</td>
</tr>
<tr>
<td>Controlling/Disorganised (D)</td>
<td>Overt attempts to control the parent through punitive or caregiving behaviour or behaviours associated with infant disorganisation.</td>
<td>An underlying strategy (A, B, C, or A/C) that is not fully implemented.</td>
<td>Control of the parent’s attention and behaviour through punitive or caregiving, solicitous behaviour.</td>
</tr>
<tr>
<td>Defended/Coercive (A/C)</td>
<td></td>
<td>Mixture of coercive and defended behaviours occurring either simultaneously or sequentially.</td>
<td></td>
</tr>
<tr>
<td>Anxious/Depressed (AD)</td>
<td></td>
<td>Sad, depressed, and dazed. Extreme distress or panic upon separation.</td>
<td></td>
</tr>
<tr>
<td>Insecure/Other/Unclassifiable (IO or U)</td>
<td>Mixture of insecure indices that do not fall into any of the above classifications</td>
<td>Mixture of insecure indices that do not fit neatly into the categories above.</td>
<td>Mixture of insecure indices that do not fall into the above categories</td>
</tr>
</tbody>
</table>
Whilst across studies relatively high inter-rater reliabilities have been reported (72%-92%; e.g. Bretherton et al. 1990; Greenberg et al. 1991; Shouldice & Stevenson-Hinde, 1992) no studies to date have reported findings relating to the short-term stability of attachment patterns as assessed by the Cassidy and Marvin system. Studies addressing the continuity of attachment classifications using the aforementioned system have produced mixed results. Cassidy, Berlin and Belsky (1990) reported stability of 66 percent from infancy to age three for three-way classifications (A/B/C). Similarly, Shouldice and Stevenson-Hinde (1992) reported 72 percent three-way stability from 2.5 to 4.5 years. However, two recent studies failed to replicate the above findings reporting low stability of 41 percent from one year to four years (Goldberg et al. 1998), and 42 percent and 38 percent from 14 to 24 months, and 58 months respectively (Bar-Haim et al., 2000).

Studies undertaken to assess the concurrent validity of the Cassidy and Marvin (1989) classification system employed concomitant with various representational measures also present a complex picture. Shouldice and Stevenson-Hinde (1992) reported significant associations between attachment classifications derived from the Cassidy and Marvin system and scales of the Separation Anxiety Test (SAT: Klagsburn & Bowlby, 1976) designed to capture qualities of Secure attachment representations. In addition, secure versus insecure classifications of the Cassidy and Marvin system significantly predicted (75%) secure versus insecure classifications derived from Bretherton et al’s (1990) doll-play attachment representation. Further, Slough and Greenberg (1990) found a strong relationship between the avoidance scale of the SAT and the short separation-reunion episode, but the attachment scale was only weakly associated and the long separation reunion failed to relate significantly to any of the identified SAT dimensions. However, in neither of the above studies could discrimination among the various insecure patterns with the representational measures be established. Furthermore, Posada, Waters, Marvin and Cassidy (in press) found only weak associations between the Cassidy and Marvin classifications and Water’s (1995) AQS assessment of secure-base behaviour in the home.

7Representational measures are described in detail in Section 2.4.2.
Taken together, the findings thus suggest that several attachment measures cannot be considered equivalents of one another although they appear to share some commonalities (Bretherton et al., 1990).

2.4.1.2 The Preschool Assessment of Attachment (PAA: Crittenden, 1992)

Underlying Crittenden’s (1992) PAA system is the notion that because diverse behaviours can be used in the service of different attachment strategies, knowledge of both the attachment figure’s behaviour and the context is critical for interpretation of the meaning of the child’s response. Guided by this principle, the PAA not only includes criteria for the analysis of preschoolers attachment behaviours upon separation from and reunion with attachment figures such as patterns of behaviour, inferred regulation of internal feeling states, and parent-child negotiation, but also places emphasis upon the caregiver’s behaviour manifested in the responsiveness and supportiveness of the attachment figure.

The PAA yields six primary attachment classifications. Secure/Balanced (B) children show direct expressions of feelings and desires and an ability to negotiate conflicts. Whilst Defended (A) children act to reduce emotional involvement or confrontation by focusing upon exploration and play, Coercive (C) children maximise psychological involvement with attachment figures and exaggerate problems and conflicts. Defended/Coercive (A/C) children mix coercive with defended behaviour. Anxious Depressed (AD) show heightened sadness and extreme distress or panic. Children who display behaviours that do not fall into the abovementioned groups are classified as Insecure/Other (IO). Table 2.6 above presents the main indices for each of the aforementioned categories. Each main category yields further sub-classifications that capture more specific patterns of behaviour in the service of a particular strategy.

As shown in Table 2.6, although some overlap exists between the PAA and the Cassidy and Marvin systems, in particular for A, B and C classifications, the PAA
diverges from the Cassidy and Marvin system in that it relies upon an expanded set of criteria and identifies a broader range of sub-classifications.

Although high inter-rater agreements for classification using the PAA have been reported across several studies (e.g. Fagot & Pears, 1996; Teti, Gelfand, Messinger, & Isabella, 1995), no study to date has undertaken the investigation of the short-term reliability of the PAA. Crittenden and Claussen (1994) applied the Cassidy and Marvin and the PAA to a maltreated and community sample and although poor agreement for main classifications was shown (38% and 39%; PAA groups A/C, AD and IO considered equivalent to D in Cassidy & Marvin), agreement for the secure versus insecure split was markedly higher (82% and 64% respectively). Nevertheless, the overall poor associations attest to the lack of consensus concerning what constitutes secure and insecure behaviour in the preschool years (Solomon & George, 1999a).

Examining the stability of attachment patterns in a German sample, Rauh, Ziegenhain, Muller and Wijnroks (2000) used the Strange Situation classification system at 12 and 21 months, and the PAA at 21 months. High agreement was reported between the Strange Situation and the PAA at 21 months for the secure/insecure split although the correspondence for sub-classifications was substantially poorer. In addition, attachment classifications at twelve months significantly predicted PAA attachment classifications at 21 for the secure/insecure split (68%).

In support of Crittenden's (1995) supposition that instability in attachment security from infancy to the preschool years would be expected due to maturational factors and changes in the caregiving environment, Fagot and Pears (1996) reported significant infant to preschooler shifts from Secure to Coercive and from Avoidant to Coercive attachments (from 10% to 36% C classification respectively). Whilst hitherto there has been no attempt to relate PAA classifications to preschoolers' secure-base behaviour in the home, several studies have reported significant
associations between maternal sensitivity and children’s attachment organisation (e.g. Bohlin & Hagekull, 2000; Rauh et al. 2000).

2.4.1.3 The Main and Cassidy Attachment Classification for six-year-olds

In a seminal paper, Main and Cassidy (1988) described a behaviourally derived classification system, akin to the Strange Situation, based upon six year olds’ responses to unstructured reunion in a laboratory setting. Underlying the development of the “sixth-year” classification system was the assumption of stability of attachment organisation and hence predictability to attachment behaviour across the five year period in the absence of major life events and stresses. The system was based upon a careful mapping of sixth-year reunion behaviour to Strange Situation behaviour patterns in infancy. A seven-point scale for avoidance that parallels the Strange Situation interactive scoring system for avoidance was constructed in addition to a nine-point security scale. The system was subsequently further developed to describe the sixth-year Ambivalent classification and sub-classifications.

The sixth-year separation-reunion procedure therefore yields attachment classification analogous to the attachment classifications of the Strange Situation procedure. Secure children appear relaxed throughout the reunion and initiate positive interactions with the parent. Unlike Secure children, Avoidant children maintain a distance from the parent upon reunion and demonstrate a continuing focus upon activities involving objects at the expense of positive interactions. In contrast to Avoidant children, Ambivalent children exaggerate intimacy with the parent and may show moderate avoidance along with hostility, fear or sadness. Controlling children actively attempt to control the parent by punitive or caregiving, solicitous means. As with classification systems for preschoolers, children whose behaviour do not fit into the aforementioned main classifications are assigned as Unclassified. Table 2.6 presents a fuller description of the main classifications listed above.
In developing the sixth-year classification system Main and Cassidy (1988) reported high inter-rater agreement for classifications across all mother-child (83%) and father-child (77%) dyads, and acceptable inter-rater agreement for both the avoidance and the security scales. In predicting the sixth-year classification to mother from Strange Situation classifications, 84 percent of the sample children were assigned to the same classification (for A/B/D classifications) with a somewhat weaker predictability for father-child dyads (61%). Further, a comparison of sixth-year overall security scores with ratings assigned in infancy, revealed a strong relation between early security of attachment and security as manifest upon reunion at age six for mother-child dyads and a weaker relation for father-child dyads. Avoidance of the mother was shown to be significantly stable over the five year period but was not stable for father. A replication of the Berkeley study completed in West Germany using a comparable sample of mother-child dyads first observed in the Strange Situation at twelve months obtained similarly high agreement in category placement of Strange Situation and sixth-year classifications (Wartner, 1987). First year four-way attachment classifications predicted 78 percent of sixth-year attachment classifications with mother. Similarly, in a longitudinal study of attachment patterns in an Icelandic sample, Jacobsen and Hofmann (1997) reported a significant correspondence between attachment classifications at twelve months and six years (84% for A/B/C/D match).

Main and Cassidy (1988) further reported a study of one month stability of the sixth-year classifications system with 62 percent stability for four-way classifications and 84 percent for three-way classification. Stability across the seven sub-classifications was 76 percent in addition to significant stability for both security and avoidance ratings. Sixth-year attachment classifications were in addition found to be related to concurrent mother-child interactions in the home environment (Solomon, George, & Ivins, 1987).

Furthermore, the concurrent validity of the Main and Cassidy classification system was established by Solomon, George and De Jong (1995) suggesting that doll-play classifications were strongly related to concurrent reunion behaviour classifications.
A particularly high level of agreement was reported for those children judged Controlling (100%) with only moderate agreement for the Avoidant classification (55%). Comparable levels of agreement between the Main and Cassidy classifications and classifications derived from representations to pictured separations were also reported by Jacobsen and her colleagues (81.3% for A/B/C match; Jacobsen, Edelstein, & Hofmann, 1994; Jacobsen & Hofmann, 1997).

2.4.1.4 Conclusions relating to separation-reunion procedures

Notwithstanding the promising findings in identifying distinct behavioural strategies parallel to those reported in infancy, the absence of a sequence of critical moments comparable to those provided in the Strange Situation reflects the difficulty in developing behavioural instruments for assessing attachment beyond infancy. An important question that remains is whether a short separation is sufficiently arousing in order to activate the attachment system in preschoolers and young school-aged children. This was raised by Ainsworth (1990) contending that the chief concern in using a comparable separation-reunion procedure to the Strange Situation beyond infancy was that with increasing age, the degree of stress induced decreases as the child is gradually exposed to everyday separations of greater length. Whilst she also argued that such procedures have proven stressful enough for the assessment of three to four year olds, it is unclear whether the same can be asserted for children in middle childhood. This view was also shared by Grossmann, Grossmann and Zimmermann (1999) arguing that “assessments of attachment quality beyond infancy should include security of mental exploration, which is evaluated predominantly through narratives” (p777).

Furthermore, the growing repertoire of children in this age range as reflected both in behaviour and in the use of language makes the task of developing a valid and reliable system very complex.

In addition, the majority of studies have employed concurrent behavioural and representational attachment measures that have not been adequately validated. The
interpretation of reviewed findings is further beset by a potentially critical difference between the two approaches, in that attachment classifications derived from representational measures are based upon the child’s representations of both parents whereas reunion classifications have been predominantly based upon the mother.

Further, unlike the Strange Situation procedure, the separation-reunion procedures outlined above have not been validated against careful home observations and therefore may not truly reflect the nature of the attachment organisation of the child under consideration. This is borne out when considering Main and Cassidy’s sixth-year attachment classification system. In the Charlottesville study both the Disorganised/Disoriented (D) and Avoidant categories emerged as relatively unreliable over the one month period. In fact, only 50 percent of children assigned a D classification in the first session were also assigned a D classification in the second session, and only 42 percent of children classified Avoidant in session one were classified as Avoidant in session two.

In addition to the relatively low short-term stability, the high predictability of one year to six year attachment classifications reported for mother in studies reviewed above rests to a large extent upon the exclusion of families who had experienced changes in life circumstances and is based on white middle-class samples. Thus, the degree to which significant continuity can be shown for low SES families remains to be established. Guided by Crittenden’s (1992) approach, lawful discontinuities would be expected and thus warrant further exploration. Furthermore, continuity in father-child attachment has hitherto received little attention and may shed further light on the discontinuities observed.

A related concern is whether attachment classifications that are parallel to those found in infancy can be derived or whether new characterisations of responses for older children are warranted. This is illustrated in the process outlined by Main and Cassidy (1988) in the development of the sixth-year classification system. An inductive process of “guess and uncover” where information regarding the actual infancy categories was used to uncover matches and mismatches.
Highlighting the above reservations, Main and Cassidy (1988) advocated the use of multiple assessments including concurrent representational measures in the study of the stability of attachment organisation from infancy to middle childhood. They further suggest that future assessments of children's attachment organisation should not rely on a single, sixth-year reunion observation but rather classifications should ideally be based on the amalgamation of two or more observations. This suggestion would also seem applicable to the reunion behaviour of preschoolers.

2.4.2 Representational Measures

Bowlby (1982) argued for behavioural homeostasis when discussing the infants' tendency to maintain varying degrees of proximity to the attachment figure, and assessments of attachment patterns in infancy have been restricted to the behavioural domain. Inferences concerning the internal organisation of attachment have therefore been drawn based on individual differences in behaviour. However, the period of early childhood is marked by considerable development reflected in part in children's growing capacity for symbolic representations that enable the conceptual organisation of knowledge (Bretherton, 1985). As noted previously, reflecting the developmental theme implicit in attachment theory and in keeping with the principles of Bowlby's theory, Main et al., (1985) called for a reconceptualisation of individual differences in attachment organisation as individual differences in the IWMs of the self and attachment figures. Representational models of relationships are assumed to be constructed on the basis of actual experiences in relationships and are therefore assumed to parallel individual differences in children's behaviour with an attachment figure. Guided by this assumption, the internal organisation of attachment in preschool and middle childhood has been assessed from verbal representational behaviour in an attempt to draw parallels between distinct behavioural patterns and representational patterns.

This shift in emphasis has thus permitted the study of attachment in preschool and middle childhood and the adoption of a representational approach. The following section reviews current representational measures used in the study of attachment in
the preschool and middle childhood years. For each of the measures reviewed, issues of validity, reliability and stability are examined and illustrated by the relevant literature.

2.4.2.1 The Separation Anxiety Test

Capitalising on preschooler's growing verbal abilities, the Separation Anxiety Test (SAT: Klagsburn & Bowlby, 1976) was devised as a semi-projective measure for the assessment of internal representation of attachment relationships. The SAT was adapted by Klagsburn and Bowlby (1976) for use with four to seven year olds from Hanburg's (1972) original measure that was designed to elicit adolescent's (11-17 year olds) mental representation of attachment relationships in response to separations from and loss of attachment figures.

The test comprises six pictures/photographs depicting separations between a child and his/her parents that were chosen to “combine maximum situational focus with a minimum of facial expression, so that the situation is made clear but the emotions aroused remain ambiguous” (Klagsburn & Bowlby, 1976, p309). The separations depicted range in severity from “mild” to “strong” and are as follows: 1) parents go away for the evening, leaving child at home; 2) parents go away for the weekend, leaving child with aunt and uncle; 3) child's first day at school; 4) parents go away for two weeks; 5) park scene, parents tell child to run off and play alone for a while because they want some time alone together to talk; and 6) mother tucks child in bed and leaves the room. The presentation of each picture is accompanied by a brief explanation and followed by a series of set questions designed to elicit attachment-related narratives. The child is asked how the protagonist in the picture would feel, why would he/she feel that way, and what would the child do in response to the separation. Underlying the procedure is the assumption that given the emotional ambiguity of the pictures, a child will project onto the protagonist his/her attachment related feelings and experiences and thus responses will reflect his/her internal representation of attachment figures and the self.
Coding systems for the SAT have varied considerably from study to study as have the criteria for what constitutes a mild or a strong separation. In Klagsburn and Bowlby's (1976) original study, the SAT responses of sixty-one, 4.5 to 5.5 year olds were first classified into 14 categories which were subsequently grouped into six classes of response from which eight indices of responses were derived. The first index assessed the balance of attachment versus self-reliance responses with more attachment responses expected in the strong separations and conversely, more self-reliant responses expected in the mild separations. The second and third indices examined the ratio of attachment versus hostility, and attachment versus anxiety responses, respectively. The fourth index measured the ratio of anxiety responses to total responses. In addition, the frequency of avoidant responses, responses indicating loss of self-esteem and idiosyncratic disturbed responses, were recorded. Finally, the eighth index assessed the ratio of appropriate actions to those showing unrealistic optimism, pessimism or withdrawal. Based on the ratings on the above indices, an overall test score was calculated which was subsequently found to correlate significantly with teacher's ratings. A qualitative analysis of responses revealed distinct patterns that were classified into four groups: those of children who were considered to be developing well; those who showed some distress and somatic responses, those who showed imbalance of attachment and self-reliance responses in addition to an inability or indifference to taking appropriate actions; and finally, those who displayed aggressive and bizarre responses that were considered indicative of severe disturbance. Whilst Klagsburn and Bowlby's (1976) innovative study clearly identified patterns of responses to separation, the validity of the SAT as a measure of IWMs of attachment was not undertaken and has only been addressed by subsequent studies.

2.4.2.2 Validity and stability

Shouldice and Stevenson-Hinde (1992) hypothesised that parallel patterns of attachment organisation will be observed from responses on the SAT and concurrent separation-reunion responses with mother at 4.5 years of age. SAT responses were coded for dimensions of emotional openness such as appropriate negative response,
avoidance, denial, anxiety and anger, in addition to interruptions, somatic responses, passive solutions and incoherence. Shouldice and Stevenson-Hinde (1992) demonstrated that secure children were more likely to produce appropriate negative responses, showed less persistent denial and over-positive responses and were overall more coherent. Children classified as Avoidant frequently gave avoidant responses, Ambivalent children exhibited most anger, and Controlling/Disorganised children showed incoherence. Notwithstanding the findings indicating similar patterns of responses to pictured separations from attachment figures and separation-reunion responses, discrepancies were also highlighted. For example, Secure children did not differ from their insecure counterparts in their expression of separation-anxiety, over-sad or crying responses or initial denial. Whilst Secure children were more likely to give an appropriate negative response, 43 percent did not. Moreover, dimensions of emotional openness identified a priori as reflecting a distinct insecure classification were not supported in particular for the Ambivalent group. As Shouldice and Stevenson-Hinde (1992) concluded, considering responses to all the measures as a whole, it would be impossible to predict which children belonged to which group.

In an earlier study of 65 five year olds' representations of separations from parents, Slough and Greenberg (1990) used an adapted version of the SAT, drawing a distinction between representations of attachment relationships as relating to the self (i.e. the child tested) and to a hypothetical other (i.e. the child depicted in the separation pictures) in addition to two separation-reunion episodes rated for security of attachment and avoidance. Three dimensions were identified as reflecting individual differences in children's narratives, attachment; self-reliance, and avoidance. Children's responses to the three “severe” separation pictures were rated on a four-point attachment scale and their responses to the three “mild” separation pictures were rated on a four-point self-reliance scale for both self and hypothetical other. A three-point avoidance scale was applied to responses on all six pictures. In addition, a nine-point emotional openness scale was applied to all six pictures in order to assess children's ability to express feelings of vulnerability and need whilst maintaining a sense of self-containment. Results revealed that children rated as more
Secure and less Avoidant during the short separation-reunion procedure were also rated higher on attachment and self-reliance and lower on avoidance in the SAT, particularly for the self. Of the three SAT dimensions identified, the avoidance scale showed the strongest relationship to the short separation-reunion responses while the attachment scale showed only a weak association to separation-reunion responses. Interestingly, the long separation-reunion assessment did not relate significantly to any of the SAT ratings, thus illustrating the difficulty in inducing levels of stress that clearly activate the attachment system and hence reveal individual differences in internal representations of attachment.

In a study of the stability of attachment status over a five year period, Main et al. (1985) found that early security of attachment with the mother as assessed through the Strange Situation procedure was significantly related to the children's emotional openness in discussing separation from parents at age six. Those six-year-olds classified as Secure with mother in infancy gave coherent and elaborated responses to the separation photos, were able to maintain a balance between self-exposure and self-containment (Kaplan, 1984) whilst showing little or no resistance or avoidance in completing the task. In contrast, children judged Avoidant with mother in infancy appeared ill at ease in discussing feelings associated with separations and typically claimed they did not know what the pictured child might do in response to severe separation. Marked distress, silence and irrational or bizarre responses to the depicted separation situations further, distinguished children classified as Disorganised/Disoriented with mother in infancy. However, early security of attachment to father bore little or no relation to responses on the SAT.

More recently, Goldwyn et al. (1999) concurrently assessed five to seven year olds using the SAT and the MCAST, a newly developed story completion task, and found high agreement of 80 percent for the secure/insecure split. Whilst Main et al. (1985) reported significant continuity between Strange Situations and SAT classifications at age six, Bohlin, Hagekull and Rydell (2000) failed to replicate the findings in studying continuity from 15 months to eight to nine years of age. Similarly, Bar-Haim et al. (2000) did not find significant continuity in attachment
patterns at 14 or 24 months using the Strange Situation, and at 58 months using the SAT.

Extending the application of the SAT to older children, Wright, Binney and Smith (1995) compared the separation responses of 21 clinical and non-clinical children for both the self and a hypothetical other. The results revealed that non-clinical children expressed a higher degree of vulnerability in response to separations, considered as an attachment dimension, and were less emotionally avoidant when discussing separation themes. In addition, the results suggested that describing the self as different from a hypothetical other was significantly associated with parental reports of poor social competence. However, in comparing SAT responses of children who were involved in bullying, children who were victimised, and a control group Bowers, Smith and Binney (1994) failed to find significant differences between the groups.

2.4.2.3 Discriminant validity

Despite the centrality of the potential influence of language upon ratings of security of attachment, very few studies have been undertaken to address this issue. McCarthy (1998) examined the relationship between attachment representations as assessed by the SAT, representations of the self in relation to others, and verbal IQ in 42 high risk four to 5.9 year olds. The results failed to find a significant relationship between scores on the British Picture Vocabulary Test and SAT scores. By contrast, two recent studies have reported associations between verbal intelligence and attachment status in five to six year olds and eight year olds (Easterbrooks & Abeles, 2000; Verschueren & Marcoen, 1999).

2.4.2.4 Inter-rater reliability, test-retest reliability and internal consistency

The absence of a standardised SAT coding system is reflected in the considerable variation of inter-rater reliability reported from study to study. Whilst Shouldice and Stevenson-Hinde (1992) reported inter-rater reliability ranging from 84-100 percent
for all the SAT dimensions, lower inter-rater reliability of 68 percent was reported by McCarthy (1998) for placement into one of the four attachment classifications. Wright et al (1995) computed inter-rater agreement for each individual picture for the attachment, self-reliance and avoidance scales, and found agreement ranging from 67-80 percent. Slough and Greenberg (1990) reported somewhat lower inter-rater agreement of 50 percent and 74 percent within one scale point for the scale of emotional openness. However, they failed to report agreement for the attachment, self-reliance and avoidance scales. Evidence for the test-retest reliability of the SAT is sparse. With the exception of Wright et al (1995), none of the studies reviewed have examined the test-retest reliability or the internal consistency of the SAT. Wright et al (1995) reported that test-retest reliability following a four-week interval did not reach statistical significance and internal consistency was only sufficient for two out of three scales.

2.4.2.2 Doll-Play measures

Adopting a doll-play approach to the study of attachment representations in the preschool years, Bretherton et al (1990) developed a story-completion task. In their procedure, 29 three-year-olds were presented with five story stems narrated and enacted using dolls and props and were then asked to complete the stories. The story stems were considered to describe attachment-related situation and were hence assumed to elicit internal representation of attachment (e.g. stories of separation from and reunion with parents). Following the enactment of each story stem, standardised prompts were used to elicit elaborations or clarification when warranted. Based upon the systematic examination of both the content and form of the stories Bretherton et al (1990) developed separate criteria for security and insecurity. Stories were considered to reflect security of attachment when parents were presented as available and protective, interactions were warm when the stories contained constructive resolutions. Stories considered to reflect an Avoidant attachment pattern contained an avoidance of the story issue, and stories containing odd or incoherent responses frequently lacking in a satisfactory resolution were considered to reflect a Disorganised attachment pattern. In addition to the story
completion task, Bretherton et al (1990) concurrently observed mother-child dyads during a modified separation-reunion procedure (Cassidy & Marvin, 1989). The findings revealed that classifications and security scores for the story completion task were significantly related to attachment classification at age three as assessed in the concurrent separation-reunion procedure. In addition, story security scores were significantly related to 18 months Strange Situation classifications. However, the classification of the type of insecurity was not related across the two procedures.

Adopting a dimensional approach to the study of attachment representations, Oppenheim (1997) developed an Attachment Doll-Play Interview (ADI) for preschoolers based upon Bretherton et al’s (1990) story completion task. Thirty-five three to five-year-olds completed the ADI and separation-reunion observations conducted in a new preschool environment. In addition, mothers completed the Attachment Q-Sort measure reporting about their child’s attachment behaviour (Waters & Deane, 1985). Six story stems focusing upon attachment relationships were included and rated along three dimensions that were identified as markers of security of attachment based on previous research; children’s ability to talk openly about emotionally charged and conflictual themes, their ability to generate constructive solutions for separations, and the quality of mother-child interaction presented in the story completion (Bretherton et al. 1990; Cassidy, 1988; Main et al. 1985). Significant associations between the three aforementioned scales emerged, with children who were rated as emotionally open tending to describe mother-child interactions as more positive and were able more readily to generate constructive resolutions to conflicts. Further, children rated as emotionally open and who described mother-child interactions in positive terms tended to explore the classroom environment pre-separation and to show less proximity-seeking behaviour and interaction with mothers upon reunion. No significant associations were found between the ADI scales and levels of post-reunion exploration, or AQS security scores as completed by the mother. Although some significant correlations were found between the ADI scale and separation-reunion behaviour, the findings are difficult to evaluate because the approach taken was dimensional and not categorical. Thus attachment categories were not derived making comparisons
between groups difficult. In addition, the separation-reunion procedure employed in the study was not validated and AQS scores of the mothers were found to be unrelated.

Similarly, Solomon et al. (1995) used a modified version of the story completion task developed by Bretherton et al. (1990) in an attempt to examine the relationship between symbolic representations of attachment and separation-reunion behaviour in a sample of six-year-olds. Sixty-nine mother-child dyads were seen in the separation reunion procedure (Main & Cassidy, 1988) followed by the story completion task. In developing the story completion classification system, only two of the stories, those depicting separation and reunion were focused upon and considered most informative in illuminating individual differences in symbolic representations. Along with moderate inter-rater reliability (71%), the results revealed that doll-play classifications were significantly related to concurrent reunion behaviour classifications. The correspondence was particularly high for those children judged Controlling in the separation-reunion procedure (100%) and somewhat weaker for those children judged Avoidant (55%).

A comprehensive study of individual differences in attachment relationships as they relate to individual differences in IWMs was undertaken by Main et al. (1985). The study sample comprised 40 six-year-olds that had been seen in the Strange Situation with mother at twelve months and father at 18 months and included approximately equal numbers of subjects classified as Secure, Avoidant and Disorganised in infancy. During the five-year follow up an extensive battery of representational measures of attachment was employed including responses to the SAT, responses to a family photograph, child drawings of the family, the fluency of discourse of parent-child dyads upon reunion, and the parents' overall working models of attachment as assessed using the AAI. The results revealed that security of attachment to mother in infancy was related to emotional openness at six in response to the separation pictures. In addition, children's responses to the presentation of the family photograph were strongly related to early security of attachment to the mother. Based upon children's videotaped responses to the family photograph,
children judged Secure with mother at infancy accepted the photograph, smiled at it, and commented readily on it. In contrast, children judged Avoidant with mother in infancy, avoided it by actively turning away or refusing to accept the photograph. Children who were considered Disorganised/Disoriented with mother at infancy became depressed or disorganised in response to the family photograph. Further, in response to a request to draw a picture of their family, six-year-olds judged as Secure with mother in infancy drew well individuated family members with arms held out in an embracing position and with individual expressions on their faces. By contrast, children classified as Avoidant with mother in infancy depicted family members with greater distance between them, figures were often drawn armless, and all have a similar stereotyped smile. Those children judged Disorganised/Disoriented with mother in infancy typically showed bizarre elements in the drawing such as unfinished objects or family members, parts that have been scratched out, and often included incongruent and unintegrated elements such as rainbows and hearts (Kaplan & Main, 1987). Additionally, a significant relation between early security of attachment and later fluency of discourse upon reunion for mother-child dyads was shown. Dyads classified as Secure in infancy were fluent and balanced in discourse, discussing a wide range of topics. Dyads classified as Avoidant in infancy were restricted in discourse to impersonal topics, showed limited elaboration of topics and frequently asked rhetorical questions. Dyads classified as Disorganised/Disoriented in infancy were dysfluent in discourse, with dysfluency marked by stumbling and false starts, focus on relationship-related topics and with the child steering the conversation (Strage & Main, 1984). Finally, patterns of attachment to mother in infancy were strongly related to parental attachment patterns as assessed in the AAI.

More recently, Green, Stanley, Smith and Goldwyn (1999) developed the MCAST for the assessment of attachment representations in young school-aged children. The MCAST is a doll-play procedure in keeping with existing doll-play methodologies but differs with respect to the emphasis placed in the stories upon the child and a single caregiver rather than a range of family members and the focus upon the child’s identification with the story figures. The instrument comprises six test
vignettes, a non-attachment introduction vignette followed by five attachment-related "distress" vignettes, depicting scenarios including the child awaking from a nightmare; hurting his/her knee; experiencing acute abdominal pain; having an argument with a friend; and getting lost while shopping with the parent. Following the introduction of each of the aforementioned vignettes, the child is asked to play out a story completion. Structured probes including how the child/parent doll are feeling, what the child/parent dolls are thinking, and what would the child doll do are subsequently introduced aimed at clarifying the child’s intention of the play and at eliciting mental state attribution. The MCAST coding system also diverges from existing story completion procedures in that it draws upon observations of reunion behaviour in infancy and toddlerhood in the Strange Situation procedure and from the discourse analysis in the AAI. Thus, the content and the structure of the child’s narrative are subject to analysis yielding 33 codings on nine-point continuous scales, falling into four broad clusters: 1) attachment-related behaviours including patterns of proximity-seeking, self-care behaviours, displacement behaviours, conflict and reversal behaviours, details of caregiving behaviour, and degree of assuagement; 2) narrative coherence, adapted for the AAI and rated according to Grice’s maxims of quality, quantity, relevance and manner; 3) Disorganised phenomena of content and verbal and non-verbal behaviour are identified incorporating disorganised/disoriented behavioural indications as per the Strange Situation, lapses in the monitoring of discourse as conceptualised in the AAI, and controlling strategies following Solomon et al (1995); and 4) additional ratings of “bizarreness” of narrative content, predominant affect, mentalising and meta-cognitive abilities are derived.

On the basis of the above dimensions, each vignette yields an attachment strategy and an overall interview classification is derived according to the predominant attachment classification across the vignettes. Attachment patterns and sub-classifications analogous to those identified in the Strange Situation and the AAI are obtained. Secure children clearly represent an interpersonal transaction that includes communication or proximity to the attachment figure, resulting in the alleviation of distress. By contrast, Avoidant children are typified by the lack of interpersonal
behaviour and focus upon self-care and displacement strategies as means for reducing distress. Although similar to Secure children, Ambivalent children represent interpersonal behaviours, these tend to be contradictory and may lead to heightening rather than the reduction of anxiety and distress. Finally, narratives of Disorganised children are marked by chaos, and/or contradictions in addition to control of the caregiver either through coercion or through solicitous behaviour. Narratives that do not fall neatly into the four categories just described are assigned to the Cannot Classify group.

Using the MCAST with a sample of 53 five to seven-year-olds, Green et al. (1999) reported high inter-rater agreement for classifications with 94 percent for the secure/insecure split, 82 percent for Disorganised versus non-Disorganised, and 91 percent for A/B/C/CC. A examination of the content validity of the MCAST revealed three factors with factor one discriminating security from insecurity and disorganisation from non-disorganisation, and factors 2 and 3 discriminating between insecure sub-categories. For stability of attachment patterns across a five-month period, 76 percent stability was shown for the three-way classification scheme (A/B/C). The findings however highlighted associations between various MCAST dimensions and age. More specifically, coherence, mentalising, and disorganisation among others were found to significantly correlate with age, with older children showing more coherence and mentalising and less disorganisation. In a second study, Goldwyn et al. (1999) failed to find significant concordance between maternal AAI classifications and children’s MCAST classifications but did find significant associations between maternal Unresolved status and children’s Disorganisation (77%). Significant associations were in addition found for contemporaneous attachment classifications as assessed by the MCAST and the SAT (for secure versus insecure, 80%). Finally, temperament and behavioural symptomatology as rated by the mother and teachers bore no significant relationship to any of the MCAST attachment dimensions or to overall attachment classifications.
2.4.2.3 Conclusions Relating to Representational Measures

Whilst the "move to the level of representations" has provided the impetus for the development of attachment measures for preschool and middle childhood, the findings reviewed above present a somewhat mixed picture.

Taken together, the findings suggest that the SAT is a potentially useful measure in assessing mental representations of attachment in the above age range. However, issues of validity (Bowers et al. 1994; Shouldice & Stevenson-Hinde, 1992) and test-retest reliability and internal consistency (Wright et al. 1995) highlight the need for future research focusing on the psychometric properties of the SAT.

Furthermore, existing studies employing the SAT have used different coding systems in judging security of attachment. The divergence in the scales employed to assess internal representations of attachment, in particular the application of separate scales to the mild and strong picture (see for example, Slough & Greenberg, 1990) or the focus upon only strong separations (see for example, McCarthy, 1998), and the divergence in the criteria set for what constitutes mild or strong separations, demonstrate the inherent difficulty in the comparability of findings and highlight the need for a standardised coding system.

Additionally, several of the studies reviewed above have used separation-reunion behaviour as validation for attachment classifications based upon SAT responses and other representational measures. As noted in the previous section, separation-reunion procedures themselves have not been validated, highlighting the absence of a "benchmark" test of attachment in early and middle childhood.

Furthermore, an important issue concerns the reliance upon a priori classifications and the application of existing criteria used by one measure to develop a new measure. As Solomon and George (1999a) emphasise, whilst the development of new representational measures must be guided by the principles of attachment theory, it also needs to be based upon the material produced by the procedure.
A related question concerns the degree to which existing representational systems activate the attachment system. It is very likely that the stories used in different procedures differ with respect to enabling the discrimination of categories of responses across different ages. This point is clearly illustrated in the procedure devised by Bretherton et al (1990) whereby for younger children, the story of the monster in the bedroom provided better discrimination between the classification groups, whereas for older children clearer distinctions were drawn for the hurt knee and the separation and reunion stories (George & Solomon, 1996).

A further consideration has been the relation between cognition, language and attachment security. Assessments of internal representations of attachment in the preschool and latency years are invariably based upon language and cognitive abilities, which relate to the ability to construct coherent responses. Whilst in adulthood, linguistic abilities were found to be independent of security of attachment as assessed through the AAI (Bakermans-Kranenburg & van IJzendoorn, 1993), this is not necessarily the case in childhood. It is possible to conceive that children who are judged secure on the SAT or the ADI may in fact be cognitively and linguistically more developed. Whilst several studies have controlled for the potential influence of language upon rating of security of attachment and reported divergent findings, the majority of studies employing the SAT have not addressed this potential confound.

Finally, whilst adult attachment classifications are conceptualised in terms of a single “current state of mind” (Main & Goldwyn, 1998), Main et al’s (1985) study illustrates the difficulty in making the leap from independent IWMs of attachment figures, as is the case in the Strange Situation, to a single unifying internal working model in middle childhood. This is particularly central in light of evidence for the view of the independence of IWMs for mother and father. This view is shared by Bretherton (1985) raising the question of whether, “An integrated model of the self is built from participation in a number of discordant relationships? If so, how and when? Or are self models, developed in different relationships, only partially integrated or sometimes not at all?” (p30).
2.5 ATTACHMENT IN ADOLESCENCE

Adolescence constitutes a transitional period that is characterised by efforts to develop autonomy and become less dependent upon attachment figures. However, rather than being antithetical to the development of autonomy, attachment relationships are viewed as functioning to facilitate the establishment of greater independence (Allen & Land, 1999). Thus, similar to the interplay between exploratory and attachment behaviours observed in infants, adolescents may still use the attachment figures as a secure base at times of heightened distress, but with reduced frequency. Recent research suggests that it is the balance struck between attaining autonomy and maintaining a sense of relatedness that reflects attachment security in adolescence (Allen, Kuperminc & Moore, 1997). The negotiation of autonomy and relatedness reflects the increasingly complex and sophisticated goal-corrected partnership between adolescents and parents, manifested in the adolescent’s enhanced capacity in perspective taking. This process also entails the adolescent’s increased capacity to evaluate his/her attachment figures and relationships in a more objective manner. Further, adolescence constitutes a period where attachment needs and behaviours are increasingly transferred to peers (Burhmeister, 1992).

In recent years attachment in adolescence has emerged as a subject of empirical investigation and has been in part made possible by the advent of the AAI with the majority of studies employing the original AAI or modifications of it. Studies of individual differences in attachment strategies during adolescence have been informed by Main and Goldwyn’s (1998) notion of a “current mental state with respect to attachment”. Thus, research has been guided by the assumption of the emergence of a single overarching attachment organisation from distinct patterns of attachment behaviour and representations as they relate to different attachment figures found in infancy and childhood. Allen and Land (1999) argued that the emergence of an integrated attachment strategy is likely to occur during adolescence because of the developing capacity for logical and abstract reasoning, including the ability to consider counterfactual possibilities and draw comparisons between
relationships with different attachment figures both to one another and to hypothetical ideals. Further, an increasing capacity to differentiate the self from others enables the adolescent to view him/herself as distinct from attachment figures and less grounded in a particular relationship.

The following section turns to the study of attachment patterns in adolescence presenting studies that have used the AAI and adaptations of the AAI.

2.5.1 Stability and Change

Ammaniti et al. (2000; 1996)\(^8\) used a modified version of the AAI, termed the Attachment Interview for Childhood and Adolescence (AICA: Ammaniti, Candelori, Dazzi, De Coro, Muscetta, Ortu, Pola, Speranza, Tambelli & Zampino, 1990) to assess the stability of attachment patterns from ten to 14 years in a sample of 31 middle-class children. With the exception of using simplified language and inserting explanations to clarify more difficult questions, the interview remained unchanged in structure and content. The findings highlighted that the distribution of attachment classifications at ten years was not significantly different from the combined distribution of young adults, and did not differ from the distribution at 14 years. The overall stability across the four-year period was 71 percent with the highest stability reported for the Dismissing classification (78%).

Judith Trowell (April, 1998 personal communication) conducted a psychotherapy outcome study, comparing AAI responses of sexually abused and non-abused children. Eighty-one sexually abused children in the six to 14 years age range\(^9\) completed a modified version of the AAI at baseline and at two years after receiving psychoanalytic psychotherapy for one year. Subjects’ primary caregivers also completed the AAI.

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\(^8\) This study used a sample with a wide age range and hence could have been presented in the previous section.

\(^9\) Similarly, this study used a sample with a wide age range but is presented in this section for the sake of consistency and clarity.
In addition a control sample of 40 children matched for age, SES and IQ, and a sample of 21 matched non-abused clinical children diagnosed with various mental health problems completed AAIs. Additional measures were employed such as assessments for post-traumatic stress disorder (PTSD), Harter scales for self-perception, and family and clinical assessments. Preliminary results of 30 AAI transcripts of the sexually abused girls revealed that contrary to expectations, none of the abused children were classified as Unresolved. They were remarkably coherent in their discussion of attachment-related experiences and those experiences of abuse, although there were other indications of strong dissociation such as high levels of diagnosis of PTSD as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). The explanation put forward for this unexpected result was that the children had had extensive and repeated discussions concerning the events of abuse in dealings with professionals such as social workers, psychologists, police investigators and the courts, hence reflected in their overall coherence but potentially scripted responses (Judith Trowell, April, 1998 personal communication).

Recently, several longitudinal studies spanning 16-20 years have examined the relation between AAI patterns in adolescence and the same individual’s Strange Situation behaviour to mother at twelve months. Hamilton (1995; 2000) explored the AAI classification of 17-year-olds from 30 non-traditional American families. Hamilton (2000) reported 77 percent stability across 16 years for two-way classifications (secure versus insecure), and 63 percent for three-way classifications (A/B/C). Additionally, Hamilton (2000) found that negative life events were associated with continuity of attachment, operating primarily in terms of maintaining insecure attachments. Similarly, Waters, Merrick, Treboux, Crowell and Albersheim (2000) found overall 72 percent stability from infancy to early adulthood for the secure/insecure split in a longitudinal study of 50 middle-class American families. When mothers had reported no stressful life events in the intervening years, attachment stability rose to 78 percent. By contrast, Lewis, Feiring and Rosenthal (2000) failed to find continuity of attachment from infancy to early adulthood in a middle-class sample with discontinuity partly accounted for by
the experience of divorce in the family. Similarly, in a German sample, Becker-Stoll
and Fremmer-Bombik (1997) did not find correspondence between patterns of
attachment to mothers in infancy or at age six and the children's attachment
representations as assessed with the AAI at age 16. Further, following longitudinally
a high-risk sample, Weinfeld, Sroufe and Egeland (2000) found no evidence for
continuity of attachment patterns from infancy to early adulthood.

Concomitant with the study of continuity of attachment patterns from infancy to
adolescence and early adulthood, several studies addressing the degree of
concordance between maternal and adolescent attachment organisation (e.g. Allen,
Land, Liebman, Bell, & Jodl, 1997; Becker-Stoll & Fremmer-Bombik, 1997;
Rosenstein & Horowitz, 1996) have reported modest correspondence. High
correspondence was associated with families where adolescents were living with
both biological parents.

2.5.2 Conclusions Relating to the Assessment of Attachment in Adolescence

Taken together, the results from the above studies highlight the potential usefulness
of the AAI in assessing the attachment status of adolescents and yet present a
complex picture of stability and change. Some studies have shown remarkable
stability over almost two decades whilst others failed to find significant continuity.
The reviewed studies do converge in suggesting that continuity of attachment
patterns is mediated by intervening social-environmental factors (Lewis et al. 2000;
Weinfeld et al. 2000). However, the extent to which continuity of attachment
strategies from infancy to late adolescence may simply reflect continuities in the
quality of parenting received rather than continuities that are the product of a stable
internal model of the self in attachment relationships is not clear (Allen & Land,
2000). As van IJzendoorn and Bakermans-Kranenburg (1996) argued, studies
finding long-term continuity of attachment strategies may primarily evidence
stability in the parents' attachment strategies.
Furthermore, the applicability of the AAI to young adolescents (see for example Judith Trowell, April, 1998 personal communication) has not been well established. The difficulties in using an interview such as the AAI with young adolescents was highlighted by Ammaniti et al. (2000) suggesting that the coherence of the narratives in children and adolescence must be carefully assessed because often the “narrative diachronicity” (Bruner, 1994) is not followed. In their study, this was evidenced by the children’s tendency to shift between discussions of past and present. In addition, descriptions of attachment relationships were characterised by an emphasis upon shared activities rather than by a valuing of the interpersonal quality of the relationships. Whilst such emphasis on activities and material objects in adulthood would be considered as reflecting a Dismissing strategy, in early adolescence it may simply reflect a particular interest in activities and constitute a developmentally appropriate stage. Furthermore, Ammaniti et al. (2000) draws attention to the influence of children’s “linguistic egocentricity” (Piaget, 1923) reflected in their proclivity to neglect essential information in the narrative as means for making a message easily understood. The above features highlight the importance of adopting a developmental perspective when assessing attachment status through narratives in this age range.

Furthermore, the results of Ammaniti et al. (2000) and Trowell (April, 1998 personal communication) highlight the difficulties in simply applying the criteria of an existing system developed to capture attachment in adulthood to a younger age. Recent findings reported by Black, Jaeger, McCartney and Crittenden (2000) concur with the above in drawing clear differences between the content and discourse of adolescents and adults as captured in the AAI. Central differences emerged in the adolescents’ focus upon present relationships with parents, the relative homogeneity (either exclusively positive or negative) adjectives used to describe the relationship with each attachment figure, and the generality of responses, particularly evident in response to questions that demand reflection on past experiences. Additionally, differences were highlighted with respect to some of the markers indicative of the differing “states of mind” suggesting substantially lower scores than those observed in adults. Lastly, the distribution of attachment patterns diverged from that found in
adult normative sample, with a higher proportion of adolescents assigned the Dismissing classification (see also Ward & Carlson, 1995). The above findings suggest that markers of particular attachment patterns as operationalised within the AAI may not constitute developmentally appropriate indices of security or insecurity of attachment in adolescence. The difficulty in assessing the applicability of the AAI to younger samples is further compounded by the relatively broad age range of children assessed.

2.5.3 Alternative Approaches to the Classification and Assessment of Attachment in Adolescence and Adulthood

Although a detailed review of alternative approaches to the coding and classification of the AAI is beyond the scope of this chapter, three approaches are noteworthy and will be thus described in brief.

The first attempt to establish an alternative approach to the analysis of AAIs was developed by Grossman et al. (1988). Attempting to determine whether or not the individual was valuing or devaluing of attachment, four main components (e.g. coherence and parent’s supportive behaviour) were identified from which attachment classifications (secure versus insecure) were derived. Applying the system, Zimmermann and Grossmann (1997) reported two-way concordance of infant attachment and mothers’ AAI to be 78 percent and slightly weaker for infant-father dyads (64%).

Adopting a different approach, Kobak (1993) developed a 100-item Q-Sort for the analysis of the AAI, with most items derived from the Main and Goldwyn (1998) system. Akin to Water’s (1995) AQS method for infants and preschoolers, a criterion prototype sort is used to identify one of three main attachment classifications (Secure, Dismissing & Preoccupied). Findings of studies using Kobak’s (1993) Q-Sort concomitant with the AAI coding and classifications have typically reported overlap ranging from 61 percent to 74 percent (see for example Kobak, Cole, Ferenz-Gillies, Fleming, & Ganble, 1993).
Whilst both the above measures carry considerable promise, they contrast with the 
Main and Goldwyn (1998) in that the Unresolved and Cannot Classify categories are 
not identified thus making them less useful in the application to clinical and high-
risk samples.

Further, although not strictly speaking an alternative approach, the development of 
the Reflective Functioning scale (RF) established by Fonagy, Steele, Steele, Moran 
and Higgit (1991) constitutes an important addition to the analysis of AAI 
transcripts. Fonagy, Steele, Steele and Target (1997) defined reflective functioning 
as “the psychological process underlying the capacity to mentalise” (p5). Based in 
part on the meta-cognitive monitoring scale of the AAI, the RF scale provides 
operational criteria for the assessment of individual differences in meta-cognitive 
capacity placing particular emphasis upon adults’ recognition and understanding of 
the self and others in terms of feelings, beliefs, intentions and desires. Fonagy et al. 
(1997) view the development of reflective functioning as rooted in Secure 
attachment relationships and further suggest that the parent’s capacity to reflect upon 
the intentionality of their children’s behaviour facilitates children’s self-control, 
affect regulation, and enhances communication. The RF scale has been widely 
applied and has yielded impressive findings suggesting that it provides a powerful 
tool in significantly discriminating clinical from non-clinical populations (Fonagy et 
al. 1996), and in predicting attachment security in infancy (Fonagy et al. 1991; 
Steele, Steele & Fonagy, 1996).

Whilst in the study of adolescent and adult attachment the AAI has been by far the 
most widely applied, using the Main and Goldwyn (1998) coding and classification 
system, alternative methods such as self-report measures have been developed in 
order to assess adolescents’ and adults’ perceptions of their relationship with parents 
and peers. Because these measures bear little relevance to the current thesis, they 
will not be described extensively.

Amongst such measures, the Inventory of Parent and Peer Attachment (IPPA: 
Armsden & Greenberg, 1987) was developed and conceptualised as “assessing i) the
positive affective/cognitive experience of trust in the accessibility and responsiveness of attachment figures, and ii) the negative affective/cognitive experiences of anger and/or hopelessness resulting from unresponsive or inconsistently responsive attachment figures" (p431). The IPPA has been used extensively to assess security in adolescence and has been shown to relate to several theoretically relevant outcome variables such as the degree of conflict with parents, self-esteem and life satisfaction (Armsden & Greenberg, 1987), and less symptomatology and distress (Kenny & Perez, 1996).

A further multi-item, self-report measure of adult attachment styles designed to assess the quality of attachment to the individual's primary attachment figure was developed by West and Sheldon (1988) and West and Sheldon-Keller (1992). The Reciprocal Attachment Questionnaire for adults includes items that tap various aspects of the attachment system such as proximity-seeking, separation protest, feared loss, availability and use of the attachment figure. Concomitantly, the questionnaire defines general patterns of attachment such as angry withdrawal, compulsive caregiving, compulsive self-reliance, and compulsive care seeking. In addition, West and Sheldon-Keller (1994) devised a separate questionnaire, the Avoidant Attachment Questionnaire, for adults who maintain that they do not have a primary attachment figure. They further report moderately high internal consistency and test-retest reliability over a four-month period (West & Sheldon-Keller, 1994).

2.6 CONCLUSIONS

Attachment theory has been a theoretical framework that has guided research and has generated a substantial body of literature. The current review of literature attempted to delineate the development of attachment measures designed to assess IWMs of attachment figures and relationships in infancy, childhood and adulthood.

In infancy, Strange Situation behaviour has been shown to reflect the nature and quality of parent-child interactions not only within a laboratory setting but also as related to home observations. In addition, infants' attachment status has been shown
to be independent for mother and father in keeping with the notion of the
development of IWMs based on the accumulated history of interactions with a
specific attachment figure. Furthermore, attachment status as assessed in the Strange
Situation has been demonstrated to be stable over time and unrelated to
temperamental variation. Finally, the distribution of attachment patterns has been
shown to be comparable across diverse cultures albeit with some variation.

In adolescence and adulthood, attachment patterns as assessed by the AAI have been
repeatedly demonstrated to reflect the adults’ current state of mind with respect to
attachment. It is independent of IQ, memory, discourse style and social desirability.
It has been powerfully shown to predict the child’s attachment status for both infants
and older children. It has been shown to be stable and reliable over time and similar
distributions have been observed cross-culturally. Overall there is clear support for
Bowlby’s notion of IWMs and their pervasive influence and resistance to change as
reflected in the high inter-generational transmission of attachment patterns.

Notwithstanding the significant developments in the study of attachment in infancy
and adulthood, measures developed to assess attachment organisation in early and
middle childhood have proved far less robust. Whilst current instruments designed
to elicit mental representations of attachment in childhood using drawings
(Separation Anxiety Test; SAT: Shouldice & Stevenson-Hinde, 1992; Slough &
Greenberg, 1990), family photos and drawings (Main et al. 1985), story stems
(Bretherton et al. 1990), and doll play (Solomon et al. 1995) have generally
demonstrated associations between mother and child attachment classifications, low
test-retest reliability (Wright et al. 1995), inadequate validity (Bowers et al. 1994),
and the absence of uniform coding systems undermine these results and thus
underscore the need for future studies addressing these inconsistencies. In a similar
vein, behaviourally derived classification systems designed to assess attachment
status in the above age group have also produced mixed findings with relatively low
stability over time and inadequate validity.
The above review highlights the "measurement gap" in the study of attachment in middle childhood and thus the need to establish a developmentally appropriate measure for eight to twelve year olds. The following chapter will outline the main considerations in developing such a measure and subsequent chapters will present the development and validation of the Child Attachment Interview.
CHAPTER 3. DEVELOPMENTAL CONSIDERATIONS IN THE ASSESSMENT OF ATTACHMENT IN MIDDLE CHILDHOOD

Although measures designed to assess attachment organisation in infancy and adulthood have been widely applied and well established as reviewed in Chapter 2, the study of attachment in early and middle childhood has proven more problematic. The measurement of attachment in infancy has been clearly restricted to the behavioural level whilst in adulthood it has been solely within the domain of language and therefore measured representationally. It remains unclear as to whether an exclusively behavioural or representational approach, or a particular combination of the two, would provide the most meaningful assessment of attachment in early and middle childhood. Existing measures developed for this age group have not as yet resolved this issue.

Researchers have developed separation-reunion procedures akin to the Strange Situation paradigm and yielding analogous attachment classifications for 2.5 to 4.5 year olds (Cassidy & Marvin, 1989) and six-year-olds (Main & Cassidy, 1988). However, the absence of a sequence of critical moments in the behavioural assessment of separations and reunions comparable to those provided in the Strange Situation coupled with children’s growing verbal abilities poses difficulties in developing valid and reliable behaviourally derived classification systems for these age groups. Indeed, although some studies employing separation-reunion procedures have reported clear associations between children’s responses and attachment representations (e.g. Bretherton et al. 1990; Main & Cassidy, 1988), others have demonstrated only weak associations and low stability over time (e.g. Main & Cassidy, 1988; Shouldice & Stevenson-Hinde, 1992; Slough & Greenberg, 1990).

In parallel, a plethora of instruments designed to elicit mental representations of attachment in early and middle childhood have been developed each sharing the assumption that inferred mental representations would reflect children’s attachment organisation in the same way as behaviour patterns do. Semi-projective measures eliciting mental representations through drawings such as the SAT (Shouldice &
Stevenson-Hinde, 1992; Slough & Greenberg, 1990), family photos and drawings (Main, Kaplan, & Cassidy, 1985), story stems (Bretherton et al. 1990; Green et al. 2000), and doll play (Solomon et al. 1995) have also been employed with mixed results. Without exception, the above reported studies have used contemporaneously behavioural and representational measures in an attempt to validate these measures. Whilst studies have consistently demonstrated associations between classifications derived behaviourally and representationally, the need to replicate such findings (Main, 1995), low test-retest reliability (Wright et al. 1995), and questions of validity (Bowers et al. 1994) highlight the need for future studies addressing these inconsistencies.

As the findings reviewed in Chapter 2 and above highlight, the development of any new measure of attachment must centrally be guided by considerations of children’s developmental phase. By way of addressing this, the following sections will delineate children’s development across various domains, principally focusing upon children’s developing emotional understanding, the development of self-concept, and aspect of cognitive development such as the emergence of autobiographical memory and the construction of narratives in middle childhood.

3.1 THE DEVELOPMENT OF SOCIAL AND EMOTIONAL UNDERSTANDING

Recent years have witnessed a burgeoning interest in children’s development of social and emotional understanding (e.g. Dunn, 1996; Harris, 1994). Studies of children’s conversational reference to feelings and mental states suggest a dramatic increase between the ages of three and four years (Brown & Dunn, 1996). Further accumulating evidence highlights a link between children’s participation in conversations about feelings, mental states and causal talk, and later success on emotion understanding and “mind-reading” tasks (Dunn & Brown, 1993; Brown & Dunn, 1996).

Emotion words such as happy, sad and scared, and references to their own mental states first appear in children’s speech late in the second year (Bretherton &
Beeghly, 1982). At that age however, their understanding of emotions is confined to the notion that certain situations give rise to corresponding emotional reactions (e.g. birthdays make me happy), are restricted to action dispositions (e.g. if I’m sad, I’m likely to cry), and are simply caused by objects; a situationist understanding of emotions. By contrast, adults recognise that emotional reactions are mediated by one’s mental states, are subjective experiences distinct from actions, and that they are not simply caused by objects; a mentalistic subjective understanding of emotion (Wellman, Harris, Banerjee & Sinclair, 1995).

Middle childhood marks a shift from a situationist understanding of emotions to a more mentalistic subjective one. This is partly evidenced by children’s growing ability to conceptualise both positive and negative emotions and express ambivalence. The capacity to conceive of two emotions being provoked either successively or simultaneously and to integrate two opposing emotions was hypothesised to only develop at the latter part of middle childhood at about ten years of age (Harter, 1983; Harter & Buddin, 1987). More recently however, Brown and Dunn (1996) found that even six-year-olds showed an understanding of mixed emotions in response to prompts about the likely feelings of characters in stories and when asked about times when they had mixed feelings (times when they felt happy and sad about something at the same time). Identifying possible precursors to individual differences in the development of understanding of multiple emotions, Brown and Dunn (1996) highlighted the contributions of past positive interactions with siblings, participation in family discussion about the causes of individual’s behaviour, language skills, and children’s concurrent reports of negative experiences at home and at school.

The findings relating to the development of emotional talk in children more generally suggest that as a result of dialogue with their parents, children come to understand emotions (Nelson & Fivush, 2000)\(^\text{10}\). In the study of attachment-related narratives, accumulating evidence converges in demonstrating the links between security of attachment and emotional openness (Main et al. 1985; Oppenheim, 1997;)

\(^{10}\) This issue will be further expanded in subsequent sections.
Emergent findings suggest that secure children are more likely to use emotional language and are more likely to discuss emotionally charged and conflictual themes. In a study of security of attachment in infancy and understanding of mixed emotions at age six, Steele, Steele, Croft, and Fonagy (1999) found significant associations between children’s understanding of multiple emotions, their attachment security to mother at twelve months, and maternal state of mind with respect to attachment. Moreover, security of attachment at twelve months constituted a significant predictor of mixed emotion understanding five years later. Interestingly, children’s understanding of ambivalent emotions was not related to their attachment status at twelve months with father, and was negatively correlated with paternal attachment security as assessed by the AAI. The observed negative correlation was largely accounted for by a sub-sample of children who were securely attached to mother but whose fathers had been judged insecure. Steele et al. (1999) therefore concluded that secure infant-mother acted as a moderator for the influence of paternal state of mind with respect to attachment upon children’s understanding of multiple emotions.

3.2 THE DEVELOPMENT OF SELF-CONCEPT

With increased social and emotional understanding children also come to develop a concept of the self that comprises core psychological characteristics including mental abilities and ways of feeling. The psychological self is viewed as developing through children’s growing capacity to consider aspects of their experiences together and view them as all part of the same “inner” self (Wolf, 1990). Young children’s thinking tends to polarise and become all-or-nothing with respect to a single dimension (Bierman, 1983). Thus when young children are presented with information that is seemingly ambiguous or inconsistent (e.g. an observation of a mother engaging in both loving and punishing behaviour), they tend to categorise the individual in split terms as either good or bad, happy or sad.

Shantz (1981) suggested that “if one were to view the child ‘as a psychologist’ who subscribes to certain positions or theories, the developmental changes, broadly put,
suggest the following: prior to seven or eight years of age, the child conceives of persons largely as a demographer-and-behaviourist, defining the person in terms of his/her environmental circumstances and observable behaviour; during middle childhood, persons are conceived more as a trait personality theorist would, ascribing unqualified constancies to persons; and by the onset of adolescence, a more ‘interactionist’ position emerges in which people and their behaviour are often seen as a joint function of personal characteristics and situational factors” (p28).

Thus, middle childhood marks a progression from consideration of physical traits or activities as distinguishing the self from others to a more complex, mature appreciation of the nature of the self as made up of psychological traits. In addition by the age of ten years, children are able to reconcile both good and bad qualities of the self (Witt, Cavell, Heffer, Carey, & Martens, 1988), reflected also in their ability to understand mixed emotions as noted previously.

The idea that self-concept develops within the context of social interactions is shared by many psychologists of diverse persuasions. A central aspect of social interactions that has been considered particularly pertinent to the formation of the self is early interaction with attachment figures (Bowlby, 1969; Stern, 1985). In arguing for the complementary nature of IWMs of the self and attachment figures, Bowlby (1979) contended that, “Typically these [securely attached] children grow up to be secure and self-reliant, and to be trusting, cooperative, and helpful towards others. In the psychoanalytic literature such a person is said to have a strong ego; and he may be described as having “basic trust” (Erickson, 1950), “mature dependence” (Fairbairn, 1952) or as having “introjected a good object” (Klein, 1948). In terms of attachment theory, he is described as having built up a representational model of himself as being both able to help himself and as worthy of being helped should difficulties arise” (p136). For Bowlby, if the child experiences a sense of being valued and loved, he or she will construct a model of the self as worthy and lovable that informs interactions with other individuals and constitutes the foundations for a confident self that is worthy of love. Thus, “A much loved child may grow up to be not only confident of his parents’ affection but confident that everyone else will find him lovable too. Though logically indefensible, these crude over-generalisations are
none the less the rule. Once adapted, moreover, and woven into the fabric of working models, they are apt henceforward never to be seriously questioned” (pp204-205).

Whilst generally there is a consensus that emergence of self-concept arises from early social interactions, the age at which global self-esteem develops remains a contentious issue. Bowlby (1979) argued that global self-esteem develops in early childhood through dyadic interaction with attachment figures. An alternative viewpoint, (e.g. Harter, 1983; Shantz, 1981) informed by Piagetian theory, suggests that young children do not possess the necessary mental sophistication in order to view themselves in global integrated terms and are thus limited to concrete, ability-specific (e.g. “I run fast”) conceptions of the self. Harter (1983) argued that, “Children would not be able to make meaningful judgements about their worth as a person until approximately the age of eight. The very concept of “personness,” as a generalisation about the self, is not yet firmly established among younger children” (p143). Harter (1983) supported her contention with the findings that young children’s responses to the global self-esteem component of her scale did not consistently load on a particular factor as they did with older children.

3.3 THE DEVELOPMENT OF EVENT MEMORY AND NARRATIVE SKILLS

Along with central milestones in children’s social and emotional understanding, and a developing self-concept, middle childhood marks a period of considerable change in cognition. Piaget argued that by the age of seven major cognitive advances had taken place, in particular, the transition from pre-operational to more advanced concrete operational thinking. This position however is contested by contemporary theorising that places this transition much earlier at around four years of age. There is however little controversy that important cognitive changes do take place in middle childhood: a marked decline in centration, that is, a reduced tendency to consider only a single piece of information when multiple pieces are relevant; a developing ability to distinguish appearance from reality (Flavell, Miller & Miller, 1993); and perhaps
most relevant to attachment, the development of the capacity to reflect upon thought processes, to think about thinking, termed meta-cognition (Main, 1991). Evidence suggests that most primary school children exhibit an understanding of conservation of physical quantities such as number, length, and mass (Campbell & Bickhard, 1986) albeit limited to concrete characteristics as opposed to abstract concepts. In middle childhood, children develop more effective classification skills, are able to focus upon more than a single dimension and are no longer restricted by the limitations imposed by centration, again limited to the concrete.

During middle childhood, children also show marked improvement in their ability to remember events and the last three decades have witnessed significant advances in the study of young children’s event memory. Prior to the 1970s, the dominant view within developmental psychology was that young children’s memory abilities were poor as reflected in unorganised and fragmentary thought processes (Piaget & Inhelder, 1973). This view has however been called into question with the growing recognition of the contextual determinants of children’s performance on cognitive tasks. Within this shift, a plethora of studies have been undertaken guided by two central questions. How do children represent and recall personally experienced events, and how do event representations change as a function of age and experience? (Fivush, 1997).

Addressing the first question, emergent findings suggest that even young children (as young as three years of age) hold well organised representations of familiar and recurring events that are sensitive to logical order and temporal structure (Nelson & Gruendel, 1981). These early generalised representations or “scripts” (Schank & Abelson, 1977) are considered as an early form of semantic memory or general knowledge (Nelson & Fivush, 2000). Greater experience of a particular event however appears to enhance young children’s capacity to report more elaborate scripts (Fivush, 1984; Nelson & Gruendel, 1981). Notwithstanding the role of experience, the findings highlight that older children’s reports are more elaborate and complex, and that their event knowledge is more flexibly organised thus allowing them to report more conditional (e.g. you can buy a banana or an apple) and optional
activities (e.g. you might eat pudding) than younger children (Fivush, Kuebli, & Clubb, 1992; Price & Goodman, 1990). Younger children show more difficulty than older children in representing variability within an event (Fivush et al. 1992).

Investigating children's memory for specific instances of recurring events, it appears that memories of specific instances fade and become integrated into the script. The findings converge in suggesting that children, like adults, have difficulty recalling single instances that do not deviate significantly from the general script but that recall for specific instances is enhanced by the provision of specific cues (Fivush, 1984; Pillemer, Picariello, & Pruett, 1994). Further, the findings indicate that similar to the difficulties shown by young children in representing variations of a specific event, they also have more difficulty than older children in representing specific episodes during the early phases of script development.

Studies assessing children's memory for novel experiences have indicated that even at two-and-a-half years of age, children are able to recall specific, novel experiences in considerable detail and can retain these memories over long periods of time (Fivush, 1997; Hamond & Fivush, 1990). The extent to which novel episodes are remembered is in large part influenced by the frequency of verbal and/or behavioural rehearsal. The findings show that younger children benefit from rehearsal soon after the occurrence of the event in order to maintain the memory (Sheffield & Hudson, 1994).

What the findings above highlight is that human memory functioning is to a great extent the result of socialisation practices beginning in early childhood and continuing into adulthood (Nelson & Fivush, 2000). The development of children's ability to recall specific events typically occurs within joint reminiscing between parents and children. Parent-guided conversations thus constitute the foundation upon which children's capacity to refer to past events develops. More specifically, it is the "scaffolding" provided by parents in the structuring and content of the narrative that facilitates children's references to past events in keeping with Vygotsky's (1978) emphasis on the role of others in facilitating and consolidating the child's conversational skills. Extensive research has shown that parents, in
particular mothers, differ in the manner in which they reminisce with their children in terms of elaborativeness and the use of types of reminiscing devices (Fivush, 1998). Reese, Haden and Fivush (1996) found that mothers who engage in highly elaborated and detailed conversations about the past with their young children facilitate their children’s developing abilities to recall episodes from their past in greater detail. In addition, Fivush (1991) and Haden, Haine, and Fivush (1997) demonstrated that mothers who focus on orienting information (e.g. who was there, where and when the event occurred) have children who focus on providing orienting information in their own independent accounts later in development. By contrast, mothers who pay greater attention to emotional evaluation (e.g. what individuals thought and felt) have children who recount highly evaluated personal narratives. The findings thus converge in highlighting that through parent-guided conversations children not only learn to recall past events in detail but also gain skills in how to structure their memories into organised narratives and to incorporate emotional evaluative information that conveys why a particular event is personally significant (Nelson & Fivush, 2000).

Further, there is growing evidence of gender and cultural differences in event memories that may also result from differential socialisation. Findings suggest that parents tend to talk in a more elaborated, emotional and embellished manner with preschool daughters than with preschool sons (Fivush, 1998; Reese et al. 1996). Differences are also reflected in the autobiographical narratives of girls and boys, with girls’ narratives being more detailed, more coherent and more emotionally laden than boy’s narratives (Fivush, 1998).

The notion of reminiscing devices is in keeping with Labov and Waletzky’s (1967) description of narratives as comprising two basic functions; a reference function which concerns the actual events arranged sequentially, and an evaluation function which provides meaning to the narrative, complementing the reference function. This view implies that a coherent and organised narrative is one which embodies these two functions, conceptualised by Bruner (1986) as the “landscape of action” and the “landscape of consciousness”. Nelson (1999) propounded that whilst the basics of the
landscape of action are understood during the first three years of life, the landscape of consciousness only emerges later on. Children younger than three appear to lack an awareness of internal states that motivate action. This contention is supported by extensive research in the field of children's developing theory of mind. The ability to impute mental states to the self and others and use these mental states in predicting behaviour begins to emerge at three to four years of age. Convergent findings suggest that children begin to demonstrate an understanding of the causal relationship between desires, beliefs and actions, in addition to an appreciation that similar to actions, emotions are in part governed by one's underlying desires and beliefs (Harris, 1989). By age four, normally developing children are quite competent at reasoning about false beliefs (e.g. Perner, Leekam, & Wimmer, 1987), as they are able to competently distinguish between appearance and reality (Flavell, Flavell, & Green, 1983). The capacity to understand second-order beliefs further develops at around the age of six (Perner & Wimmer, 1985).

The notion that event memory and narrative construction arises from socialisation practices is in keeping with the central tenets of attachment theory. Bretherton (1999) argued that "emotionally open communication within an attachment relationship is likely to facilitate the child's construction of a more coherent, and therefore more accessible, well cross-referenced organisation of working models that, in turn, fosters the ability to retrieve relevant memories and evaluations on-line and thus to generate coherent narratives about attachment experiences in response to questions from a non-judgmental interviewer" (p348).

The emergence of language as the means to communicate about and to represent the past, the present and the future, also consolidates the child's conception of time. Research on the development of temporal awareness suggests that constructs of clock time and calendar time emerge around age seven to nine (Wessman & Gorman, 1977). Further, conceptions of temporal order (i.e. the succession of events) and temporal duration (i.e. the length of interval between events) develop only with the advent of concrete operational thinking at around the ages of eight or
nine. This is evident in younger children’s tendency to judge recent events as further back in time compared with older children’s temporal ordering (Friedman, 1978).

In addition, an elaborated sense of personal and historical time emerges only in adolescent years (Wessman & Gorman, 1977). Whilst adolescents show an awareness of personal continuity in the sense of past and future selves, younger children show a tendency to describe themselves in terms of the immediate present (Damon & Hart, 1982). The focus upon the present is also evident in children’s memory and recall capacity, with younger children demonstrating a memory bias towards recent events (Fitzgerald, 1981). Recent studies suggest that not only do young children show a bias towards recent events but also adolescents tend to bring forth descriptions of relationships that are most recent (e.g. Ammaniti et al. 2000; Black et al. 2000). Scheuerer-Englisch, (1989) showed that ten-year-old’s representations of their mothers and/or their fathers as supportive and emotionally available did not correspond to their quality of attachment in infancy. The above findings highlighted that the children’s current working models of the parents as supportive were more strongly influenced by current experiences within the parent-child relationship than by early attachment patterns.

3.4 CENTRAL CONSIDERATIONS IN DEVELOPING A NARRATIVE-BASED ASSESSMENT OF ATTACHMENT IN MIDDLE CHILDHOOD

As highlighted in Chapter 2, the need to develop age appropriate measures for assessing how attachment patterns are manifested in middle childhood has been clearly identified within the attachment field. Questions of how best to assess attachment in the aforementioned age range need to be guided by several central conceptual and methodological considerations outlined below.

The first important issue concerns the question of whether assessments of attachment organisation should focus upon children’s attempts to regain physical proximity at times of distress or address children’s perceptions of the availability of the attachment figures. Crittenden (1992) argued that it is important to define the quality
of attachment in terms that are relevant to the period under consideration. It is clear that during middle childhood and adolescence, children continue to be vulnerable to a wide range of threats and continue to use their attachment figures as secure bases from which to explore (Marvin & Britner, 1999). The set goal of the attachment system during these years however is no longer physical proximity but rather the availability of the attachment figure. This is reflected in Bowlby’s contention that, “a) belief that lines of communication with the attachment figure are open, b) that physical accessibility is possible, and c) that the attachment figure will respond if called upon for help” (Bowlby, personal communication, 1987, cited in Ainsworth, 1990) constitute the set goals as part of the goal-corrected partnership. Assessing attachment in this age group therefore needs to access the degree to which children perceive the parent as available and accessible should the need for help arise.

An additional and critical conceptual consideration concerns whether an assumption can be made that an integrated state of mind with respect to attachment has been achieved, or are separate IWMs arising from the history of interaction with each caregiver present. This was highlighted by Bretherton (1985) suggesting “is an integrated internal working model of the self built from participation in a number of discordant relationships? If so, how and when? Or are self-models, developed in different relationships, only partially integrated or sometimes not at all?” (p30).

A further methodological issue concerns the suitability of separation-reunion procedures as a valid form of assessment of attachment in middle childhood. Whilst separation-reunion procedures akin to the Strange Situation appear to indicate clear attachment strategies in young school-aged children, language clearly plays an increasingly important role and therefore the need to construct representational measures that capitalise on children’s growing verbal abilities is advocated (Main et al. 1985). As Grossmann et al. (1999) argued “assessments of attachment quality beyond infancy should include security of mental exploration, which is evaluated predominantly through narrative” (p777). This is particularly the case because “like the systems for assessing the attachment patterns of infants and preschoolers, the reunion system for six-year-olds under-emphasises aspects of the child’s security of
exploration or organisation of emotions and behaviours in situations that challenge his or her adaptation. This fact would make the ecological validation of these patterns in the child's day-to-day behaviour more difficult" (p775). Separation-reunion procedures thus do not focus upon the child's cognitive, motivational or emotional evaluation, nor do they tap children's “freedom to evaluate experiences” as the mental equivalent of “freedom to explore” (Main & Goldwyn, 1998).

A related issue concerns the question of whether it is more appropriate to adopt a projective or direct questioning approach. Without exception, existing representational measures have been semi-projective in nature. Underlying the use of semi-projective measures has been the argument that children would identify and thus project onto the protagonist in the story their attachment experiences, and so their responses would reflect their IWMs of attachment figures. However, interpretation of narratives elicited through projective approaches is made difficult because it is unclear whether the child is sufficiently engaged and involved so as to identify with the protagonist and thus reveal his/her internal organisation. Hitherto, there have been few attempts to develop direct childhood assessments of attachment, guided by the assumption that children would fail to comprehend and thus respond, when asked directly about current as well as early attachment experiences. However, direct questioning may prove a fruitful avenue to explore as a way of accessing mental representations of attachment figures and indeed recent studies utilising a modified version of the AAI provide some initial support for this (e.g. Judith Trowell, personal communication, 1998, Ammaniti et al. 2000).

An additional methodological issue concerns whether an interview-based assessment of attachment should focus upon past or current relationships. In light of evidence that young children show a tendency to describe themselves in terms of the immediate present (Damon & Hart, 1982) and that this tendency is also shown in children's memory and recall capacity, with younger children demonstrating a memory bias towards recent events (Fitzgerald, 1981), it suggests that it may be more appropriate to ask children about current relationships rather than past relationships as per the AAI. As Kobak (1999) argued “focusing on the availability
of attachment figures has critical implications for attachment researchers and clinicians. First, security from infancy through adulthood derives from *current* appraisals of the attachment figure’s availability. This places an emphasis on the need to assess security in the context of current attachment relationships...attachment security results from a dynamic transaction between internal working models and the quality of current attachment relationships” (p39).

Furthermore, special attention should be given to the process by which narratives are elicited, highlighting the need to adopt a developmentally appropriate interviewer stance. Oppenheim and Waters (1995) argued that narrative assessments of internal representations are co-constructions and thus the interviewers’ probes play a central role in shaping children’s responses. Further, the need to use scaffolding in helping children to remember is well evidenced by findings indicating that with appropriate cues children can better recall specific event memories (e.g. Nelson & Fivush, 2000).

In addition, adopting a representational approach, most measures have derived attachment classifications based solely upon an analysis of children’s verbal responses. However, non-verbal communication, not limited to separation-reunion behaviour, may be a very useful source of information in identifying distinct attachment patterns, and would go some way to integrate representational and behavioural approaches to the study of attachment. This would be in keeping with previous researchers recommendations for examining different modalities of behaviour in the context of an interview (e.g. Main et al. 1985).

Further, traditionally, research within the attachment framework has been guided by a categorical approach whereby distinct patterns of attachment behaviours or representations are identified. Whilst linear scales have often been constructed as complementary to the classification systems, very few studies (e.g. Oppenheim, 1997) have adopted a dimensional approach in establishing attachment organisation. The traditional categorical approach and the identification of fairly broad categories does not allow for a fine-tuned analysis of distinct attachment dimensions and their possible interaction in the internal organisation of attachment beyond infancy.
The above review suggests that middle childhood constitutes a period of considerable development in both the cognitive and socio-emotional domains. An increased mentalistic and subjective understanding of emotions, the emergence of a psychological self, and the development of a biographical self, based upon shared experiences with attachment figures constitute central developmental tasks achieved in the middle childhood years.

It is therefore argued that the aforementioned developmental tasks must be considered in any attempt to design a developmentally appropriate measure of attachment for this age group. The remainder of the thesis turns to the construction and validation of the Child Attachment Interview (CAI), which was guided, in considering what should be measured and how, by these developmental considerations.
CHAPTER 4. ADDRESSING THE "MEASUREMENT GAP": THE DEVELOPMENT OF THE CHILD ATTACHMENT INTERVIEW

The evidence reviewed in Chapter 3 converges in suggesting that children in middle childhood can talk relatively fluently about their own and others' emotional and mental states, have a fairly well developed autobiographical memory and psychological self. The question of whether children can respond to direct questioning about their attachment-related experiences and about their psychological selves in a coherent and collaborative manner therefore arose.

4.1 THE DEVELOPMENT OF THE CHILD ATTACHMENT INTERVIEW PROTOCOL

The Child Attachment Interview (CAI) was developed in an attempt to overcome the shortcomings of existing attachment measures as outlined in Chapters 2 and 3. Assumptions underpinning the development of the CAI protocol and coding and classification system are outlined below in turn.

As noted in Chapter 3, current representational measures have been developed based upon the premise that attachment organisation cannot be assessed by direct questioning and have therefore been semi-projective in nature. However, a review of recent findings suggested that it is possible and moreover valid to ask young adolescents (10-14 years olds) directly about attachment relationships and experiences using modified versions of the Adult Attachment Interview (Ammaniti et al. 2000; Judith Trowell, personal communication, April 1998).

Unlike the Separation Anxiety Test (SAT: Klagsburn & Bowlby, 1976), the Attachment Doll-Play Interview (ADI: Oppenheim, 1997) and other semi-projective instruments, the CAI was developed with the aim of eliciting mental representations of attachment figures by directly asking children about their experiences with, and perceptions of, their primary caregivers. Central to the CAI was the degree to which
the child conceived their parents as emotionally available, responsive and thereby felt able to call upon them as a secure base.

The development of the interview protocol was conceptually based on the Adult Attachment Interview (AAI: George et al. 1985), and guided by central considerations as outlined in Chapter 3. Firstly, akin to the AAI, the CAI needed to activate the attachment system so as to elicit attachment-related information. Secondly, whilst the interview needed to be constructed so as to reveal structural variations in presentation, it also needed to be sufficiently flexible and suitably similar to a clinical interview in order to help children with the demands placed upon them, but without compromising the veracity and relevance of the information elicited. Thirdly, in contrast to other representational instruments, the interview needed to include questions concerning children’s relationships with both mother and father to ensure that mental representations of both attachment figures were elicited. Fourthly, the interview protocol should focus upon current rather than early attachment relationships as guided by the findings of children’s bias towards recent events. Lastly, the administration of the interview should be designed to yield the necessary information that would form the basis for the subsequent coding of the interview.

Guided by the above criteria, the questions comprising the interview were initially taken from the Berkeley Autobiographical Interview (Main et al. 1985) and the AAI, and adapted for use with children in the eight to twelve years age range. The CAI was conceived of as not only calling upon children’s ability to recount attachment-related interactions and experiences with attachment figures in a coherent and plausible manner, but as also calling upon their capacity to think and reflect on these experiences. The CAI was therefore not designed to simply elicit autobiographical or episodic information, but rather to attempt to capture the affective nature of the relationships described. For example, the CAI sought to tap into memories the child held concerning times of crises and separations from parents, in addition to positive aspects of their relationship with their parents. In this respect, the CAI was considered as analogous to the Strange Situation (Ainsworth et
al. 1978) and was characterised as a meeting between a child and a stranger/interviewer in an unfamiliar setting. Both interview content and the setting were assumed to activate the child’s attachment system and thus require the child to draw upon his/her internal working models (IWMs) of his/her attachment figures as facilitating or inhibiting engagement with the task. The quality of IWMs as revealed through the interview are thought to reflect the quality of representation of “goal-corrected partnership”.

Important consideration was given to the manner in which the interview was to be conducted with an emphasis upon the adoption of a developmentally appropriate interviewer stance. The scaffolding of the child’s episodic memory and the encouragement of a child-centred (egocentric) representation of the self and relationship episodes was therefore underscored. Further, focus on eliciting emotional processing and the fostering of the child’s “freedom for mental evaluation” (Main & Goldwyn, 1998) was highlighted.

4.2 THE DEVELOPMENT OF THE CHILD ATTACHMENT INTERVIEW CODING AND CLASSIFICATION SYSTEM

Alongside the development of the CAI protocol, the current study was concerned with the establishment of a corresponding coding and classification system for the assessment of attachment organisation based upon the material elicited in the CAI.

The CAI coding and classification system was constructed in keeping with the principles of attachment theory and guided in part by the coding and classification system of the AAI. In developing the CAI coding and classification system several important criteria were identified. Firstly, no a priori assumptions should be made concerning the applicability of the existing AAI coding system to responses elicited using the CAI. The development of the system therefore had to initially be based upon a careful examination of the material elicited by the CAI. Secondly, attachment classifications should be derived separately for mother and father in keeping with the conceptualisation of independent IWMs within the Strange Situation classification.
system. Thirdly, the coding and classification of responses elicited by the CAI should be based upon a linguistic and a behavioural analysis thus integrating both modes of communication. The development of the coding system was additionally informed by previous literature in considering central dimensions that have consistently been shown to be markers of security of attachment. A brief description of these dimensions follows.

(i) Emotional Openness. Sroufe’s (1996) affect-regulation model, which posits a link between the attachment system and the development of affect regulation, was instrumental in considering emotional openness as an important dimension. This model states that the expectation that an attachment figure will be effective in restoring homeostasis guides behaviour. Avoidant-Dismissing individuals are thus shown to consistently minimise or down-regulate affect, Resistant-Preoccupied individuals adopt a strategy of up-regulation, and Disorganised-Unresolved individuals exhibit a breakdown in strategy and are often overwhelmed by emotions. Furthermore, several studies employing narrative assessments of internal representations have identified emotional openness as an important aspect of children’s attachment-related narrative and moreover as a marker of security of attachment (Slough & Greenberg, 1990; Wright et al. 1995; Oppenheim, 1997). Emergent findings suggest that Secure children are more likely to demonstrate high emotional openness in discussing emotionally charged and conflictual themes. Based on previous findings emotional openness was hence considered an important dimension to be included in the current coding system.

(ii) Preoccupied Anger. In the AAI coding system “preoccupied anger” has emerged as an important characteristic that often distinguishes Insecure-Preoccupied individuals from both secure and other insecure patterns. It was therefore considered an important dimension in identifying a particular child strategy that may be akin to the adult one and would potentially be manifest in the manner in which attachment themes are discussed in the CAI.
(iii) **Idealisation.** "Idealisation" has been identified as a distinct characteristic of individuals who are classified as Dismissing of attachment (in particular Ds1) in the AAI and it was thus considered informative to attempt to characterise and measure the degree to which children, like adults, idealise parental figures and further how this may indicate a dismissing strategy.

(iv) **Dismissal.** "Active derogating dismissal" of attachment figures and relationships that characterises individuals falling within the Ds2 sub-classification of the AAI was also considered important in an attempt to characterise this Avoidant-Dismissing pattern in children's attachment-related narratives.

(v) **Self-Organisation.** Studies addressing the social and cognitive correlates of security of attachment have consistently shown associations between security of attachment and higher self-esteem and self-competence (Cassidy, 1988; Oppenheim, 1997; Sroufe, 1988). A Secure child is thus thought to hold an internal representation of the self as an active agent that is able to plan, organise and execute a goal to its satisfactory conclusion. It was thus determined to be important to identify individual differences in children's ability to generate resolutions to conflicts that are self-initiated and executed as a potential marker of security of attachment.

(vi) **Balance of Positive/Negative References to Attachment Figures.** Whilst this dimension has not been previously directly assessed, children's ability to present a balanced view of parental figures, reflecting an integrated internal model of attachment figures was assessed and hypothesised to be associated with security of attachment.

(vii) **Use of Examples.** Children's ability to provide relevant and elaborate examples was also considered a central dimension and as a possible marker of security of attachment.
(viii) Resolution of Conflicts. Children's ability to generate and describe constructive resolutions to conflicts has been identified as a central dimension in the assessment of attachment security (Oppenheim, 1997) and was thus included in the CAI.

(ix) Overall Coherence. Within the AAI coding system, the "coherence of transcript" has been shown to be the strongest correlate of infant security of attachment and is central in deriving an adult attachment classification. Whilst no a priori assumptions were established concerning the centrality of the coherence of transcript in determining the child's attachment classification, it was considered an important dimension.

Concomitant with the linguistic analysis of attachment-related narratives, a behavioural analysis of children's responses to the interview situation and questions was deemed meaningful. Features such as the maintenance of eye contact throughout the interview, changes in tone of voice, marked anxiety and others were hence considered potentially informative in deriving attachment classifications. For example, children who maintained little eye contact and spoke with a flat, depressed tone, and representationally provided impoverished narratives were considered insecure.

The main objectives of the current study were two-fold. Firstly, to construct a developmentally appropriate measure and coding system for the assessment of attachment organisation in middle childhood, namely the Child Attachment Interview (CAI). Within the above objective, three aims were subsumed: i) to develop an interview schedule that would be comprehensible to children in middle childhood; ii) to develop an interview schedule that would elicit attachment-related narratives that are diverse in both structure and content and reflect the child's attachment representations; iii) to devise a formal coding and classification system, founded upon CAI narratives and informed by attachment theory.

Secondly, to examine the psychometric properties of the emergent instrument, focusing in particular on issues of reliability. As in any process of test construction,
the establishment of adequate reliability and validity is essential and will thus be undertaken in the following ways;

The first planned analysis will establish inter-correlations between the CAI scales as a way of potentially highlighting particular attachment strategies as reflected in children's responses to the CAI.

Kline (1993) suggested that high internal consistency is a prerequisite for high validity of any assessment tool and hence an examination of the internal consistency of the CAI scales will subsequently be conducted.

Alongside the establishment of internal consistency, determining inter-rater reliability constitutes a central part of reliability testing of a new instrument (Bakermans-Kranenburg & van IJzendoorn, 1993) and will thus be assessed in three ways; Firstly, by comparing the ratings assigned on the CAI scales between the two judges. Secondly, by examining inter-rater agreement for main attachment category placement, that is, Secure versus Insecure. Thirdly, by establishing the level of agreement between the two raters for sub-classification placement, that is, Very Secure, Secure, Insecure, and Very Insecure.

Additionally, it is considered central to establish whether attachment classifications as derived from the CAI are independent of age, gender, socio-economic status (SES), ethnicity, and one or two parent households.

Finally, examining the construct validity of the CAI, differences between those children judged Secure and those judged Insecure as assessed by the CAI will be explored by comparing ratings on the twelve CAI scales between the two groups.
4.3 METHOD

4.3.1 Participants

The process of recruitment of participants was guided by two considerations; i) to obtain a sample that would capture the diversity of mental representations relating to attachment within the population as a whole, ii) to obtain a sample that may provide clarity in the examples of different attachment relationships.

By way of establishing a reliable attachment measure for middle childhood, a heterogeneous sample was recruited of normal children, that is, a non-clinical population, and from a clinical population in which purely physical illness predominated, for example, cystic fibrosis (CF). Existing evidence suggests that the child's psychological adjustment is more dependent upon healthy family functioning than on the presence of the illness itself (Simmons, Corey, Cowen, & Keenan, 1987). The daily regimen of care required by children with CF was likely to place attachment relationships between child and parent under strain. Consequently it was considered that exploring attachment relationships in children where issues of availability of affection and support from parents were particularly pronounced may provide clear examples of particular patterns of relating. The sample therefore comprised normal children and those suffering from CF. It was not the aim of the present study to include attachment-related representations in middle childhood of children who were psychologically disturbed as it was considered that doing so at this stage would serve to confound rather than clarify the potential results. Furthermore, no attempt was made to explore differences between the groups but rather to endeavour to access a broad range of attachment-related mental representations.

4.3.1.1 Normal sample

Ethical approval for the reported study was obtained under the auspices of a larger standardisation project undertaken at the Anna Freud Centre. Letters inviting the children to participate in the study were sent out to parents (see Appendix A) along
with information sheets explaining the nature of the project and what would be required of both the child and the parent (Appendix A) along with parental and child consent forms (Appendix A).

Participants who formed the sample for the pilot stage were selected from a larger outcome measure standardisation study at the Anna Freud Centre (AFC) and were self-selected, their parents having responded to information circulated in local schools. The sample comprised seven girls and ten boys ranging in age from seven years and eight months to twelve years and four months (Mean = 9 years and 7 months; SD = 1.4)

For the main study, a sample comprising 20 children were recruited from two sources; a school in North West London and a children’s club in South West London.

Table 4.1 shows the demographic characteristics of the normal sample. Children ranged in age from six years and seven months to twelve years and six months (Mean = 10.0; SD = 1.9). Approximately equal numbers of males and females were selected and they came from predominantly white (95%), middle-class (65%), two parent households (90%).
Table 4.1. Demographic Data of the Normal Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Normal Sample (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 10.0 (SD = 1.9)</td>
</tr>
<tr>
<td>Range</td>
<td>6.6 – 12.5</td>
</tr>
<tr>
<td>Females</td>
<td>9 (45%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>19 (95%)</td>
</tr>
<tr>
<td>2-Parent Family¹</td>
<td>18 (90%)</td>
</tr>
<tr>
<td>Social Class² I-II</td>
<td>13 (65%)</td>
</tr>
<tr>
<td></td>
<td>III-IV 7 (35%)</td>
</tr>
</tbody>
</table>

¹Includes re-marriages.
²Based on employment status-Classification of Occupation (1990)

4.3.1.2 Cystic Fibrosis (CF) sample

Ethical approval for the recruitment of the CF sample was granted by the Institute of Child Health Ethics Committee. Child and parental consent was obtained for the use of information obtained in anonymous form for research purposes along with video recording agreement forms. Parents and children were in addition given information sheets outlining the nature of the study and what would be required of them as participants in the study. The information pack was followed by a letter sent to the parents of prospective participants explaining in detail the study aims and including a consent form for participation in the study (see Appendix A).

Out of a total of 76 families with CF children, 20 families returned the consent forms thereby agreeing to take part in the study. Table 4.2 presents the demographic characteristics of the CF sample. The children ranged in age from seven years and seven months to twelve years and nine months (Mean = 10.8; SD = 1.7). Approximately equal numbers of males and females were selected and they came from predominantly white (95%), middle-class (70%), two parent households (95%).
Table 4.2. Demographic data of the CF sample.

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>CF Sample (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>$X = 10.8 (SD = 1.7)$</td>
</tr>
<tr>
<td>Range</td>
<td>7.6 – 12.7</td>
</tr>
<tr>
<td>Females</td>
<td>12 (60%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>19 (95%)</td>
</tr>
<tr>
<td>2-Parent Family$^1$</td>
<td>19 (95%)</td>
</tr>
<tr>
<td>Social Class$^2$ I-II</td>
<td>14 (70%)</td>
</tr>
<tr>
<td>III-IV</td>
<td>6 (30%)</td>
</tr>
</tbody>
</table>

$^1$Includes re-marriages.
$^2$Based on employment status-Classification of Occupation (1990)

The demographic characteristics of the combined sample are presented in Table 4.3. As shown in Table 4.3, children ranged in age from seven years and one months to twelve years and nine months (Mean = 10.6; SD = 1.6). Approximately equal numbers of males and females were selected and they came from predominantly white (95%), middle class (67.5%), two parent households (85%).

Table 4.3. Demographic Data of the Combined Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Complete Sample (N=40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>$X = 10.6 (SD = 1.6)$</td>
</tr>
<tr>
<td>Range</td>
<td>7.1 – 12.7</td>
</tr>
<tr>
<td>Females</td>
<td>21 (52%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>38 (95%)</td>
</tr>
<tr>
<td>2-Parent Family$^1$</td>
<td>34 (85%)</td>
</tr>
<tr>
<td>Social Class$^2$ I-II</td>
<td>27 (67.5%)</td>
</tr>
<tr>
<td>III-V</td>
<td>13 (32.5%)</td>
</tr>
</tbody>
</table>

$^1$Includes re-marriages.
$^2$Based on employment status-Classification of Occupation (1990)
4.3.2 Measures

4.3.2.1 The Child Attachment Interview protocol

Version I of the Middle Childhood Attachment Interview: Pilot Sample

The development of the interview protocol was informed by attachment theory and previous studies (see below) and based upon the AAI protocol and the Berkeley Autobiographical Interview (Main et al. 1985) adapted for use with latency age children. Dr Mary Target, Tiffany Schneider and John Crosse (who formed part of the research team at the Anna Freud Centre) developed the first draft of the protocol in 1996. This was used for a small number of experimental interviews which were written up for an MSc project by Marie Weisz in the beginning of 1997 (Weisz, 1997). These early interviews were analysed qualitatively, Ms Weisz being supervised by Dr Target with additional independent coding by Dr Andrew Gerber, using a very simple scheme based on relationship episodes and guided by attachment principles. Dr Adrian Datta (AD), then a clinical psychologist in training, joined the group in 1997, followed by the present author. Over the following year, Dr Datta and the author revised both protocol and coding scheme much more systematically, working in consultation with Dr Mary Target and Prof. Peter Fonagy. Dr Tom O’Connor and Dr Tania Pilley also contributed to this development group at different times. This group therefore oversaw the first full versions of the measure and its coding system, which are to be reported here, the drafting and collection of examples being the responsibility of the author and Dr Datta.

The interview consisted of 31 questions addressing several attachment-related themes (see Appendix 2). Questions 1-4 of the protocol were designed to orientate the child to the interview task and similarly to orientate the interviewer to the child’s attachment history. These were followed by a question tapping the child’s self-perception, asking the child to think of three words to describe himself/herself and to further substantiate these with specific examples. Although not a direct measure of attachment organisation in itself, the question was included because it was
considered to potentially illuminate the child’s internal working model of the self as worthy or unworthy. Further, Cassidy (1988) suggested that with young children it might be fruitful to explore both the model of the self within the relationship with the attachment figures as well as the model of the self separate from this relationship. Low self-esteem and self-worth have been previously linked in the attachment literature with insecurity of attachment (Bowlby, 1973). Additionally, the child’s self-concept could reflect the child’s ability to consider affective characteristics versus concrete, physical attributes, which could in future be used to indicate security versus insecurity. Questions 6-11 and questions 12-17 of the protocol focused upon the child’s relationship with his/her mother and father, respectively. It was hoped that these questions would elicit attachment-related information that would be used in subsequently deriving attachment classifications. A secure child was thus expected to hold an internal representation of one or both parents as available and responsive and who could be viewed as a secure base from which the child could explore and hence develop (Bowlby, 1979; Main, 1991). Based on the findings of previous studies (Main et al. 1985; Slough & Greenberg, 1990) questions 18-27 were designed to elicit information concerning the child’s experience of loss through death of attachment figures or significant others and separations from, and conflicts with, his/her primary attachment figures. These themes were considered central because there were assumed to potentially elicit mild distress and thereby activate more readily the attachment system. The four final questions were included as ending questions to enable the child to end the interview on a positive note.

The underlying reasoning for the inclusion of a relatively large number of questions was threefold: Firstly, as means for determining the appropriate phrasing of questions in order to ensure that children’s responses reflected the intended understanding of the questions. Secondly, to identify those questions that triggered access to IWMs of attachment figures and hence would elicit relevant and detailed attachment-related information. Thirdly, to evaluate the length of the interview and whether the child’s attention and engagement with the task could be focused throughout. There was thus a deliberate overlap between some of the interview
questions that would give way to possible refinements in later versions of the CAI protocol.

Version I of the CAI protocol was subsequently piloted on 17 children and video recorded. The systematic examination of the pilot data highlighted the need for modifications to the interview protocol on several grounds. Firstly, the duration of the interview proved to be too long often taking an hour to complete. A close examination of the narratives revealed that children demonstrated difficulties in remaining consistently engaged with the task, thus clearly having a detrimental effect upon the quality and relevance of the information elicited. Secondly, the over inclusion of questions at the outset was aimed at determining those questions that were particularly sensitive in eliciting attachment-related episodes and it was anticipated that not all would produce the desired information. Indeed, this was reflected in the CAI narratives elicited with some questions providing general autobiographical information that bore little or no relevance to the child’s attachment status. Furthermore, a detailed case-by-case study of the narratives often revealed impoverished responses. It was apparent that some questions proved unintelligible and confusing and hence produced few or no responses.

Revising the CAI Protocol

On the basis of the observations described above modifications to the interview protocol were undertaken by AD and the author. Consequently, several CAI questions were dropped and others were re-phrased so to elicit attachment-related information. Three questions that were thought of as warm up questions based on items from the Berkeley Autobiographical Interview were dropped because they failed to elicit what was considered attachment-relevant information. These included questions concerning the first three things the child could remember, the best thing that ever happened to the child, and the worst thing that ever happened to the child.

In addition, the questions, “Can you tell me three words to describe how you feel when you are with your mum/dad” were dropped because they heavily overlapped
with the questions, "Can you tell me three words that describe your relationship with mum/dad" that were considered more appropriately phrased. Further, questions concerning what happens when mum and dad are ill were dropped because they were deemed irrelevant to the representations of attachment figures the child may hold and failed to produce relevant and elaborate responses. A typical response of a child was, "My mum/dad is never ill", or "I can't remember the last time mum/dad was ill, it was ages ago". The questions, "Can you tell me about a time when you might have found your parents confusing/frightening" was also eliminated because children consistently demonstrated difficulties in understanding the questions and thus failed to provide responses that could potentially be used in informing an attachment classification. Similarly, the problem-solving question was removed because it was not considered as strictly speaking an attachment-related question and failed to produce relevant responses. Finally, the two ending questions concerning the child's wish to be a parent him/herself and what s/he would like to be when they grew up were dropped because they were felt to be unnecessary and uninformative.

Continuity from Version I to Version II was maintained in that CAI questions that were of particular interest and which were assumed to potentially elicit mild distress and thereby activate more readily the attachment system were left unchanged. Thus, questions concerning the child's relationship with his/her parental figures and those concerning separations from, and conflicts with, parents were considered most pertinent.

Additional refinements to the administration of the CAI protocol were also considered in order to produce a more focused interview that would elicit children's detailed descriptions of interactions with their attachment figures. These descriptions were considered most informative in identifying individual differences in attachment patterns and were termed "Relationship Episodes" (RE)\textsuperscript{11}. It was this reconceptualisation and emphasis upon REs that resulted in the inclusion of prompts that were assumed to elicit specific REs throughout the interview. This line of thinking consequently shaped the interview protocol in two ways. First, interviewers were instructed to seek elaboration of REs whenever they occurred in the interview.

\footnote{\textsuperscript{11}A complete definition and description of relationship episodes follows.}
Second, probes were added to the protocol to elicit detailed information pertaining to the relationship episodes under discussion.

*Version II of the Middle Childhood Attachment Interview*

Based upon the above refinements, Version II of the CAI protocol included a total of 14 questions that were all considered to elicit important and relevant information that would be potentially useful in highlighting individual differences in attachment organisation. The interview thus consisted of a warm-up question that was considered to orientate the interviewer to the child’s family circumstances, a self-concept question, questions concerning the child’s relationship with his/her mother and father respectively, questions focusing upon separations and loss, and finally an ending question concerned with the impact of their experiences of being parented upon their sense of being parents.

For a full description of the CAI protocol including instructions of administration and prompts see Appendix B.

*4.3.2.2 CAI coding and classification system*

The coding system was initially developed as an attempt to explore and meaningfully describe the information provided by children and to consider its relevance to the attachment organisation of the child. The development of the system was the consequence of group meetings with Mary Target, Peter Fonagy, Adrian Datta and the author. Videotaped interviews were systematically examined in an attempt to identify central dimensions that captured important aspects of the attachment-related narratives elicited through the CAI.

The only guiding principle was that the coding system should be theory-driven and would be free to draw on other coding systems in as much as they were grounded upon attachment theory. Initially it was not decided whether a categorical or continuous measurement would be devised. Although empirically it would be
satisfying to devise a measure that neatly bridged the gap between the classifications obtained from the Strange Situation and the AAI (yielding 4 primary classifications) it was considered that such an objective would constrain and limit the development of the CAI and so no explicit aim of this sort was stated.

The approach taken in developing the current coding system was guided by the notion that individual differences would be readily observable through a detailed psycho-linguistic and behavioural examination of attachment-related narratives as elicited using the CAI.

Whilst the interview protocol was closely based upon the AAI protocol, no a priori assumptions concerning the appropriateness of the AAI coding and classification systems were made. The case-by-case study of children's responses to separations, loss, conflicts as well as other positive interactions with attachment figures thus formed the initial stage of the development of the coding. The developed coding system was based in conceptualisation upon the AAI and the Strange Situation but was adapted as a developmentally and age appropriate system. In comparison with the AAI, the CAI is clearly less concerned with retrospective accounts of early childhood experiences and the current assessment of past experiences. Focus is placed upon relatively recent attachment-related events and how these are represented and explored within the interview.

The first stage of the coding involved the identification of children’s descriptions of interactions with parents termed Relationship Episodes (REs). These were considered most informative in assessing the child’s attachment status.

**Definition of Relationship Episodes**

The concept of REs was informed by Luborsky and Crits-Christoph’s (1990) Core Conflictual Relationship Theme (CCRT) method in which REs identified from the narrative of a psychotherapeutic session were individually studied. They defined REs thus,
“Any part of a session that occurs as a relatively discrete episode of explicit narration about relationships with others or with the self. The demarcation of the relationship episode is facilitated by the fortunate fact that as a narrative it tends to have a beginning, a middle and an end”.

Based upon Luborsky and Crits-Christoph’s (1990) conceptualisation of REs, defining criteria were subsequently set in order to guide the rater in identifying REs throughout the narrative. These are presented below.

Any part of the narrative that contained a description of an interaction between a child and an attachment figure constituted an RE. Whilst most REs would involve the child and his/her primary caregivers, a small proportion of REs may include other family members, friends and teachers. These, although not focal, were also used to inform the child’s attachment status. REs considered of particular relevance were those representing instances where caretaking behaviour of attachment figures was called upon. On occasions, a more flexible definition was applied when the narrative produced by the child concerning attachment-related experiences was impoverished. In those circumstances “non-interactions” were recorded as these were the only information provided, albeit poor in quality, and in themselves reflected a particular strategy. A non-interaction was described as one where the child made reference to the attachment figure when requested to recount an RE but the episode in fact described an activity that was independent of the attachment figure and so no direct contact was described.

Applying these criteria in identifying REs in preliminary viewing revealed the richness of the information elicited and highlighted the importance of not only the linguistic content and form of the narrative, but also non-verbal communication as a key source of information. This marked a departure from the AAI coding and classification system where rating was based exclusively upon a detailed analysis of discourse and was not informed by individual differences manifested in behaviour. Thus, the CAI coding system attempted to integrate both representational and behavioural information in distinguishing attachment organisation in latency age.
children and therefore built upon both behaviourally derived classification systems, that is, the Strange Situation, and representational measures, that is, the AAI. This integration went some way to address the suggestions for multiple assessments of attachment patterns for this age group (Cicchetti, Cummings, Greenberg, & Marvin, 1990; Main, 1991).

**Coding Pilot Interviews**

Coding of the interviews was undertaken by the author and AD. The CAI narratives were coded directly from the video-recorded interviews rather than the coding of verbatim transcripts. This allowed a linguistic as well as a behavioural analysis. As non-verbal communication was undoubtedly tied in with the nature of what was being discussed, it was considered difficult to isolate and thus rate one independent of the other. This therefore formed the rationale for rating interviews directly from video.

Through a preliminary examination of 20 pilot interviews, operational criteria for rating REs were established through a recursive process of examining the narratives in an attempt to draw commonalities and differences in form and content. This process resulted in the identification of central dimensions that were based on the material elicited. Although as stated above no assumptions were made with respect to the applicability of AAI dimensions, the examination of narratives suggested that some of the central markers identified within the AAI captured important aspects of CAI narratives and were thus modified appropriately for rating CAIs.

In the following section, a brief outline of the identified operational criteria is presented.
Linguistic Analysis: Scales for the Assessment of Current State of Mind with Respect to Attachment

The majority of the scales developed aimed to assess the child’s overall current state of mind with respect to attachment that was assumed to be reflected in the narrative as a whole. Three of the scales, namely, Preoccupied Anger, Idealisation and Dismissal were rated separately for mother and father with all ranging from 1 to 9. Because IWMs of attachment relationships are assumed to reflect the history of interactions with each attachment figure, it was considered necessary to capture attachment strategies manifested in Idealisation, Dismissal, and Preoccupied Anger separately for each caregiver. The central dimensions identified within the CAI that were scored for the narrative as a whole include Emotional Openness, Balance of Positive and Negative References to attachment figures, Use of Examples, Self-Organisation, Resolution of Conflict, and Overall Coherence. For example, the scale of Emotional Openness was conceived in an attempt to measure the extent to which the child was able to not only label emotions but also provide affect-laden description that reflected an understanding of the interplay between affect, mental states and behaviour. In addition, the Coherence scale was considered to capture the child’s ability to present an integrated and consistent account of his/her attachment relationship whilst being collaborative. A detailed description of the CAI scales and the respective identified anchor points are presented in Appendix C.

Behavioural Analysis

As noted earlier, a behavioural analysis was undertaken in addition to the linguistic analysis as summarised above. Whilst several behavioural markers were identified as potentially informative, these were recorded but not rated.

In recording non-verbal communication, responses to a particular query which included marked changes in behaviour were noted, for example, turning away, drawing legs to body, as well as marked anxiety in response to a particular question as manifested in excessive fidgeting, rocking, or explicit request to return to parent.
In addition, the extent to which eye contact was maintained or shifted from the interviewer at particular points in the interview was noted. The tone of voice was considered both generally and noticeable changes in response to particular questions. Finally, the discrepancy between content of narrative and accompanying behaviour was identified, that is, incongruities or discrepancies between the nature of the episode recounted and the behaviour displayed. For example, a child might have described an unfavourable incident with a parent where he/she got hit, but have an inappropriate and incongruent facial expression.

At the present time however, behavioural information has only been recorded and has not as yet been formally considered in arriving at an attachment classification.

A copy of an example-coding table is presented in Appendix C.

**The CAI Classification System**

Subsequent to rating the narratives based on the above scales, an attachment classification was arrived at by considering ratings on all scales. These guidelines were developed based upon both theory driven expected relationships between scales and empirical findings relating to similar AAI scales.

**Guidelines for Assigning an Attachment Classification**

1) Overall ratings were assigned for mother and father independently.

To obtain a Secure classification, the child must have been assigned a rating of five or above on the positive scales such as Emotional Openness, Balance of Positive/Negative References, Resolution of Conflicts, and Overall Coherence. In addition, the child must have been assigned a score of three or less on the Idealisation, Dismissal and Preoccupied Anger Scales. To obtain an Insecure classification, the child must have been assigned a rating of five or less on the
positive scales as listed above and be assigned a score of three or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.

2) Sub-classifications were assigned of Secure/Very Secure or Insecure/Very Insecure.

To obtain a Very Secure sub-classification, the child must have received a score of seven or above on the positive scales as presented above, and been assigned a score of three or less on the Idealisation, Dismissal and Preoccupied Anger Scales. To obtain a Very Insecure sub-classification, the child must have received a score of four or below on the positive scales along with a score of five or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.

A complete description of the criteria for the assignment of attachment classifications is provided in the CAI manual presented in Appendix C. For a table of samples and CAI versions see Appendix D, Table D27.

4.3.3 Procedure

4.3.3.1 Administration

The interview was administered by AD either at the child’s school, local after-school club, or home and formed part of a battery of measures administered over one to two sessions, including a concurrent assessment of attachment using the SAT. The interview was conducted in a quiet room with interviewer and child sitting face to face and was videotaped throughout. The duration of the entire session ranged between an hour and an hour and a half depending on the child’s responses.

4.3.3.2 Coding

Consequent upon the development of the CAI coding and classification as described in Section 4.3.2.2, AD and the author undertook the independent ratings of the 20
interviews chosen at random from the complete sample. Each rater subsequently coded ten of the remaining 20 interviews.

4.4 PLANNED DATA ANALYSIS

The first planned analysis will establish inter-correlations between the CAI scales as a way of potentially highlighting particular attachment strategies as reflected in children's responses to the CAI. This will be followed by determining the internal consistency of the CAI.

By way of establishing the reliability of the CAI further, inter-rater reliability will be assessed in three ways. Firstly, by comparing the ratings assigned on the CAI scales between the two judges using two-way mixed model intra-class correlations (ICC3), and percentage of agreement. As judgements concerning ratings on the CAI scales may be subject to measurement error, it was considered important to use ICC to examine the degree to which judges were in agreement whilst taking into consideration factors such as rater bias. Secondly, by calculating the percentage of agreement and Cohen's kappa statistic for main attachment category placement (Secure versus Insecure) between the two raters. Thirdly, by calculating the level of agreement between the two raters for sub-classification placement (Very Secure, Secure, Insecure, Very Insecure) using Kendall's tau-b statistic.

Additionally, the relationship between demographic variables and attachment security will be examined by using independent samples t-test and Chi-square tests.

Finally, examining the construct validity of the CAI, differences between those children judged Secure and those judged Insecure as assessed by the CAI will be explored in two ways: Firstly, ratings on all 12 CAI scales will be compared between the two groups employing t-tests; Secondly, sub-classification comparisons will be explored by constructing contingency tables but no formal statistical test will be carried out due to the small sample size.
4.5 RESULTS

4.5.1 Descriptive Results

The descriptive results pertaining to the CAI scales are presented in Table 4.4. As shown in Table 4.4, with the exception of the Preoccupied Anger scale, ratings on all CAI scales were not restricted to a narrow band of low or high scores (Mean ranged from 2.6 to 5.5, SD ranged from 1.6 to 2.8). Ratings for Preoccupied Anger with respect to mother and father respectively ranged from one to five (Mean = 1.3, SD = 0.85; Mean = 1.5, SD = 1.0), suggesting a narrower use of the scale.

Table 4.4 Means, SDs and Ranges of the CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Mean (SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>4.8 (2.1)</td>
<td>1-9</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.0 (2.1)</td>
<td>1-9</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>5.5 (1.6)</td>
<td>1-9</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.3 (.85)</td>
<td>1-5</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.5 (1.0)</td>
<td>1-5</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>2.6 (1.9)</td>
<td>1-7</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>2.7 (2.0)</td>
<td>1-9</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>3.2 (2.7)</td>
<td>1-9</td>
</tr>
<tr>
<td>Dismissing of Father</td>
<td>3.3 (2.8)</td>
<td>1-9</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.5 (1.7)</td>
<td>3-9</td>
</tr>
<tr>
<td>Coherence</td>
<td>5.2 (2.0)</td>
<td>1-8</td>
</tr>
</tbody>
</table>

4.5.2 Inter-Correlations Between CAI Scales

In order to examine the relationship between ratings on the CAI scales, inter-correlations were computed using Pearson Product Moment correlations (r) and are presented in Table 4.5.
As shown in Table 4.5, positive correlations ranged from $r = .04$ to .87 and negative correlations ranged from $r =-.15$ to -.84. Statistically significant positive correlations were observed between Emotional Openness and Balance of Positive And Negative References to attachment figures ($r=.68$), Use of Examples ($r=.67$), Resolution of Conflict ($r=.64$), Self-Organisation ($r=.61$) and Coherence ($r=.76$). Emotional Openness in addition correlated negatively with Idealisation with respect to mother ($r=-.49$), Dismissal with respect to mother ($r= -.73$), and Dismissal with respect to father ($r= -.70$). Preoccupied Anger with respect to father only showed positive correlations with Preoccupied Anger with respect to mother ($r=.70$) and with Dismissal with respect to father ($r=.46$). Preoccupied Anger with respect to mother correlated positively with Dismissal with respect to father ($r=.46$), and correlated negatively with Coherence ($r=-.43$).

Idealisation with respect to mother correlated positively with Idealisation with respect to father ($r=.70$), and both respectively correlated negatively with Self-Organisation ($r=-.48; r=-.46$), and Coherence ($r=-.42; r=-.46$). Dismissal with respect to mother correlated positively with Dismissal with respect to father ($r=.87$), and both respectively correlated negatively with Resolution of Conflict ($r=-.73; r=-.61$), Self-Organisation ($r=-.60; r=-.48$), and Coherence ($r=-.84; r=-.75$). Resolution of Conflict correlated positively with Self-Organisation ($r=.77$) and Coherence ($r=.80$). Lastly, Self-Organisation also correlated positively with Coherence ($r =.81$).
<table>
<thead>
<tr>
<th></th>
<th>EO</th>
<th>Bal</th>
<th>UoE</th>
<th>PA-M</th>
<th>PA-F</th>
<th>ID-M</th>
<th>ID-F</th>
<th>DS-M</th>
<th>DS-F</th>
<th>RES</th>
<th>SO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bal</td>
<td>.68*</td>
<td></td>
<td>.67*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UoE</td>
<td>.67*</td>
<td>.62*</td>
<td></td>
<td>.62*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA-M</td>
<td>-.19</td>
<td>.01</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA-F</td>
<td>-.33</td>
<td>-.20</td>
<td>.09</td>
<td>.70*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID-M</td>
<td>-.49*</td>
<td>-.46*</td>
<td>-.48*</td>
<td>-.13</td>
<td>-.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID-F</td>
<td>-.38</td>
<td>-.37</td>
<td>-.44</td>
<td>.13</td>
<td>.04</td>
<td>.70*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS-M</td>
<td>-.73*</td>
<td>-.62**</td>
<td>-.63**</td>
<td>.40</td>
<td>.42</td>
<td>.27</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS-F</td>
<td>-.71**</td>
<td>-.57**</td>
<td>-.52*</td>
<td>.46*</td>
<td>.46*</td>
<td>.26</td>
<td>.32</td>
<td>.87**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RES</td>
<td>.64**</td>
<td>.57**</td>
<td>.64**</td>
<td>-.34</td>
<td>-.20</td>
<td>-.39</td>
<td>-.39</td>
<td>-.73**</td>
<td>-.61**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SO</td>
<td>.61**</td>
<td>.60**</td>
<td>.77**</td>
<td>-.12</td>
<td>.07</td>
<td>-.48*</td>
<td>-.46*</td>
<td>-.60**</td>
<td>-.48*</td>
<td>.77**</td>
<td></td>
</tr>
<tr>
<td>COH</td>
<td>.76**</td>
<td>.66**</td>
<td>.77**</td>
<td>-.43*</td>
<td>-.30</td>
<td>-.42*</td>
<td>-.46*</td>
<td>-.84**</td>
<td>-.75**</td>
<td>.80**</td>
<td>.81**</td>
</tr>
</tbody>
</table>

Key: *p < .01, **p < .001

1Key to scale abbreviations. EO – Emotional Openness; Bal – Balance of Positive/Negative References to attachment figures; UoE – Use of Examples; PA-M/F – Preoccupied Anger with respect to mother/father; ID-M/F – Idealisation with respect to mother/father; DS-M/F – Dismissal with respect to mother/father; RES – Resolution of Conflicts; SO – Self-Organisation; COH – Overall Coherence.

4.5.3 Internal Consistency of CAI Scales

Internal consistency between the twelve CAI scales for mother and father respectively was calculated using Cronbach’s alpha as the reliability statistic. Internal consistency for mother = .92 and for father = .91, were both high (an alpha coefficient of .70 is considered acceptable for reliability; Kline, 1993).
4.5.4 Inter-Rater Reliability

As noted in Section 4.3.3.2, the author and AD, who jointly developed the current CAI coding and classification system, rated pilot responses to the CAI and discussed differences of agreement. Inter-rater reliability was subsequently established for CAI ratings for a total of 20 interviews based on the independent ratings of AD and the author.

**Inter-Rater Reliability for the CAI Scales**

Inter-rater reliability on the CAI scales across the two raters was established by computing the percentage of exact agreement in addition to intra-class correlations using two-way mixed model (ICC3), reporting single measure intra-class correlations.

The percentages of agreement for the CAI scales are presented in Table 4.6. As indicated in Table 4.6, using conservative criteria, percentage of exact agreement varied across scales with some scales producing low agreement and others revealing high agreement (the range of percentage of exact agreement was 45% - 95%). In particular, ratings on Emotional Openness (75%), Preoccupied Anger with respect to mother and father (95% and 70% respectively), Idealisation and Dismissal with respect to father (75% and 70% respectively), and Resolution of Conflict (70%) were shown to be high. Using slightly less stringent criteria, percentage of agreement within 1-scale point was very high without exception (75%-100%). Agreement as computed by intra-class correlations was also very high and ranged from ICC= .60 to .97. Lower, albeit, adequate correlations were observed for Anger and Idealisation with Respect to Father (.68 and .60 respectively; a correlation of .70 is considered acceptable; British Psychological Society, 1993).
Table 4.6. ICC3 Correlation Coefficients and Percentage of Exact Agreement and Agreement Within 1-Scale Point for all CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>ICC3 Coefficients</th>
<th>% Exact Agreement</th>
<th>% Agreement within 1 scale-point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>.97</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>.87</td>
<td>45</td>
<td>80</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>.83</td>
<td>60</td>
<td>95</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>.84</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>.68</td>
<td>70</td>
<td>89</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>.85</td>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>.60</td>
<td>75</td>
<td>79</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>.91</td>
<td>55</td>
<td>75</td>
</tr>
<tr>
<td>Dismissing of Father</td>
<td>.95</td>
<td>70</td>
<td>84</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>.89</td>
<td>70</td>
<td>95</td>
</tr>
<tr>
<td>Self-Organisation</td>
<td>.89</td>
<td>50</td>
<td>85</td>
</tr>
<tr>
<td>Overall Coherence</td>
<td>.92</td>
<td>60</td>
<td>95</td>
</tr>
</tbody>
</table>

**Inter-Rater Reliability for CAI Main Classifications**

Based upon ratings on the above CAI scales, main classifications, namely, Secure or Insecure with respect to mother and father respectively were assigned and converted into security scores whereby Secure = 1 and Insecure = 2. For the 20 CAIs rated a perfect agreement (100%; kappa = 1.00) was obtained for classifications for both mother and father.
Inter-Rater Reliability for CAI Sub-Classifications

Based upon the CAI scales and placement within a main classification of attachment, attachment sub-classifications were assigned and converted into security scores whereby Very Secure = 1, Secure = 2, Insecure = 3, and Very Insecure = 4 for both mother and father respectively. Inter-rater reliability was computed using a Kendall's tau-b coefficient ($\tau$). Complete agreement was obtained for attachment sub-classifications with respect to mother, and for sub-classifications with respect to father ($\tau = 1.00; 100\%$).

4.5.5 The Relationship between Attachment Security and Demographic Variables

The relationship between age and CAI attachment classifications for mother and father respectively was determined by independent sample t-tests and did not reach statistical significance [for mother $t(38) = .40, ns.$; for father $t(36) = .20, ns$].

The influence of gender, SES, and one or two parent household upon CAI attachment classifications was further determined by chi-square tests for CAI attachment classifications to mother and father respectively.

With the exception of SES, none of the aforementioned demographic variables were related to security of attachment as assessed by the CAI. SES however, was found to differ as a function of security of attachment with respect to father [$\chi^2 (1, N = 38) = 7.37, p < .01$, with continuity correction] where only one child out of twelve low SES children was classified Secure with respect to father, and was approaching statistical significance for attachment classifications with respect to mother [$\chi^2 (1, N = 40) = 3.23, p < .07$, with continuity correction]. Tables 4.7 and 4.8 present the CAI attachment classifications as a function of SES for mother and father respectively.
Table 4.7 CAI Attachment Classifications to Mother as a Function of SES

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Mother</th>
<th>SES</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Secure</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Insecure</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>13</td>
</tr>
</tbody>
</table>

As Table 4.7 presents, 82 percent of children classified Secure with respect to mother came from families of high SES and 50 percent of children classified Insecure with respect to mother came from families of low SES.

Table 4.8 CAI Attachment Classifications to Father as a Function of SES

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Father</th>
<th>SES</th>
<th>Total (N = 38)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Secure</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Insecure</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>12</td>
</tr>
</tbody>
</table>

1Two of the sample fathers, one from each SES were excluded from analysis due to insufficient information for assigning an attachment classification.

As shown in Table 4.8, 94 percent of children judged Secure in the CAI with respect to father came from families of high SES and 48 percent of children judged Insecure with respect to father came from low SES families.
4.5.6 Differences Between Secure and Insecure Classifications on the CAI Scales

Main Classification Comparisons

In order to establish whether the ratings assigned on the CAI scales could distinguish those children classified as Secure from their Insecure counterparts, t-tests were computed for mother and father respectively. With the exception of the scales of Preoccupied Anger with respect to mother \( t(38) = -1.17, \) ns and Preoccupied Anger with respect to father \( t(36) = -1.97, \) ns, all other scales revealed highly significant differences in ratings as a function of security of attachment to mother. In addition, with the exception of Preoccupied Anger with respect to mother \( t(36) = -2.22, \) ns, all of the CAI scales were shown to significantly differ when defined by security of attachment to father. Tables 4.9 and 4.10 present the means, standard deviations, t-test values and probabilities for the comparisons between the Secure and Insecure attachment classifications on the CAI scales for mother and father respectively.
Table 4.9 Comparisons Between Secure Versus Insecure Classifications With Respect to Mother on CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=22)</th>
<th>Insecure (N=18)</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Emotional Openness</td>
<td>6.3 (1.2)</td>
<td>3.0 (1.6)</td>
<td>7.13**</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>6.2 (1.8)</td>
<td>3.4 (1.5)</td>
<td>5.37**</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.5 (1.1)</td>
<td>4.4 (1.4)</td>
<td>5.09**</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.2 (.60)</td>
<td>1.5 (1.1)</td>
<td>-1.10</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.2 (.63)</td>
<td>1.9 (1.2)</td>
<td>-1.97</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.8 (1.0)</td>
<td>3.7 (2.2)</td>
<td>-3.26*</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.9 (1.4)</td>
<td>3.7 (2.1)</td>
<td>-2.94*</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.4 (.80)</td>
<td>5.4 (2.6)</td>
<td>-6.20**</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>1.6 (1.4)</td>
<td>5.3 (2.7)</td>
<td>-5.31**</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>6.5 (1.1)</td>
<td>4.2 (1.1)</td>
<td>6.65**</td>
</tr>
<tr>
<td>Self-Organisation</td>
<td>6.0 (1.4)</td>
<td>2.9 (1.3)</td>
<td>7.01**</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.7 (.93)</td>
<td>3.4 (1.2)</td>
<td>9.67**</td>
</tr>
</tbody>
</table>

Key: *p < .01, **p < .001

As shown in Table 4.9, with the exception of Preoccupied Anger with respect to both mother and father, means varied considerable across the two groups. Particularly striking differences emerged for Emotional Openness, Balance of Positive and Negative References to attachment figures, Dismissal with respect to mother and father, Self-Organisation, and Coherence.
### Table 4.10 Comparisons Between Secure Versus Insecure Classifications With Respect to Father on CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=21)</th>
<th>Insecure (N=17)</th>
<th>t-tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Emotional Openness</td>
<td>6.4 (1.2)</td>
<td>3.5 (1.9)</td>
<td>5.83**</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>6.2 (1.7)</td>
<td>3.9 (1.9)</td>
<td>4.00*</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.5 (1.2)</td>
<td>4.7 (1.6)</td>
<td>3.99**</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.0 (.00)</td>
<td>1.5 (1.1)</td>
<td>-2.22</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.0 (.24)</td>
<td>1.9 (1.2)</td>
<td>-3.32*</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.8 (1.0)</td>
<td>3.4 (2.2)</td>
<td>-2.90*</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.6 (.79)</td>
<td>3.7 (2.2)</td>
<td>-4.02**</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.3 (.70)</td>
<td>4.9 (2.8)</td>
<td>-5.60**</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>1.2 (.69)</td>
<td>5.0 (2.8)</td>
<td>-5.76**</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>6.6 (1.2)</td>
<td>4.5 (1.5)</td>
<td>4.80**</td>
</tr>
<tr>
<td>Self-Organisation</td>
<td>6.0 (1.2)</td>
<td>3.4 (1.4)</td>
<td>5.34**</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.8 (.95)</td>
<td>3.4 (1.6)</td>
<td>7.02**</td>
</tr>
</tbody>
</table>

Key: *p < .01, **p < .001

As presented in Table 4.10, similar differences in mean ratings emerged between children judged Secure and their Insecure counterparts with respect to father as with respect to mother. Substantial differences emerged for Emotional Openness, Balance of Positive and Negative References to attachment figures, Dismissal with respect to mother and father, Self-Organisation, and Coherence.
4.5.7 Qualitative analysis

Narratives elicited by the CAI proved to constitute a meaningful and diverse source of attachment-related information. Whilst the bulk of the results section reflects a quantitative approach, the process of developing the CAI Protocol and Coding and Classification System was in large part based upon qualitative observations of the responses elicited. The wealth of such responses is often lost in the translation from narratives to scale scores and hence it was considered important to present pertinent examples of children’s responses as the observations were made. Whilst a comprehensive qualitative analysis is beyond the scope of this study, several illustrations are brought forth as a way of highlighting the richness of the material collected.

As an illustration of the children’s ability to comprehend the CAI questions and the diversity of attachment-related responses elicited, three short extracts are presented below.

In response to the question concerning times of separation from attachment figures, a nine-year-old girl replied thus,

“I went on holiday and stayed with my cousins. What was it like for you to be away? I felt sad because I didn’t see them but they rang me on the phone”.

In response to the same question a nine-year-old boy replied,

“I went on camp three times just with friends. How long for? The first time I went for three days, another time for three days and then ten days to Guernsey. What was it like for you to be away from your mum and dad? After a while, about seven days I got bored of it and wanted to go home, I got fed up of the same things over and over again. What was it like to see your parents again? I felt happy. What about your parents? They were also happy. What did you do when you saw them? Nothing really”.

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In response to the above question a ten-year-old boy replied,

“I went for two nights with the school. What was it like? I was really missing them, mum went to holiday and I cried, I stayed with my aunt. On the third night mum was away I went upstairs and I was missing her, it was lonely. What did you do? I sat down, I lay on the bed and my aunt came with dinner and I cried and my aunt gave me a cuddle and then I felt not so lonely, felt someone cared for you. My aunt’s husband is a businessman and he is always away so she knows what it feels like and my sister went to America today and mum is already missing her and worrying about her. When mum came back my aunt told her what happened and mum gave me a cuddle but mum wasn’t that happy because she had to spend money on the person she went on holiday with and so only had little money to buy us presents”.

In response to the same separation question a twelve-year-old girl replied,

We played games all day for a whole week. How did you feel to be away from your mum and dad? I felt free, but got a bit homesick, and lonely, I didn’t have my sister and nobody said good night to me. What was it like to come back home? It was nice coming back and seeing everyone but I was very tired. What was it like for your mum and dad? I don’t know what my parents thought, maybe they missed me”.

The above extracts exemplify not only that children were able to comprehend the interview question and respond meaningfully but also that their responses were qualitatively different in both structure and content.

Differences in narrative structure and content were in addition reflected in the following two extracts.

When asked to provide three words to describe his relationship with his mother an eight-year-old boy replied, “she makes me laugh, its good, and excited”. When then
“Tell me about a time when she made you laugh? Playing games, she’s done a thing, didn’t let me get the answer right. Can you explain? Don’t know, I had to do time and she didn’t let me. I laughed and then mum said what are you laughing at. What did you do? Nothing, I just ignored her. What about a time when it felt good? When we went to Harvester, we had a good time in there. When did you go? On Friday or Thursday. Tell me about a time when you were excited with mum? When we go out. Can you think of the last time? Don’t know because we go out all the time to places that are exciting. When was the last time you did that? About two weeks ago we went to Brighton, we ate there but they closed early so we had to go home. Who decided where to eat? We voted what to eat.”

In response to the question what happens when your mum is upset with you, the above child replied,

“I get grounded for a week or a day. When was the last time mum got upset with you? About three days ago, I was shouting and everything, messing with the dog, I was grounded and I said why am I grounded? And mum said you know why. What did you do? I just ignored her, I didn’t say anything.”

When asked to describe her relationship with her mother in three words, a ten-year-old girl described her relationship with her mother as, “Talk about things, always honest, and trust”. When then asked to substantiate these words with specific examples the same girl replied,

“Tell me about a time when you talked about things? We have a good relationship because if I have trouble at school or I’m not feeling well then we talk about it, mum says do your best and encourages me. When did that happen? A few weeks ago, I didn’t get a high mark in math and mum said just try your best and I said I’ll try harder next time. What about honest? We are honest with each other if I have done
something wrong I always tell her and if I don’t feel well, then I tell her and she can contact the hospital. *What about trust?* Well if I have secrets from people, I can tell her and she won’t tell anyone else. *When was the last time that happened?* About the Christmas present, she didn’t tell my sister, she kept it a secret. *Can you remember another time?* When I told her I didn’t really want to go to secondary school, I was frightened and I trusted her to advise me what to do.

In response to the question what happens when your mum is upset with you, the above child replied,

“I feel really sad, I go over to her and I say I am really sorry and give her a cuddle, and I make it up with her. *When does that happen?* When I don’t do my treatments the best I can she gets angry and says I should do it properly. *Does it happen often?* Yeah when I don’t do my physio, she gets upset because she doesn’t want to see me unwell. *Does she get upset with you at other things?* Yeah if I’ve done something naughty. *Do you remember the last time that happened?* No I can’t remember.”

As exemplified, the above two children produced qualitatively different response to the same CAI questions. In the former extracts, the child demonstrates considerable difficulties in substantiating the words used to describe the relationship, and provides examples that either stand in contradiction to the general view of the relationship (as the case in the example brought forth to support “makes me laugh”) or are unelaborated and impoverished. Further, moderate dismissal is evidenced when describing the incident brought forth to support the general description of “mother makes me laugh” and when recalling a time of conflict, and reference to emotional states of the self and other are largely absent.

By contrast, the latter extract shows the child’s ability to describe the quality of her relationship with her mother and provide examples that are relevant and consistent with the general view albeit not particularly elaborate. In addition, descriptions of interactions are laden with emotions (in particular when describing a conflict with
her mother) and reflect the child’s understanding not only of her own feelings but also those of her mother.

**Self-Descriptions**

In addition to qualitative differences in children’s ability to respond to a range of question, pertaining to their attachment relationships, it was considered of interest to qualitatively explore children’s conceptions of the self. Whilst, self-descriptions were not formally operationalised and thus did not inform the current coding system, they were nonetheless informative, in particular, in examining differences between children judged Secure and those judged Insecure.

**Secure Group**

Children judged Secure in the CAI showed a proclivity to describe themselves in positive terms, and were able to respond openly, with little or no inhibition. Descriptive words such as “kind”, “friendly”, “generous”, “nice”, and “happy” were repeatedly chosen to describe the self. Additional descriptors that were used by several children included “fun”, “funny”, “adventurous”, and “cheerful”. Very few children within the secure group chose terms to describe more ability-based characteristics of the self such as “sporty”, “clever” and “hard working”. Whilst children within the Secure group referred predominantly to positive characteristics of the self, several of the children showed an ability to consider imperfections in the self and referred to more negative features such as “naughty”, “quite bossy”, and “a bit nasty sometimes”.

By way of illustrating children’s ability to provide episodic examples to support their choice of adjectives, a nine-year old boy described himself as “a bit bossy”, “quite generous” and “quite patient”. In response to the prompt to provide specific examples for each of the above words, the boy replied, “When I play a game, like football, sometimes I get bossy because my brother starts messing about and I tell him not to do it” What happens then? Mum says don’t do it again when I’m bossy.
Can you give me an example when you are quite generous? When I got sweets, mum forgot to get sweets for my brother so I gave three quarters of mine to my brother, I didn’t care and my brother was happy. What about quite patient? I will wait when someone says so”.

**Insecure Group**

By contrast to children considered Secure, Insecure children were markedly less forthcoming and free to describe themselves. Several children were unable to think of three words to describe the self and showed considerable inhibition. Others provided descriptions restricted to the physical domain such as “I take tablets”, “I have lots of stuff in my room” and “I am an awake person” despite prompting for words describing what kind of person they are. Further, by contrast to Secure children, only a minority of Insecure children made reference to positive characteristics such as “caring” or “happy”. Descriptions including “clever” and “sporty” predominated. However, similar to Secure children, only few of the Insecure children made reference to negative aspects of the self including “short temper”, “lazy” and “silly”.

To illustrate, an eleven-year-old girl described herself in two words as “relatively nice” and “have sense of humour”. When asked to provide examples, she replied, “Can you think of a time you were nice? At school usually. Can you think of a time? No I can’t. What about a sense of humour? Some of the teachers say I’ve got a sense of humour but I can’t really tell jokes. When was the last time? Last Friday. What happened? I don’t really want to say”.

**4.6 DISCUSSION**

In addressing the existing measurement gap in measures of attachment for middle childhood, the current study was undertaken with two primary objectives. Firstly, to construct a developmentally appropriate interview protocol for the assessment of attachment in middle childhood and a corresponding coding and classification
system. Secondly, to establish the reliability of the newly devised instrument. The summary and discussion of findings will address the above in turn.

4.6.1 The CAI Protocol

Underpinning the development of the CAI interview protocol was the assumption that children would be able to comprehend and thus respond to direct questions concerning attachment experiences and relationships and that variations in the presentation of these experiences would reflect their internal attachment organisation. The interview protocol was initially developed with the aim of testing the above assumption and was to include a large number of questions designed to allow the identification of those questions that were particularly sensitive in eliciting attachment-related information.

Whilst piloting Version I of the CAI interview protocol clearly demonstrated that children could understand and respond coherently to direct questions concerning attachment-related themes, it also highlighted the need for refinements. Subsequent refinements were therefore undertaken, leaving out several questions and paraphrasing others. The most pertinent refinement was the inclusion of further prompts in the form of scaffolding in order to enable the child to recount relationship episodes and tell a story.

The above modifications ensured that the interview was developmentally appropriate and focused enough to elicit attachment relevant information. This was evidenced by the illustrative extracts presented in the qualitative analysis section of the results. Children were able to respond coherently to the questions contained within the CAI protocol and their responses were qualitatively different on the dimensions identified in the CAI coding and classification system.

In addition, the interview proved successful in eliciting diverse self descriptions as illustrated in the qualitative result section. Notwithstanding the considerable diversity, children tended to describe themselves in positive terms. Cassidy (1988)
argued that a child’s need to appear in a socially desirable light may mask low self-esteem. For such a child the admission of any imperfections may be considerably threatening. The ability to openly admit faults and weaknesses may require a strong self-esteem. Thus, the interpretation of the child’s response is problematic as it is not always clear whether it reflects the child’s high self-esteem or the child’s attempts at defending against low self-worth. In assessing self-esteem in six-year-olds, Cassidy (1988) reported that patterns of responses to a narrative assessment of self-esteem were significantly related to concurrent as well as subsequent (one-month later) attachment patterns. Although no such attempt was made in the current study, it remains an interesting issue to explore further.

The aforementioned refinements paved the way for the piloting of Version II of the CAI protocol and the development of a coding and classification system that would allow comparisons to be drawn between attachment patterns as manifest in the CAI interview.

4.6.2 The CAI Coding and Classification System

Following refinements to the CAI interview protocol, the coding and classification system was established and its psychometric properties tested. In the following sections, the findings pertaining to the psychometric properties of the CAI are summarised and discussed in turn.

The inter-correlations between CAI scales were considered potentially useful as a starting point for the process of identifying differing patterns of attachment organisation. In particular, scales that were shown to correlate negatively with one another were most illuminating in revealing potentially distinct attachment strategies.

Based upon attachment classification patterns in adulthood, the AAI coding and classification system clearly identified patterns that would indicate low or negative associations between Coherence of Transcript, Idealisation, Derogation, and
Preoccupied Anger. A similar pattern of correlations was also demonstrated between the CAI scales.

Taken as a marker of security, Emotional Openness correlated positively with Balance of Positive and Negative References to attachment figures, Use of Examples, Resolution of Conflict, Self-Organisation, and Coherence. In addition, Emotional Openness correlated negatively with Idealisation and Dismissal, both with respect to mother and father. Based upon the above correlations, it is possible to begin to describe the shared characteristic of those children considered Secure with respect to attachment. Thus, children who present a coherent picture of attachment relationships substantiated by relevant, richly detailed, balanced and affect laden episodic examples, and who perceive themselves as active agents capable of well planned and executed actions may constitute the Secure group. The above qualities were exemplified in two of the extracts presented in the results section wherein an emotionally open and coherent account of the relationship with mother was presented. This was particularly evident in the child’s account of a time of conflict, demonstrating her capacity to consider both her own and her mother’s emotional state, leading to a satisfactory resolution.

Idealisation with respect to mother and to a lesser extent father correlated negatively with Emotional Openness, Balance of Positive and Negative References to attachment figures, Use of Examples, Resolution of Conflict, Self-Organisation, and Coherence. In addition, Dismissal with respect to mother and father correlated negatively with the above scales, but did not correlate significantly with Idealisation with respect to mother and father. The above correlations suggest a pattern consistent with the Avoidant/Dismissing attachment pattern identified in infancy and adulthood (Ainsworth et al. 1978; Main & Goldwyn, 1998). Children who consistently dismiss or idealise attachment figures, and relationships, are relatively incoherent in their presentation, show restriction in affect and in providing relevant autobiographical memories may thus constitute the Dismissing group. The above characteristics were clearly illustrated in the account given by the nine-year-old boy presented previously. His description of his relationship with mother was
impoverished, devoid of reference to emotional states and contained some dismissal with respect to mother. Furthermore, his failure to provide relevant examples to support his general descriptors was considered as indication of idealisation with respect to mother.

Whilst clear patterns have emerged with respect to correlations between Idealisation and Dismissal and the remaining CAI scales, Preoccupied Anger with respect to mother and father has not yielded such clear associations. Preoccupied Anger with respect to mother and father correlated positively with Dismissal with respect to mother and father, and negatively with Coherence (only marginally significantly for Preoccupied Anger with respect to father, \( p < .05 \)). It appears that children who manifest preoccupied anger when discussing attachment-related experiences with respect to attachment figures, are likely to also dismiss attachment figures and be less coherent in their presentation. This pattern may constitute a potentially analogous one to the Ambivalent/Preoccupied pattern observed in infancy and adulthood.

Notwithstanding the future potential for identifying distinct patterns of attachment that would closely parallel those identified in infancy and adulthood, it is as yet premature to draw clear distinctions and thus formally categorise these patterns on the basis of the current sample.

In establishing the internal consistency of the CAI scales, all scales were demonstrated to be measuring the same construct, as internal consistency did not rise with the exclusion of any one of the scales. Whilst internal consistency was high, it may prove premature at this stage in the development of the CAI coding to assume that the construct being measured is attachment relationships. The results may equally reflect some other unrelated construct or one that can conceivably be associated with security of attachment such as the level of disturbance or psychopathology of the child. This could be illuminated by establishing further the discriminant validity of the CAI and will be addressed in Chapters 9, 10, and 11.
Inter-rater reliability was examined in three ways. First, ratings for all CAI scales were compared between the two raters. Second, attachment category placements with respect to mother and father respectively were compared between the two raters. Finally, inter-rater agreement for CAI sub-classifications was examined.

Inter-rater reliability for the scales revealed that the percentage of exact agreement on the rating scales ranged from 45 to 95 percent and within 1-scale point ranged from 75 to 100 percent. High intra-class correlations were also demonstrated on all the but two of the scales, namely, Preoccupied Anger with respect to father and Idealisation with respect to father which showed only moderate levels of agreement (ICC3 = .68 and .60 respectively). The lower observed agreement between raters on the above two scales may be explained with respect to the relative lack of information that was elicited in the CAI concerning fathers. Whilst some children offered rich and detailed information pertaining to their relationship with their fathers, others offered very little detail that could inform the rater in assigning a rating on the aforementioned scales. This invariably made the task of assigning ratings much more difficult and consequently less reliable. On closer examination, the range of ratings assigned on these dimensions was extremely narrow, with most assigned a rating of 1 (that is no Preoccupied Anger or Idealisation present), and therefore any differences between the raters were comparatively exaggerated.

In establishing inter-rater agreement for main attachment category placement, complete agreement between the two raters concerning the assignment of a Secure or Insecure classification to mother and father was obtained. Inter-rater agreement for sub-classification assignment with respect to mother and father respectively also demonstrated one hundred percent agreement. The observed agreement for sub-classification assignment with respect to father is particularly striking because of the relative insufficiency of attachment-related information concerning the child-father relationship. As fathers tended to be described as somewhat less involved in their children's day-to-day lives as evidenced by the lower frequency of child-father relationship episodes, it was in some cases difficult to distinguish between children's probable experience and their internal representations of the father. For example,
one child when asked, "Can you give me three words to describe your relationship with your dad?" replied, "Relationship - I don't have a relationship with my dad. He is always at work and busy". Other interviews produced relatively neutral descriptions of fathers.

The inter-rater reliability results reported above are very promising and may suggest that the current CAI coding and classification system allows raters to make confident judgements that are not only limited to scale scores but also in distinguishing between distinct types of interview response. Nevertheless, the above results should be interpreted with caution as such high levels of agreement may reflect the close collaboration between the two raters in devising the coding manual and their increased level of shared understanding.

The results summarised above all converge in highlighting the need to establish further the reliability of the coding and classification system by examining inter-rater agreement with a rater who had not been closely involved in the development of the system. Such an undertaking was outside the scope of the current study but is called for as an essential step in determining further the reliability of the CAI and will be addressed in Chapter 5.

Upon establishing adequate inter-rater agreement for both the CAI scales and classifications, a preliminary examination of the validity of the CAI was subsequently undertaken. Two-way classification comparisons, that is, Secure versus Insecure, revealed significant differences across groups for all the CAI rating scales with the exception of Preoccupied Anger with respect to mother and Preoccupied Anger with respect to father. These two scales failed to significantly distinguish children classified as securely attached from their Insecure counterparts. On closer inspection, the above scales were used very narrowly with a mean rating of less than 2 for both parents across the two groups. The Insecure group however, did appear to be assigned a slightly higher rating on this scale and it was therefore possible that due to the small sample size tentative differences failed to reach statistical significance. Nevertheless, the above findings suggest that the existing
Preoccupied Anger scale may not be sensitive enough in picking up differences in attachment status and highlight the need for fine-tuning the scale. The scale may prove to be particularly useful when applied to a clinical population where angry preoccupation with attachment figures would be expected to be more prevalent and readily observed.

The relationship between demographic variables and attachment security was initially established. Contrary to expectations, SES was found to relate to security of attachment. However unexpected, this finding is in keeping with existing literature on the relationship between social disadvantage and insecure attachment patterns. As Fonagy (1998) suggested, attachment is powerfully influenced by its social context and social inequalities, both directly and indirectly, and these have consistently been shown to predict security of attachment with social advantage generally associated with secure attachment (Belsky, 1996; Murray, Fiori-Cowley, Hooper, & Cooper, 1996; Shaw & Vondra, 1993). This was clearly illustrated in a study by Broussard (1995) in which only 24 percent of infants were found to be securely attached while 32 percent were found to be Insecure-Disorganised in an inner city sample. In contrast, in most middle-class samples, 65 percent of infants were found to be Securely attached and only 10 percent were classified as Insecure-Disorganised.

### 4.6.3 Future Considerations in the Development of the CAI

The findings presented in the current study clearly support the idea that it is unnecessary to adopt a projective approach in assessing attachment status in middle childhood. Similar to adults, children are able to cope with the demands of direct questioning concerning attachment-related experiences and their responses appear to reflect their internal attachment organisation, although it seems to be desirable to shorten and simplify the interview.

In addition, the current CAI protocol did not include an ending question that functions to ensure that the interview was completed on a lighter note. Judith Trowell (personal communication, April 1998) incorporated such a question when
interviewing adolescent girls and reported that it has proved a helpful way of ending the interview. It may thus prove valuable to include an ending question as a way of allowing the child to “wind down”.

Furthermore, previous findings suggest that the capacity to reflect upon one’s own and other’s mental states is associated with security of attachment (Fonagy et al. 1991; Fonagy et al. 1997). The present coding system did attempt to assess children’s reflective capacity with reflective functioning assessed along with dimensions of emotional openness. Whilst the emphasis upon relationship episodes within the interview has proven central in eliciting attachment-related information, the inclusion of prompts designed specifically to assess the reflective capacity of the child would constitute an important addition to the current protocol. A prompt such as “What do you think your mum felt and/or thought when she was upset with you?” would potentially highlight individual differences in reflective capacity and would be useful in informing the child’s attachment classification.

In addition, the relationship between attachment organisation, intelligence and verbal ability has not been explored in the current study. Evidence suggests that infants judged Secure in the Strange Situation demonstrate comparably more advanced cognitive abilities than those infants judged Insecure (Main, 1983; Matas, Arend, & Sroufe, 1978). Such results raise the question whether representational measures of attachment simply capture some aspects of linguistic or cognitive abilities erroneously identified as security of attachment. Future studies however should formally explore the relationship between attachment classification and verbal intelligence in order to rule out the possibility that what is being measured is the child’s linguistic and cognitive abilities. The discriminant issues raised above are addressed in Chapters 9 and 10.

At a conceptual level, one of the objectives set out in the study was to derive independent attachment classifications for mother and father in keeping with the Strange Situation paradigm. Although it is unclear whether latency aged children possess a single, unified state of mind with respect to attachment or separate
patterns of attachment representations, the current results suggests that while in some cases it was difficult to separate out the child's model of mother as distinct from father, in others clear differences emerged, that may potentially allude to the presence of independent strategies. Although, as noted previously, information concerning fathers has been somewhat impoverished this is not surprising and is in agreement with studies that have repeatedly demonstrated weaker associations between both infants' and latency aged children's attachment classifications in relation to the father, on the AAI (e.g. Main et al. 1985). The difficulty is also born out in the highly significant positive correlations shown between those CAI scales that were rated as independent for mother and father, namely, Preoccupied Anger, Idealisation and Dismissal.

4.7 CONCLUSIONS

In sum, the results of the current study have clearly demonstrated that it is possible to ask children directly about attachment relationships and experiences and that their responses appear to reflect their attachment organisation. In examining the psychometric properties of the CAI coding and classification system adequate to high inter-rater reliabilities were shown for the scales, in addition to high agreement on main category placement and sub-category placement for mother and for father. In addition, high internal consistency was demonstrated and correlations between particular CAI scales indicated potentially distinct attachment patterns. Furthermore, ratings on the CAI clearly distinguished those children classified as Secure from their Insecure counterparts

Whilst the results of the current study are promising and highlight the enormous potential of the CAI as an instrument for assessing attachment organisation in middle childhood, the conclusions drawn are necessarily tentative and should be interpreted with caution not least because of the small sample size employed. The above discussion highlighted the need for refinements and additions to the CAI protocol and coding system and these will be addressed in subsequent chapters in turn.
CHAPTER 5. REFINING THE CHILD ATTACHMENT INTERVIEW

The preliminary findings pertaining to the psychometric properties of the CAI presented in Chapter 4 confirmed unequivocally that children in middle childhood are able to meet the demands of direct interviewing concerning attachment-related themes. Using the CAI as a semi structured attachment interview has shown to provide ample attachment-related information that is meaningful, reflecting differences in structure, and content that would form the basis for the categorisation of children according to their distinct attachment organisation.

Moreover, narratives elicited using Version II of the CAI protocol formed the basis for the development of a corresponding coding and classification system and the measurement of attachment status along a continuum of attachment security.

As stated in Chapter 4, notwithstanding the CAI protocol’s similarity to the AAI protocol, no a priori assumptions concerning the suitability of the AAI coding and classification system to the CAI narratives were made. The systematic examination of children’s responses to separations, loss, conflicts as well as other positive interactions with attachment figures in conjunction with initial statistical findings as reported in Chapter 4 formed the basis for subsequent extensions and refinements to the CAI coding and classification system.

Not surprisingly however, at least two similar attachment patterns - Secure and Avoidant/Dismissing - to those identified in both infancy using the Strange Situation procedure, and adulthood using the AAI, emerged based upon the inter-correlations between ratings on the CAI scales in the samples reported in Chapters 4 and Study 1 of the current chapter. In addition, although Preoccupied Anger was identified in only one child, this was considered highly informative in attempting to arrive at some initial criteria for the development of a more specific classification system.

In the Methods section that follows, a description of the samples and procedures for data collection and coding used in the following two studies are provided.
5.1 THE CURRENT STUDY

The first study will report on the psychometric properties of Version III of the CAI under which three main objectives are subsumed: Firstly, to examine the interview protocol in greater detail using a new sample of children and ensure that all the questions that have been included were relevant and informative vis-à-vis attachment, and to further establish whether certain questions could be discarded, added or paraphrased; Secondly, to develop and refine the corresponding CAI coding and classification system, clarify the definitions of scales and provide further examples from transcripts to illustrate scale anchor points; and thirdly, to explore the psychometric properties of the CAI following the refinements as detailed below.

The second study will also focus upon the establishment of the psychometric properties of CAI, applying Version IV of the protocol under which two main aims are subsumed: Firstly, to further develop the CAI coding and classification system, establishing clear criteria for the identification of distinct attachment patterns, namely, Dismissing, Secure, Preoccupied, based upon differences in content and form as reflected in the CAI narratives; and secondly to examine the reliability of the new three-way classificatory system as described below.

Similar analyses to those reported in Chapter 4 will be undertaken in both Study 1 and Study 2 using data collected from two newly recruited normal samples. Inter-correlations between the CAI scales will be followed by the establishment of the internal consistency of the CAI. Inter-rater reliability will subsequently be determined for ratings on CAI scales, main attachment classifications, and sub-classifications. The relationship between demographic variables and attachment security will be further examined in addition to Secure versus Insecure comparisons on the CAI scales.

In addition, Study 2 will report on the test-retest reliability of the CAI using as a second judge, a person who had not been closely involved in the development of the CAI as an extension of Chapter 4. Because the focus is upon the CAI's reliability
under stable conditions and less upon the continuity or discontinuity of attachment classifications under changing life circumstances, test-retest reliability across a two-month period will be established in the following ways; i) comparing the ratings assigned on the CAI scales between Time 1 and Time 2; ii) calculating the percentage of agreement and concordance for main attachment classifications, that is, Secure versus Insecure, for the two time periods; iii) calculating the level of agreement between Time 1 and Time 2 for sub-classifications, that is, Very Secure, Secure, Insecure and Very Insecure.

STUDY 1. REFINING THE CAI ON A NEW NORMAL SAMPLE

5.2 METHOD

5.2.1 Participants

Twenty-eight children were recruited from two diverse sources: (a) an inner London school with predominantly low-income families and multiple social problems, and (b) through the Department of Psychology at University College London comprising mostly families with both parents in professional employment. Letters inviting the children to participate in the study were sent out to parents along with an information pack explaining the nature of the project and what the project would entail for both the child and the parent (see Appendix A). Additionally, parental and child consent forms were included (see Appendix A). Table 5.1 presents the demographic data pertaining to the study sample. The children ranged in age from eight years to twelve years and five months (Mean = 10.09; SD = 1.03). The gender distribution was 15 girls (54%) and 13 boys (46%) with all but three children being Caucasian. Children came from predominantly middle-class, professionally employed (71%), two-parent households (86%).
Table 5.1 Demographic Data of the Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=28)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 10.1 (SD = 1.03)</td>
</tr>
<tr>
<td>Range</td>
<td>8 – 12.4</td>
</tr>
<tr>
<td>Females</td>
<td>15 (54%)</td>
</tr>
<tr>
<td>Non-Caucasian</td>
<td>3 (11%)</td>
</tr>
<tr>
<td>2-Parent Family(^1)</td>
<td>24 (86%)</td>
</tr>
<tr>
<td>Social Class(^2) I-II</td>
<td>20 (71%)</td>
</tr>
<tr>
<td>III-V</td>
<td>8 (29%)</td>
</tr>
</tbody>
</table>

\(^1\)Includes re-marriages.
\(^2\)Based on employment status-Classification of Occupation (1990)

5.2.2 Measures

5.2.2.1 The CAI protocol

*Version III of the CAI*

Based upon the results and discussion reported in Chapter 4 pertaining to Version II of the CAI, several modifications to the interview protocol were considered important.

Version II of the CAI protocol did not include a formal, standardised introduction to the interview and thus it was left to the individual interviewer’s own discretion as to the manner in which he/she chose to introduce the interview. This was however felt to be unsatisfactory and a standardised opening statement was hence included.

An additional modification to the introduction of the interview was the re-phrasing of the orientation question designed to elicit some autobiographical information with the aim of familiarising the interviewer with the child’s family situation and the child with the interview task. The re-wording of the question was felt to be more child appropriate and less threatening and demanding.
Further re-wording was introduced in questions 4 and 6 concerning what happens when mum/dad get upset. The term upset was changed to cross primarily because upset was felt to be quite broad and ambiguous. This was borne out by observations that some children responded by describing events or episodes when mum/dad were emotionally upset rather than cross or angry.

By way of assessing more directly children’s Reflective Functioning (RF), greater emphasis was placed on introducing “demand” questions, asking the child to think how others would have felt or thought across various episodes recounted within the interview. The inclusion of demand questions was thought to provide the child with an opportunity to describe and potentially reflect upon the events described and how these may have affected him/herself as well as the attachment figures.

Further, “What kind of mum/dad would you like to be” was re-phrased to, “In what ways would you like to be like your mum/dad” on the grounds that it was placed within the context of children’s existing relationship with each of their attachment figures and was hence related to their perception of the nature and quality of the parenting that they had received.

A final modification was the inclusion of an ending question, unrelated to attachment because it was considered important to end the interview on a positive note and allow the child some freedom and creativity.

Version III of the CAI protocol, including the aforementioned modifications, is presented in Appendix B.

5.2.2.2 CAI coding and classification system

The principal development from Version I to Version II of the CAI coding and classification system was the introduction of illustrations of the key anchor points for each of the CAI scales from the narratives elicited through the CAI protocol.
This was considered pivotal in order to allow judges who were not involved in the establishment of the system to use the manual with greater confidence.

The inclusion of illustrative examples of anchor points was the result of extensive and systematic observations of interview narratives collected from 68 children who comprised Samples 1 and 2 reported in Chapter 4 and the current chapter.

For example, for the Emotional Openness scale, extracts from interviews were included along with a guideline of the ratings assigned as presented below.

_How did you feel when mum was upset?_ I feel like I shouldn’t have done it, when you get told off you know what you’ve done wrong” (Rate 3).

_Can you tell me what happened when your mum got cross with you?_ I can’t remember what happened but erm, what happened is my mum went up to her room and I went into my room and I was crying cause I don’t like it when she’s upset and then my sister went to see if she was alright. _So how do you think she felt when that happened?_ Ahm well normally when she gets upset it’s probably cause I’ve done something, if I’ve done something really wrong or like if she’s, sometimes when she’s ill she just like, she gets not exactly moody but she’s not her normal self and she gets stressed out quickly. _So how do you think she would have felt that time?_ Erm sad and if it was when I think yeah when she was ill so angry a little and upset. _And how did you feel when that happened?_ Ahm I feel really upset cause I don’t like hurting anyone’s feelings especially not my mum’s. (Rate 8)

The former extract was considered a restricted emotional response, merely labelling an appropriate emotional state within the context of a loss and was thus given a low rating. By contrast, the latter extract was assigned a high rating because it contained a range of emotional states grounded within the relationship. For a complete version of the CAI manual see Appendix C.
In addition, the Self-Organisation scale developed in Version I of the CAI manual was discarded because it overlapped significantly with the Resolution of Conflict scale and was thus deemed superfluous. This was demonstrated by the highly significant positive correlation between ratings on the scales reported in Chapter 4 ($r = .78; p < .001$). The decision to exclude the Self-Organisation scale and not the Resolution of Conflict scales was primarily based on a clearer definition and specificity of the latter scale.

Finally, based upon the results of Chapter 4, the Preoccupied Anger scale warranted further specification because examples of Preoccupied Anger were rarely found and thus ratings were applied very narrowly. Version II of the CAI Manual included a clearer definition of preoccupied anger and sought to provide illustrations that would assist judges in identifying preoccupied anger and in making more confident ratings.

5.2.3 Procedure

5.2.3.1 Administration

The majority of children were assessed at their school or after school club. A small proportion of children were assessed at home when parents expressed a preference for a home assessment. A clinical psychologist in training (TP) possessing considerable experience in the administration of the interview conducted the assessments. The CAI formed part of a larger battery of measures including, amongst others, measures of expressive language and IQ, administered over one to two sessions. The interview was always completed first and conducted in a private and quiet room with interviewer and child sitting face to face. Before the beginning of each assessment, the interviewer explained the nature of the study and ensured that the child felt at ease and consented to take part. The duration of the interview ranged from 20 minutes to one hour depending upon the individual child’s response and the sessions were videotaped throughout.
In addition, parental assessments were conducted at home by the same experienced interviewer, in a private and quiet room in order to minimise any disturbance. The aim of the study was explained to each parent prior to the assessment. The AAI was subsequently completed and audiotaped, carefully following George et al's (1985) guidelines for administration. As a final task, parents were required to complete the Child Behaviour Checklist (Achenbach & Edelbrock, 1983) pertaining to their child’s behaviour in the home.

Following an interval of approximately two months, children were re-assessed by the same interviewer. For the second administration, only the CAI was completed and videotaped, and conducted at the same place as the first administration.

5.2.3.2 Coding

Two independent judges, the author and TP, who possessed considerable knowledge of attachment theory and a familiarity with current attachment assessment methodologies, completed the coding. Formal reliability training was undertaken by TP for 15 cases with the author as the reliable judge. During this process TP rated one interview at a time and this was followed by a comparison of the ratings with the author and a discussion concerning agreements and discrepancies. Ambiguities were addressed and clarified vis-à-vis the coding and classification of interviews before TP proceeded to rate the next interview. Following the above training process, the interviews of the entire sample were rated independently by the two judges.

5.3 PLANNED DATA ANALYSIS

Similar analyses to those reported in Chapter 4 were conducted in the current study. Additional analyses were however undertaken in order to determine the test-retest reliability of the CAI. Test-retest reliability across a one-month period was thus established in three ways; i) by comparing the ratings assigned on the CAI scales between Time 1 and Time 2 using Pearson Moment Product correlations and percentage of agreement; ii) by calculating the percentage of agreement and Cohen’s
kappa statistic for main attachment classifications, that is, Secure versus Insecure, for the two time periods; iii) by calculating the level of agreement between Time 1 and Time 2 for sub-classifications, that is, Very Secure, Secure, Insecure and Very Insecure, using Kendall’s tau-b statistic.

5.4 RESULTS

5.4.1 Descriptive Results

Ratings on all CAI scales with the exception of Preoccupied Anger were not restricted to a narrow band of low or high scores. (Mean ranged from 2.5 to 5.7, SD ranged from 1.4 to 1.9). Whilst ratings for Preoccupied Anger with respect to mother ranged from 1 to 7 (Mean = 1.2, SD = 1.1), suggesting a narrower use of the scale, ratings for Preoccupied Anger with respect to father were restricted to a score of 1 across the whole sample (see Appendix D for Table D1 of descriptive data).

5.4.2 Inter-Correlations Between CAI Scales

By way of establishing the relationship between ratings on the CAI scales, inter-correlations were computed using Pearson Product Moment correlations (r). Positive correlations ranged from $r = .04$ to $r = .87$ and negative correlations ranged from $r = -.15$ to $r = -.84$. Appendix D presents Table D2 of inter-correlations.

5.4.3 Internal Consistency of CAI Scales

Internal consistency between the CAI scales was further calculated and yielded Cronbach’s alpha of .91 for mother and .93 for father, both considered very high (an alpha coefficient of .70 is considered acceptable for reliability; Kline, 1993).
5.4.4 CAI Inter-Rater Reliability

Inter-rater reliability between the author and TP was established for CAI ratings for the complete sample in three ways. First, ratings on all CAI scales were compared for agreement between the two raters. Second, inter-rater agreement for placement in the Secure and Insecure main classifications for both mother and father were established. Third, agreement for sub-category placement for both mother and father was explored.

Inter-Rater Reliability for CAI Scales

Inter-rater reliability was assessed using two-way mixed model intra-class correlations (ICC3), reporting the average measure intra-class correlation coefficients and by computing percentage of exact agreement and agreement within 1-scale point for all scales with the exception of Preoccupied Anger with respect to father. Correlations ranged from .78 to .96 and were all highly significant. Whilst percent of exact agreement was not uniformly high across the CAI scales, ranging from 50 to 68 percent, with the lowest percentage of exact agreement observed for Balance of Positive and Negative References to attachment figures (50%), and Resolution of Conflict (61%), percentage of agreement within 1-scale point was high without exception, ranging from 86 to 96 percent (see Appendix D for Table D3 of ICCs and percent of agreement).

Inter-Rater Reliability for CAI Main Classifications

Based upon ratings on the above CAI scales, main classifications, namely, Secure or Insecure with respect to mother and father were assigned and converted into security scores whereby Secure = 1 and Insecure = 2. Agreement for attachment classifications with respect to mother was very high [93%, k = .84, p < .001]. Out of 28 cases, discrepancy arose in only two children judged Secure by one judge and Insecure by the other judge. For Secure attachment classifications with respect to
mother 100 percent agreement was thus shown whilst for Insecure attachment classifications, 80 percent agreement was obtained.

Similarly, agreement for attachment classifications with respect to father was very high [96%, \( k = .92, p < .001 \)] with disagreement over a single case. For Secure attachment classifications with respect to father 100 percent agreement was shown whilst for Insecure attachment classifications, 91 percent agreement was shown (see Appendix D for Table D4 and D5 of inter-judge agreement).

**Inter-Rater Reliability for CAI Sub-Classifications**

Inter-rater reliability was computed using Kendall’s tau-b coefficient (\( \tau \)). High agreement was obtained for attachment sub-classifications with respect to mother [79%, \( \tau = .76, p < .001 \)]. One of the three (33%) children classified as Very Secure with respect to mother by the author was also judged so by TP. Of the 15 children judged Secure by the author, 13 (87%) were assigned the same classification by TP. Three of the six (50%) children judged Insecure by the author were judged Insecure by TP, and three out of the four (75%) children assigned a Very Insecure classification by the author were assigned the same classification by TP.

Similarly, high inter-rater agreement was achieved for sub-classifications with respect to father [82%, \( \tau = .82, p < .001 \)]. Of the three children classified as Very Secure with respect to father by the author, a single child (33%) was also judged so by TP. Out of the 14 children judged Secure by the author, 13 (93%) were assigned the same classification by TP. Four of the six (67%) children judged Insecure by the author were judged Insecure by TP, and four out of the five (80%) children assigned a Very Insecure classification by the author were assigned the same classification by TP (see Appendix D for Tables D6 and D7 of inter-judge agreement).

**5.4.5 The Relationship Between CAI Classifications and Demographic Variables**

Similar to Chapter 4, the relationship between age and attachment security with respect to mother and father as assessed by the CAI was determined by independent
sample t-tests and did not reach statistical significance. The relationship between gender, SES, and one or two parent household and CAI attachment classifications with respect to mother and father respectively was further examined using chi-square test, none of which reached statistical significance.

5.4.6 Differences Between Secure and Insecure Classifications on the CAI Scales

Main Classification Comparisons

In order to establish whether the ratings assigned for the CAI scales could distinguish those children classified as Secure from their Insecure counterparts, t-tests were conducted for mother and father respectively. The scale of Preoccupied Anger with respect to father was excluded from the analyses since a score of 1 was assigned for all cases.

With the exception of the scale of Preoccupied Anger with respect to mother all other scales revealed significant differences in ratings as a function of security of attachment to mother. Highly statistically significant differences in ratings emerged for the scales of Emotional Openness \(t(26) = 4.78, p < .001\), Balance of Positive and Negative References to attachment figures \(t(26) = 4.38, p < .001\), Use of Examples \(t(26) = 4.66, p < .001\), Idealisation with respect to father \(t(26) = -3.03, p < .001\), Resolution of Conflict \(t(26) = 3.89, p < .001\), and Coherence \(t(26) = 6.00, p < .001\).

Similarly, with the exception of the scale of Preoccupied Anger with respect to mother all of the CAI scales were shown to significantly differ when defined by security of attachment to father. Highly statistically significant differences were shown for the scales of Emotional Openness \(t(26) = 3.98, p < .001\), Balance of Positive and Negative References to attachment figures \(t(26) = 4.08, p < .001\), Use of Examples \(t(26) = 5.02, p < .001\), Idealisation with respect to mother \(t(26) = -3.03, p < .001\), Idealisation with respect to father \(t(26) = -3.88, p < .001\),
Resolution of Conflict \([t(26) = 3.27, p < .001]\), and Coherence \([t(26) = 6.10, p < .001]\). Marginally significant differences, albeit weaker, were also demonstrated for Dismissal with respect to mother and father \([t(26) = -2.02, p < .05; t(26) = -2.05, p < .05]\) respectively. Appendix D presents Tables D8 and D9 for the secure versus insecure comparisons on all CAI scales.

5.4.7 Test–Retest Reliability

Test-retest reliability was determined by correlating ratings assigned by the author for Time 1 with ratings assigned by TP for Time 2 in three ways. First, ratings on all CAI scales were correlated for agreement between Time 1 and Time 2. Second, test-retest for placement in the Secure and Insecure main classifications for both mother and father between Time 1 and Time 2 were established. Third, agreement for sub-category placement for both mother and father between Time 1 and Time 2 was explored.

Test-Retest Reliability for CAI Scales

Pearson Product Moment correlations, corrected for attenuation, and agreement within 1-scale point were computed for all CAI scales with the exception of Preoccupied Anger with respect to father. As shown in Table 5.2, correlations ranged from \(r = .59\) to \(r = 1.0\), with Emotional Openness \((r = .88)\), Dismissal with respect to mother and father \((r = .92\) and \(r = .98\) respectively), and Coherence \((r = .73)\) demonstrating the highest correlations (Kline [1993] suggested correlations of .80 are necessary for good reliability). Percent of agreement within 1-scale point ranged from 46 to 100 percent and was satisfactory for Emotional Openness, Preoccupied Anger with respect to mother and, Resolution of Conflict. Percent of agreement within 1-scale point was somewhat lower for the remaining scales, in particular, for Idealisation with respect to father and Balance of Positive and Negative References to attachment figures.
Table 5.2 Pearson Product Moment Correlation Coefficients (Corrected for Attenuation) and Percentage of Test-Retest Agreement Within 1 Scale-Point

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Pearson Correlations ($r$)</th>
<th>% Agreement within 1-scale point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>.88</td>
<td>75</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>.67</td>
<td>54</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>.67</td>
<td>68</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.0</td>
<td>100</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>.59</td>
<td>61</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>.62</td>
<td>46</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>.92</td>
<td>68</td>
</tr>
<tr>
<td>Dismissing of Father</td>
<td>.98</td>
<td>61</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>.61</td>
<td>71</td>
</tr>
<tr>
<td>Overall Coherence</td>
<td>.73</td>
<td>68</td>
</tr>
</tbody>
</table>

Test-Retest Reliability for CAI Main Attachment Classifications

Concordance between main attachment classifications at Time 1 and Time 2 was computed using the kappa statistic with respect to mother and father. Concordance rates were very high for attachment classifications with respect to mother and father (82%, $k = .61$, $p < .001$ and 79%, $k = .55$, $p < .001$ respectively).
Table 5.3 Test-Retest Reliability for Attachment Classifications with Respect to Mother

<table>
<thead>
<tr>
<th>Attachment to Mother - Time 1</th>
<th>Attachment to Mother - Time 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>Secure</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Insecure</td>
<td>1</td>
</tr>
<tr>
<td>Secure</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Insecure</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>28</td>
</tr>
</tbody>
</table>

As shown in Table 5.3, 16 out of 20 (80%) children judged Secure at Time 2 were also judged Secure at Time 1. Seven out of eight (87.5%) children judged Insecure at Time 2 were judged Insecure at Time 1. Whilst four of the children judged Insecure at Time 1 were subsequently assigned a Secure classification at Time 2, only one Secure child at Time 1 was assigned an Insecure classification at Time 2.

Table 5.4 Test-Retest Reliability for Attachment Classifications with Respect to Father

<table>
<thead>
<tr>
<th>Attachment to Father - Time 1</th>
<th>Attachment to Father - Time 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>Secure</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Insecure</td>
<td>2</td>
</tr>
<tr>
<td>Secure</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Insecure</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>12</td>
</tr>
</tbody>
</table>

As presented in Table 5.4, slightly weaker associations between attachment classifications for Time 1 and 2 were shown with respect to father. Fourteen out of 18 (78%) children judged Secure at Time 2 were also judged Secure at Time 1. Eight out of ten (80%) children judged Insecure at Time 2 were judged Insecure at Time 1. Whilst four of the children judged Insecure at Time 1 were subsequently assigned a Secure classification at Time 2, only two Secure children at Time 1 were assigned an Insecure classification at Time 2.
Test-Retest Reliability for CAI Attachment Sub-Classifications

Concordance between attachment sub-classifications at Time 1 and Time 2 was computed using Kendall tau-b correlations and was found to be very high with respect to mother (71%, $\tau = .74, p < .001$) and with respect to father (68%, $\tau = .70, p < .001$).

Table 5.5 Test-Retest Reliability for Attachment Sub-Classifications with Respect to Mother

<table>
<thead>
<tr>
<th>Attachment to Mother - Time 1</th>
<th>Very Secure</th>
<th>Secure</th>
<th>Insecure</th>
<th>Very Insecure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Secure</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Secure</td>
<td>-</td>
<td>13</td>
<td>1</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>Insecure</td>
<td>-</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Very Insecure</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>18</td>
<td>3</td>
<td>5</td>
<td>28</td>
</tr>
</tbody>
</table>

As shown in Table 5.5, all of the children classified as Very Secure at Time 2 were also judged so at Time 1 (2 children). Out of the 18 children judged Secure at Time 2, 13 (72%) were assigned the same classification a Time 1. Whilst only one child of the three (33%) judged Insecure at Time 2 was judged so at Time 1, four out of the five (80%) children were assigned a Very Insecure classification at Time 1 and Time 2.
As shown in Table 5.6, similar to attachment with respect to mother, all of the children classified as Very Secure with respect to father at Time 2 were also judged so at Time 1 (2 children). Out of the 16 children judged Secure at Time 2, 11 (69%) were assigned the same classification at Time 1. Whilst only two children of the five (40%) judged Insecure at Time 2 were judged so at Time 1, four out of the five (80%) children were assigned a Very Insecure classification at Time 1 and Time 2.

### 5.4.8 Qualitative Data Analysis

Several refinements to the CAI were undertaken in the current study as presented in section 5.2.2.1. The inclusion of demand questions was presumed to allow the child to describe and potentially reflect upon the events recollected and how these may have impacted upon him/herself as well as the attachment figures. The above addition proved exceptionally fruitful as children’s responses showed considerable diversity as reflected in the following extracts.

When asked what happened when her mother gets cross with her, a nine-year-old girl replied thus,

"Well say she sends us out of the room about ten minutes and then when she’s calmed down a bit she accepts us back in. Can you think of the last time that..."
happened? To me? Yeah. About a week ago. And what were you doing? Erm well I broke something first. And what happened? And she just shouted at me and said to get out of the room and I got out of the room and she called me in about five minutes and said come back now. And how did you feel when that happened? Well I felt a bit annoyed cos I hadn't done it on purpose but then it was one of her favourite ornaments I suppose, I'll get quite angry if I had broken one, if someone had broken one of my favourite ornaments. What was that? It was a China vase. What were you doing to break it? Erm, I was running around, I was running around the kitchen and then I bashed the chair and the chair bashed the table, the table wobbled and then the vase fell onto the floor. And how do you think your mum felt when that happened? Well I think she felt a bit upset and angry, erm, I don’t know, something like that. And why do you think she told you to go out of the room? So that she could just calm down and relax.

When asked the above question, a nine-year-old boy replied thus,

“Very angry .... erm well he was a bit angry yesterday and the day before well no not the day before I don’t think but erm yesterday he was sort of a bit angry and he wasn’t as angry as my mum though but erm . last time he got really angry was erm actual erm I can’t remember erm, I’ll try to remember though. Oh yes it was about a week ago or so maybe a bit more. Can you remember what happened? Yes I was, usual me and Max were being annoying (laughs) yep. And what did you do?And what I did was I cos he’s got this electronic erm chess set (Hm) cos he’s very good at chess he came up in came up (Who, your dad, or Max?) Max (Right) and I wiped off all and that was a nightmare with Max cos he kept on switching it on switch it off the lights and the TV and so I was in an angry mood, I told him stop but he doesn’t like he always he carries on like at bed time if erm sometimes he goes “Hello silly billy billy” and then I say “Stop it” and then normally he would and then and my mum comes up and hits him and then he doesn’t get very angry he goes “Hello silly billy billy billy” and carries on very quietly and and so that’s what happened there he just kept on going instead of going like dick dick turning on off on, he was doing like dick dick really fast. Right, so what did your dad do then? Erm like he was in the middle
of level 62 there’re 64 levels there’re 64 squares on the and at on and he erm I wiped it all off, I wiped all the chess pieces off but it was on the big black chess board on the floor and I walked by (stands out and shows the interviewer) like that and then I wiped them off so my dad hit me and sent me out. Right, and how did you feel when that happened? Erm I feel, I felt annoyed with Max I knew he, dad would do that but I just wanted to get my own back on with Max so I did it. And how do you think your dad felt when that happened? Erm I think he didn’t feel too annoyed he just didn’t want argument to go on like the same as my mum and cos I was I he just sent me outside not outside the front door he sent me outside the door downstairs and erm and and then I can hear his conversations and he doesn’t sound angry at all. Right, and why do you think he does that? You said that he didn’t want the argument to carry on? Because as I said he gets distracted a lot and erm he he says it get hi he it’s distracts when he’s cooking and erm and so he doesn’t want the argument to go on ‘til he’s staying and stuffing it longer so he just sends one of us out so the argument can’t carry on and he goes back to cooking. Right, and do you know why he tells you off, or what you’ve done wrong, usually? Erm usually as I said I react a lot usually he sends me out cos I’m the one who reacts and erm once Max started it and then I did something he he started coming up behind me and like being like pulling (shows the interviewer) my head back like that and then erm I hit him in the belly and he went to tell dad and he told the story to dad the truthful story dad sent him out (Right) even though he went and told so erm my dad does like er make the right decision sometimes (Right) but often he sends me out.

To the same question, a ten-year-old girl replied thus,

“I can’t remember what happened but erm whatever I can’t remember but what happened erm is my mum went up to her room and I went into my room and I was crying cos I don’t like it when she’s upset and then my sister went up to see if she was alright. So how do you think she felt when that happened? Mmm well normally when she gets cross its probably cos I’ve done something if I’ve done something really wrong or like if she’s sometimes when she’s ill she just like, she gets not exactly moody but she’s, she’s not her normal self, she gets stressed out quickly.
Alright, so how do you think she would have felt then, at that time? Erm sad and if it was when, I think yeah was when she was ill so angry a little and upset. And how did you feel when that happened? Mm I feel really upset cos I don’t like hurting anyone’s feeling especially not my mum’s. And why do you think she reacted in that way? I suppose cos it’s just the way she is, everyone else has their own way of handling it.

The above three extracts illustrate the children’s ability to respond meaningfully to the demand questions and demonstrate considerable emotional openness and reflectiveness in their discussion of both their own feelings as well as those of their attachment figures during times of conflict.

By way of presenting the diversity of attachment-related narratives in the current sample, several extracts reflecting different types of responses are presented below.

When asked to describe her relationship with her mother, a nine year-old girl judged as securely attached with respect to both mother and father replied thus,

“Can you tell me three words to describe what it’s like to be with your mum? Hmm ... fun ... erm ... sometimes it’s scary like when she shouts at me and don’t know how to explain it but like when I when I’m upset and she’s like she’s always there for me so. Can you tell me, well you mentioned a little about your mum sometimes a bit scary. I’d like to know what happens when your mum gets upset with you. Can you think of the last time that happened? Erm I think it was when we got into an argument, when I’d forgotten to clear the rats for a week and they really stunk .. erm .. my mum went up to her room and I erm and I went into my room er when I went into my room I started crying. Can you remember what she said to you? Erm no. Can you remember how you felt when that happened? Yeah I was I well I didn’t really know what to think. I was really sorry because you know they really did stink and I was angry because you know I didn’t mean to forget for a whole week and I was upset because I don’t like upsetting my mum”.
The above extract illustrates the child’s ability to present her mother in a balanced way, integrating both positive and negative aspects of the relationship, and to remember and describe an episodic example in an emotionally open and coherent manner.

By contrast, children who idealised and/or dismissed one or both attachment figures as reflected in their narratives produced relatively impoverished examples, were less likely to present attachment figures in a balanced light, showed a restriction in the use of emotional terms and failed to describe the resolution of conflicts, all potentially reflecting a strategy that serves to avoid or minimise the importance of attachment figures and experiences.

To illustrate, an extract from an eight year-old girl who was judged as Very Insecure with respect to both mother and father is presented below.

**OK. How do you get on with your mum? Can you think of three words to tell me what it’s like to be with your mum?** Good. It’s good, yeah. **Can you think of any other words, to describe what it’s like to be with your mum?** Nice. Nice, yeah, and another word? er no. No, **OK. Can you give me an example of when it felt good to be with your mum?** All the time. **All the time? Is there any time in particular? That you felt it was. Yeah. What were you doing? at home** At home? **What were you doing? together in bed. You were together in bed? When was that?** Er .. every Sunday. **Every Sunday, what normally happens, can you tell me?** I sleep with her until and then after I go with my nanny to sleep. **Right. So do you sleep all night with her, or what happens?** All night with her. **You spend all night with her? Yeah. And that happened last Sunday, did it? Yeah. And can you tell me about a time when it felt nice to be with your mum?** Huh (exhales) no. **You can’t think of a time? Isn’t there anything you can remember when it felt nice to be with your mum?** (shakes her head) No. **OK. What happens when your mum gets upset with you?** She shouts. **And then what happens? Errrrr (shrugs her shoulder) nothing.** What does she normally say to you? She doesn’t just say it to me she says it to everybody. **Can you remember the last time when she got upset with you?** (shakes her head) No. **Can you remember what she**

The above extract clearly demonstrates the child’s attempt to present her mother exclusively in positive terms and her inability to substantiate this view with an episodic example. In addition, she shows considerable restriction in talking about attachment experiences, mentions no emotions despite prompting, and is overall incoherent.

Whilst the majority of children fell into the two patterns presented above, only a single child across the complete sample showed considerable Preoccupied Anger with respect to mother.

When asked what happened when she was ill, the aforementioned girl of ten years responded thus,

“Last time I’ve been to hospital was when I cracked my eyebrow. I’ve got a scar there (shows interviewer). What happened? I fell out of bed. It was this big sideboard like that and it was really sharp and I fell out of bed, whack, on the corner of it, o.k.? And I woke up and started to cry and then my mum came in and it was pitch black she didn’t even bother to turn the light on and you know when you bleed you can taste the blood in your mouth I said “mum its bleeding” and she said “no its probably just tears” she said “hold on a minute” and she turned the light on and blood everywhere dripping on the side of my face and all over the pillow and she didn’t even take me to hospital till the morning, 8 hrs after it happened. And then one night I was in bed and she got an ear ache and she took me to hospital, 11.30 at night, and she wouldn’t take me to hospital when I cracked my eyebrow because she couldn’t be bothered. I mean it’s a bit unfair because she takes herself to hospital at 11.30 and she doesn’t take me at 2 in the morning.” (Rate 7)

Although the above transcript extract was identified as a very clear example of Preoccupied Anger, none of the remaining 27 children in the sample showed any re-
experiencing of anger that would qualify for a rating higher than 1 on the Preoccupied Anger scale.

STUDY 2. FURTHER REFINEMENTS TO THE CHILD ATTACHMENT INTERVIEW

5.5 METHOD

5.5.1 Participants

Thirty-two children were recruited from three separate classes at a local primary school in the Manchester area. The children formed a sub-sample of children who had two to three years previously taken part in a study undertaken by Dr Jonathan Green and colleagues in the piloting of the Manchester Child Attachment Story Task (MCAST: Green et al. 1999; Goldwyn et al. 1999). Letters inviting parents and children to participate in the study were sent out to parents along with an information pack explaining the nature of the project and what the project would entail for both the child and the parent. Letters were also sent to a minority of children (4 children) who had changed schools in the intervening years. Parental and child consent forms were included (see Appendix A for information letter and consent forms).

Out of a total sample of 56 children, 54 children were contacted (2 had left the Manchester area with no forwarding address), and 32 agreed to participate in the 3-year follow up study. Table 5.7 presents the demographic data pertaining to the study sample. The children ranged in age from eight years and one month to eleven years (Mean = 9.6; SD = .83). The gender distribution was 18 girls (56%) and 14 boys (43%) with all but three children being Caucasian. Children came from predominantly middle-class, professionally employed (78%), two-parent households (81%).
Table 5.7 Demographic data of the study sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 9.6 (SD = .83)</td>
</tr>
<tr>
<td>Range</td>
<td>8.1 – 11.0</td>
</tr>
<tr>
<td>Females</td>
<td>18 (56%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>29 (91%)</td>
</tr>
<tr>
<td>2-Parent Family¹</td>
<td>26 (81%)</td>
</tr>
<tr>
<td>Social Class² I-II</td>
<td>25 (78%)</td>
</tr>
<tr>
<td>III-V</td>
<td>7 (22%)</td>
</tr>
</tbody>
</table>

¹Includes re-marriages.
²Based on employment status-Classification of Occupation (1990)

5.5.2 Measures

5.5.2.1 The CAI protocol

Based upon the findings and discussion presented in Study 1 of the current chapter, the only further addition to be considered for Version IV of the CAI Protocol was the inclusion of a question concerning the child’s sense of rejection by attachment figures.

Whilst none of the CAI protocol versions reported hitherto directly elicited information relating to feelings of rejection of the child by attachment figures, this has been of central significance in informing the judges’ decisions in the linguistic analysis of AAI transcripts in adulthood, in particular in the identification of Idealisation of attachment figures. Adults may present a highly positive picture of their attachment relationships when asked to choose five adjectives to describe their relationship with their mother and father respectively whilst recalling specific untoward episodes in support of those general descriptions. However, they may also fail to acknowledge feelings of rejection when episodes of rejection are clearly brought forward.

However, by contrast to the AAI protocol, where adults are directly questioned about having felt rejected in childhood, in the CAI the question was to be phrased in a more
child appropriate manner guided by the assumption that some children may not comprehend what is meant by rejection. Indeed adult’s definitions of rejection as reflected in their AAI transcripts vary considerably as Main and Goldwyn (1998) noted in the AAI Manual. As a way of limiting the degree of children’s confusion to a minimum, the question was framed in terms of feeling loved or unloved. The question was phrased thus:

“Do you ever feel that your parents don’t really love you?”

By introducing the word “really”, a distinction was drawn between times of feeling really or unconditionally loved by attachment figures to times where feelings of rejections were experienced to a lesser or greater extent.

The sequential position of the above question within the interview was considered important and the most appropriate place for the question to be introduced was judged to be following question 7, concerning times when the child felt that he/she needed help or was misunderstood.

Version IV of the CAI is presented in Appendix B.

5.5.2.2. CAI coding and classification system

The development of Version III of the CAI coding and classification system marked a departure from previous versions in that a wealth of observations had been collected that lent themselves to the adoption of a categorical approach.

The development of the current version of the coding system was based upon CAI narratives collected from 68 normal children and a sub-sample of clinic-referred children.\(^\text{12}\)

\(^{12}\)The complete clinical sample is described in Chapter 6.
Inter-correlations reported in Chapter 4 and Study 1 of the current chapter constituted the foundation for identifying specific criteria for the categorisation of children with respect to their attachment organisation to mother and father.

To re-state, children who were found to idealise and/or dismiss one or both attachment figures often produced relatively impoverished examples, were less likely in their description to integrate positive and negative aspects of their attachment figures, showed a marked restriction in the use of emotional terms and if described, rarely provided resolutions to conflicts, all potentially reflecting a strategy that serves to avoid or minimise the importance of attachment figures and experiences.

With these observed associations as a guide, CAI narratives were systematically re-examined to identify children whose narratives seemed to share some of the characteristics described above. This process facilitated the identification and description of key markers or characteristics that were found to be typical of children in the Dismissing group. Concomitantly, guidelines set to assist judges in deciding whether a particular case fitted the main classification descriptors, based upon CAI scale ratings, were introduced. Not surprisingly, many of the hallmarks of those adults judged Dismissing in the AAI, were faithfully echoed in the children’s narratives as elicited through the CAI.

Presented below is a brief summary of the main indices for the identification of children considered Dismissing with respect to attachment to mother and/or father respectively.

Dismissing children were found to frequently emphasise their independence, attempt to present attachment figures as “perfect” or “ideal” in the absence of episodic support, and often limit the discussion of unfavourable experiences with attachment figures to a minimum. Expression of any feelings, in particular, those of vulnerability or dependency are largely absent or if present are unelaborated. The narrative is laced with references to lack of memory with a strong emphasis on material possessions and activities as a substitute for more relational interactions.
By contrast to those children judged Dismissing, children who described attachment-related experiences in a coherent and consistent manner were less likely to idealise and/or dismiss attachment figures and relationships and more likely to offer affectively laden episodic examples, present a balanced view of attachment figures, integrating both positive and negative aspects of their relationships with attachment figures, and describe conflicts that have been clearly resolved, all considered as potential markers of security of attachment.

Following the systematic re-examination of cases that exhibited the above associations, markers of the Secure group were formally described along with guidelines for assigning a Secure classification based upon scale ratings. These are briefly summarised below.

Secure children tend be collaborative in recounting attachment-related episodes, most often acknowledging the impact of separation and loss and expressing clear valuing of attachment relationships/figures. References to emotional states are commonly accompanied by elaborate and relevant examples with little or no restriction, even when discussing less favourable aspects of the relationship.

Whilst the Dismissing and Secure classifications were identified relatively straightforwardly on the basis of extensive observations and scale associations, only a minority of children displayed some of angry preoccupation with one or both parents, but these failed to correlate significantly with any of the remaining CAI dimensions. In the absence of clear associations, the task of identifying a third, distinct pattern proved very challenging. Nevertheless, the limited observations of preoccupied anger that were made formed the basis for the tentative description of possible markers of the “Preoccupied” group, based currently on moderate to high Preoccupied Anger scores.

The markers considered of central importance were instances where the child’s predominant strategy was one of preoccupation with, or excessive focus on one or both parents, reflected partly in angry or derogatory statements and/or attempts to
involve the interviewer and enlist his/her agreement. Additional indications of a Preoccupied status were descriptions that were repetitive, containing irrelevant information as if losing track of the question, repeated references to concern for attachment figures, and indications of fearful preoccupation with attachment figures.

For a complete description of the CAI coding and classification system see Appendix C.

5.5.3 Procedure

5.5.3.1 Administration

Children were assessed by the author from three different locations; at their school; and in two separate local GP surgeries. A very small proportion of children were assessed at home when parents expressed a preference for a home assessment. The author conducted all the assessments, with the CAI forming part of a larger battery of measures including, amongst others, measures of expressive language and IQ, administered over one session. In all cases, the CAI was completed following a short life events questionnaire as a way of establishing rapport with each child. The assessments were conducted in a private and quiet room, either at the school or at one of the GP surgeries, with interviewer and child sitting face to face. Prior to the beginning of each assessment, the interviewer explained the nature of the study and ensured that the child felt at ease and consented to take part. The interview was then introduced as described in Chapter 5. The duration of the interview ranged from 20 minutes to one hour depending upon the individual child’s response and the sessions were videotaped throughout.

Whilst children were being assessed, their respective mothers were required to complete several forms relating to their child’s temperament, behaviour in the home and mothers’ own mood/depression.
5.5.3.2 Coding

The author undertook coding of the complete sample ten months following the completion of the assessment of the sample as a whole. As means of establishing inter-rater reliability, a second independent rater (AG, a psychologist working at the Anna Freud Centre) received formal reliability training for 15 cases with the author as the reliable judge. During this process, AG rated one interview at a time and this was followed by a close examination of the ratings with the author and a discussion concerning agreements and discrepancies. Where ambiguities arose, these were addressed and clarified vis-à-vis the coding and classification of interviews before AG proceeded to rate the next interview. Following the above training process, AG rated 14 of the 32 interviews independently.

5.6 PLANNED DATA ANALYSIS

Planned data analysis followed closely the analyses described in detail in Chapter 4 and Study 1 of the current chapter.

5.7 RESULTS

5.7.1 Descriptive Results

CAI Scales

Ratings on all CAI scales with the exception of Preoccupied Anger were not restricted to a narrow band of low or high scores. (Mean ranged from 2.2 to 5.9, SD ranged from 1.2 to 1.5). Whilst ratings for Preoccupied Anger with respect to mother ranged from 1 to 4 (Mean = 1.1, SD = .55), suggesting a narrower use of the scale, ratings for Preoccupied Anger with respect to father were restricted to a score of 1 to 2 across the whole sample (see Appendix D for Table D10 of descriptive data).
Two-Way Attachment Classifications

Two-way attachment classifications with respect to mother and father did not differ for the sample as a whole. Two-way attachment classifications with respect to mother and father revealed that 22 (69%) children were classified as Secure and ten (31%) were classified as Insecure (see Appendix D for Table D11 of two-way distribution of attachment patterns).

Three-Way Attachment Classifications

Similar to two-way attachment classifications, three-way attachment classifications with respect to mother and father did not differ across the 32 children. The distribution of three-way attachment status with respect to mother and father showed that eight (25%) of the 32 children were classified as Dismissing, a single child (3%) was judged as Preoccupied and 23 (72%) were judged Secure (see Appendix D for Table D12 of three-way distribution of attachment patterns).

5.7.2 Inter-Correlations Between CAI Scales

In order to examine the relationship between ratings on the CAI scales, inter-correlations were computed using Pearson Product-Moment correlations. Positive correlations ranged from \( r(32) = 0.01 \) to 0.95 and negative correlations ranged from \( r(32) = -0.01 \) to -0.70, with all correlations in the expected direction (see Appendix D for Table D13 of inter-correlations).

5.7.3 Internal Consistency of CAI Scales

Internal consistency between the CAI scales was further calculated and yielded Cronbach’s alpha of .83 for both mother and father, both considered very high (an alpha coefficient of .70 is considered acceptable for reliability; Kline, 1993).
5.7.4 CAI Inter-Rater Reliability

Inter-rater reliability between the author and AG was established for CAI ratings for a sub-sample of 14 cases chosen arbitrarily by computing agreement for ratings on all CAI scales, agreement for two-way classifications, that is, Secure versus Insecure, and agreement for three-way classifications, that is, Dismissing, Secure and Preoccupied.

CAI Scales

Inter-rater reliability was assessed using two-way mixed model intra-class correlations (ICC3), reporting the single measure intra-class correlation coefficients and by computing percentage of exact agreement and agreement within 1-scale point. Preoccupied Anger with respect to father was excluded from the analysis because a score of 1 was assigned across the 14 cases. Correlations ranged from .29 to .82 and were particularly high for the scales of Idealisation with respect to mother (.80), Dismissal with respect to both mother and father (.74 and .79 respectively), Resolution of Conflict (.70) and Coherence (.82). Percent of exact agreement ranged from 23 to 93 percent and percent of agreement within 1-scale point ranged from 69 to 93 percent and was high without exception (see Appendix D for Table D14 of ICCs and percent of agreement).

CAI Two-Way Attachment Classifications

Two-way attachment classifications with respect to mother and father did not differ for any of the 14 children. Agreement for attachment classifications with respect to mother and father was very high (93%, $k = .86$, $p < .001$) with only one out of the 14 children being judged Secure by one judge and Insecure by the other. Seven of the eight (87.5%) children judged Secure with respect to mother and father by the author were also judged Secure by AG. Complete agreement was demonstrated for the Insecure category with all six children judged Insecure by the author and AG.
Appendix D presents Table D15 of inter-judge agreement for two-way attachment patterns.

**CAI Three-Way Attachment Classifications**

Applying Version III of the CAI coding system, three-way attachment classifications were further assigned and inter-rater reliability was computed using the kappa statistic. Similar to the two-way attachment classifications, three-way attachment classifications with respect to mother and father did not differ for any of the 14 children. High agreement was obtained for three-way attachment classifications with respect to mother and father (86%, $k = .75$, $p < .001$).

Table 5.8 Three-Way Attachment Classifications with Respect to Mother and Father Across Two Judges

<table>
<thead>
<tr>
<th>Attachment to Mother - 1st judge</th>
<th>Attachment to Mother - 2nd judge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Secure</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

As shown in Table 5.8, all five (100%) of the children judged by the author as Dismissing were judged so by AG. Out of the eight children judged Secure by the author, seven (87.5%) were assigned the same classification by AG. Only one child was judged by the author as Preoccupied with respect to attachment to both mother and father but was assigned a Dismissing classification by AG.
5.7.5 The Relationship between CAI Classifications and Demographic Variables

Similar findings to those reported in Study 1 were shown. Associations between age, gender, SES, and one or two parent household and CAI attachment classifications with respect to mother and father respectively did not reach statistical significance.

5.7.6 Differences Between Secure and Insecure Classifications on the CAI Scales

**Main Classification Comparisons**

In order to establish whether the ratings assigned for the CAI scales could distinguish those children classified as Secure from their Insecure counterparts, t-tests were conducted for mother and father respectively. However, on closer observation, the means and standard deviations for Secure and Insecure classifications did not differ with respect to mother and father although some slight variations were observed in the raw scores. For this reason, the results presented reflect differences between Secure and Insecure children with respect to both mother and father. The findings showed that only the scale of Coherence revealed significant differences in ratings as a function of security of attachment \( t(30) = 4.42, p < .001 \). Marginally significant differences were in addition shown for Emotional Openness \( t(30) = 3.24, p < .05 \), Use of Examples \( t(30) = 3.20, p < .05 \), and Resolution of Conflict \( t(30) = 2.18, p < .05 \). Appendix D includes Table D16 of Secure versus Insecure comparisons.

Although theoretically it would have been appropriate to explore differences between three-way classifications, that is, Dismissing, Preoccupied and Secure, given that only a single child was judged Preoccupied with respect to mother and father, such comparisons were deemed unnecessary. Indeed, excluding the single Preoccupied case would in effect constitute a two-way comparison between those children judged Secure and their Insecure-Dismissing counterparts as in case of the Secure versus Insecure analysis above.
5.7.7 Qualitative Data Analysis

Following the refinements to the CAI protocol, a diverse array of attachment-related narratives were elicited in response to the newly included rejection question, examples of which are presented below.

A nine-year-old girl replied to the question of feeling rejected thus,

"Do you ever feel that your parents don’t really love you? No, not really, I always know that they love me but they don’t always like me that much on a particular day, but I know they love me. Why do you feel rejected sometimes? Because they are telling me off or maybe carrying on teasing me and they have to keep on telling me off but then it feels like they don’t like me."

Another nine-year-old girl replied,

"Do you ever feel that your parents don’t really love you? Sometimes, a couple of times but I know they do. Why did you feel like that? Because, I don’t know. Do you remember why you felt they didn’t love you? Because they were just being nasty to me for no reason, I think they had a hard day at school (both parents were teachers), they were just telling me to leave them alone, in peace. What happened then? I went to watch T.V. and just left them and didn’t speak to them. Did you talk to them afterwards? I said, yeah, I did speak to them. Did you tell them how you felt? Yeah they were my friends again”.

The above two examples demonstrate the girls’ ability to think about times when they felt unloved or rejected but also shows their ability to draw a clear distinction between feeling unloved and not liked as a temporary event that is contextually bound.

Another nine-year-old boy replied,
"Do you ever feel that your parents don’t really love you? No, not really, I always know that she loves me”.

Although by contrast to the former two examples, the latter is rather impoverished and perhaps unbelievable it nevertheless stands in contrast to other children who responded with an emphatic “no” or “never” which appeared at times as a defence against having to remember potentially painful or difficult attachment-related events when such feeling may have been evoked.

Additional differences, both structural and content wise, emerged between children of the current sample indicating distinct strategies in accessing and presenting attachment-related information.

When asked, “What happens when your mum gets cross with you?”, a nine-year-old girl judged Secure with respect to attachment replied thus,

“I get in a bit of a mood and I try and say sorry or I give her a note. What do you write in the note? Sorry mum or I love you, please be my friend again and I just go up and hug her and say sorry but not a lot. Can you give me an example when it happened? Ya, I had to make healthy eating biscuit bars for school and she bought these boxes, recipe box and I was tired and horrible when I came back and I felt a bit ill and I wasn’t paying much attention and she got angry with me and said ‘Oh fine Lucy, you have it your way, I spent ages to look for this box’ and I felt sad and more depressed. What did you do? Don’t know, Actually it was only two days ago cause made 16 bars and brought to school so people could taste. Why felt sad? Cause I don’t like people getting angry with me, I think. How do you think your mum felt? She felt angry but sad as well because she put a lot of effort into doing this box. Why did she get cross? I wasn’t paying much attention. Do you usually know why she gets cross? Yeah, sometimes I don’t. Do you think its fair? Yeah.

The above example illustrates the child’s ability to recount a very detailed and coherent episode. She provided an emotionally open account of a conflict that has
been satisfactorily resolved, and in addition demonstrated a capacity to consider her mother’s feelings and hold her mother’s perspective in mind.

When asked the same question, a nine-year-old girl judged Dismissing with respect to attachment replied thus,

*What happens?* I go and say sorry, sometimes she makes me go to my room when its bed time she makes me go up a bit early, tells me not to do it. *Can you remember the last time she got cross with you?* This morning cause I was supposed to get dressed and I forgot. *What did your mum say?* Go get dressed quickly. *How did you feel?* Don’t really know. *What did it feel like?* Can’t really explain. *How do you think your mum felt?* I don’t know, feels angry with me. *Why did she get cross?* Cause I don’t do something or do what I’m not supposed to do. *Do you think its fair?* Sometimes.

By contrast to the former example, the above child provided an impoverished example marked by an avoidance of talking about feelings. She required considerable prompting and even when prompted, provided little detail in recounting the episode.

In addition to those children whose narratives clearly fell into the three “organised” patterns identified, two of the children produced narratives that contained bizarre associations and disorganised speech. To illustrate, an eight-year-old boy showed clear disorganised speech in response to questions concerning how he would like to be and not like to be like his step-father.

*“How would you like to be like your step-dad?* My step-dad, lots of things, he’s good at cricket. *How would you not like to be like your step-dad?* I’m not allowed to say it, I don’t want to have bald hair cause I can get really bad scars and I could die, even if I fell from height, I think I want to kill myself but if I had hair I would have a chance of survival because if fall down it will affect your brain”..
5.8 DISCUSSION

The current study was undertaken with the aim of further refining the CAI protocol and coding and classification system in order to access children's internal working models of attachment relationships. In the following sections, the results are briefly summarised and discussed in turn.

5.8.1 The CAI Protocol

By extension to the findings presented in Chapter 4, the results of Study 1 of the current chapter lend further support to the supposition that children in middle childhood are able to describe and discuss aspects of their relationships with their parents and respond in meaningful ways to the interview demands. As part of a recursive process, detailed and systematic observations of interviews conducted with an additional normal sample confirmed the importance of the refinements introduced to Version III of the CAI protocol. Children showed little or no confusion in response to questions 4 and 6 of the protocol and without exception recounted episodes where mum/dad were cross. This was clearly illustrated by the diversity of their responses as presented in the qualitative analysis section. Those who failed to respond did so because of some restriction or inability to recall rather than because of any ambiguity contained in the earlier wording of the questions.

The introduction of further demand questions proved productive in accessing children's understanding of other's states of mind and in facilitating their description of diverse perspectives as reflected in some children's elaborated, emotionally open, and coherent responses exemplified in the qualitative analysis section.

Finally, the inclusion of an ending question that was not strictly speaking related to attachment experiences was found to be helpful in completing the interview on a lighter note. This was evidenced by the majority of children in the reported sample who expressed pleasure, excitement, and creativity in thinking about what they would wish for.
The findings of Study I however highlighted the need to focus upon an assessment of the child's perception of the availability and supportiveness of attachment figures. For this reason the inclusion of a question addressing the child's experiences and/or feelings of rejection was considered important.

Continuity from Version III of the CAI protocol to Version IV as described in Study 2 of the current chapter was maintained with the additional inclusion of a question accessing times of rejection as discussed above. The underlying reasoning for the inclusion of the question was that it would provide additional information concerning the child's perception of the availability and support of the attachment figures and would serve to highlight inconsistencies where those were present within the narrative as a whole. Based upon observations as illustrated in Section 5.7.7, the inclusion of the rejection question was considered valuable in providing further attachment-related information that formed the basis for the coding of interviews.

5.8.2 The CAI Coding and Classification System

As noted in Section 5.2.2, the coding and classification system underwent considerable refinements and these were reflected in the results obtained. In the following sections, the findings concerning the psychometric properties of the CAI are summarised and discussed in turn.

CAI Inter-Correlations

Whilst inter-correlations between CAI scales as presented in Study I were all found to be in the expected direction, not all were statistically significant. Emotional Openness was found to correlate positively with the scales of Use of Examples, Resolution of Conflict, and Coherence, and to correlate negatively with Dismissal of both mother and father. In addition, Coherence was shown to correlate positively with Balance of Positive and Negative References to attachment figures, Use of Examples, and Resolution of Conflict whilst correlating negatively with Idealisation and Dismissal with respect to both mother and father. The observed correlations are
in keeping with theoretical and empirical expected associations and go some way in illuminating further potential patterns of attachment in the eight to twelve years age group. In the current sample and consistent with patterns of correlations reported in Chapter 4, children who produced attachment-related narratives considered as coherent and consistent were less likely to idealise and dismiss attachment figures and relationships. They were in turn more likely to offer affectively laden episodic examples, present a balanced view of attachment figures, and describe conflicts that have been clearly resolved, all considered as potential markers of security of attachment. These associations were well illustrated in the extract of the Secure child presented in the qualitative section of the results. The child’s ability to offer an emotionally laden episodic memory that was relevant and supportive of the general view of her relationship with her mother was demonstrated. Further, she showed the ability to integrate positive as well as negative aspects of the relationship and was both coherent and collaborative with no apparent idealisation or preoccupation.

Other narratives were marked by considerable idealisation and/or dismissal of one or both attachment figures. These narratives were characterised by relatively impoverished examples, unbalanced presentation of attachment figures, restriction in the use of emotional terms and failure to describe the resolution of conflicts, all assumed to reflect a strategy that serves to avoid or minimise the importance of attachment figures and experiences. An illustration of the above characteristics was given in the qualitative analysis. The extract clearly showed the child’s attempt to present her mother exclusively in positive terms and her inability to substantiate this view with a specific and relevant example. The narrative was in addition, marked by a considerable restriction in talking about attachment experiences and a striking absence of references to emotions.

By contrast to the findings obtained in Study 1, fewer statistically significant correlations between the CAI scales were observed in Study 2, with some scales demonstrating correlations below expectations. Particularly striking, and in contrast to previous findings, were the non-significant correlations between Balance of Positive and Negative References to attachment figures and the remaining CAI scales.
scales. This in part could be explained by the somewhat restricted band of ratings used (range was 3-7.5, Mean = 5, SD = 1.5). Coherence however, was shown to correlate in the expected direction with scales apart from the scales of Preoccupied Anger with respect to mother and father and Balance of Positive and Negative References to attachment figures. The above associations are not surprising when considering that Coherence scores, to some degree, reflect the scores assigned on the remaining CAI scales. Moreover, Coherence is determined by considering both positive scales such as Emotional Openness, Use of Examples, Balance, and Resolution of Conflict, and those scales that indicate Idealisation, Preoccupied Anger, and Dismissal. Consonant with the findings reported in Chapter 4 and Study 1 of the current chapter, highly significant correlations were shown for each of the three scales rated independently with respect to mother and father, namely, Preoccupied Anger, Idealisation and Dismissal.

In keeping with internal consistency findings reported in Chapter 4, internal consistency of the CAI scales as reported in Study 1 and Study 2 was very high, suggesting that all scales were potentially measuring the same construct.

**The Distribution of Attachment Patterns**

Whilst the coding and classification system reported in Study 1 adopted a dimensional approach in the assessment of attachment and defined attachment security along a continuum from Very Secure to Very Insecure, the aforementioned scale associations provided the building blocks for the potential identification of distinct attachment patterns. The adoption of a categorical approach concomitant with a dimensional approach was taken up in Study 2 and in line with expectations, the distribution of attachment patterns found using the CAI was comparable to the distribution observed in infancy using the Strange Situation (Fonagy, Steele, & Steele, 1991; Steele & Steele, 1994), and in adulthood using the AAI (van Ijzendoorn & Bakermans-Kranenburg, 1996). Although in keeping with previous studies, the current findings suggest a preponderance of Dismissing classifications (25%) as compared with only a single Preoccupied classification. The relatively
high proportion of Dismissing children in the current sample may be explained in terms of relational changes taking place in the transition from childhood to adulthood. As Grossmann et al (1999) noted, changes in adaptive behavioural strategies could occur throughout the life span, and during early adolescence these changes may be particularly driven by the need to keep attachment figures at a distance in order to achieve individuation and independence. As early adolescence ushers a period of negotiation of the balance between attachment and autonomy and thus marks a period of growing detachment from parents, it is possible that this detachment could underlie changes in the organisation of attachment not only in early adolescence but also in middle childhood. Some support for this notion comes from a study of the stability of attachment representations from ten to 14 years of age conducted by Ammaniti et al. (2000), reporting an increase in the proportion of Dismissing children from 29 percent at ten years of age to 36 percent at 14 years of age. Further, two recent studies using the AAI to assess the attachment organisation of young adolescents have also reported a higher proportion of the Dismissing classification as compared with the distribution in normative adult populations (Black et al., 2000; Ward & Carlson, 1995).

Contrary to expectations, complete concordance was demonstrated for attachment classifications with respect to mother and father and therefore the distribution of two-way and three-way attachment classifications did not differ for mother and father across the sample as a whole. The above finding coupled with the high correlations observed between the independent ratings for mother and father on the CAI scales as discussed above raise questions concerning the conceptualisation of separate attachment representations for mother and father. Whilst in the AAI a unitary state of mind with respect to attachment has been assessed, based on Bowlby’s (1969) attachment theory and ample empirical evidence in infancy one would expect multiple models to reflect the personal history of child-parent interactions. It is perhaps premature on the basis of the current study to conclude the existence of a unifying internal working model of attachment relationships and additional samples may shed further light on this issue.
Inter-Rater Reliability

Similar to results in Chapter 4, the findings of Study 1 and Study 2 demonstrated highly significant inter-rater agreement for all CAI scales. Whilst percent of exact agreement was not uniformly high across the CAI scales, percent of agreement within 1-scale point was considered very high for all scales (ranging from 72% to 100% across the two studies). Not surprisingly, very high agreement was observed for ratings of Preoccupied Anger with respect to mother and with respect to father and this could be explained by the very narrow use of the scale. These findings are somewhat unexpected particularly since the Preoccupied Anger scale was more fully defined and elaborated in Version III of the CAI coding and classification system and was thus hoped to yield a broader range of Preoccupied Anger ratings. In fact, for the samples reported in Study 1 and Study 2, only a single child was assigned a rating higher than 1. None of the remaining children in either samples showed any re-experiencing of anger that would qualify for a rating higher than 1-2 on the Preoccupied Anger scale.

Several explanations may be put forward to account for the scarcity of angrily preoccupied representations of attachment figures. Firstly, it is possible that preoccupied anger was simply not manifested by the children in the current samples with the exception of two children as shown in Study 1. Secondly, preoccupied anger may not be manifested in the eight to twelve years age group in the same way it has been shown to be expressed by adults in the AAI. Alternatively, the Preoccupied Anger scale as presently operationalised may be insufficiently specified and require further definition. Nevertheless, it is important to note that the reported percentage of adults judged Entangled (E) in the AAI in middle-class samples, of which Preoccupied Anger is a central marker, is typically 18 percent across sample. Comparably, only 10 percent of infants are judged Ambivalent/Resistant in the Strange Situation procedure (Steele & Steele, 1994; van IJzendoorn & Kroonenberg, 1988) highlighting the low frequency and possibly difficulties in the identification of this pattern. Converging evidence calls for broadening the criteria for what may constitute angry preoccupation within the CAI. It remains however to be seen
whether such representations may be manifest more readily in a clinical group, a question that is addressed in Chapter 6.

Inter-judge agreement with respect to main attachment classifications was highly significant as was the percent of agreement for both mother and father in studies 1 and 2 (93%-96% and 86%-93% respectively). Percent of agreement for sub-classification placement for both mother and father in Study 1 was in addition shown to be very high (79% and 82% respectively) suggesting that the operational criteria of the CAI were well defined, allowing close agreement between judges. The findings were further supported by high percent of agreement for three-way attachment classifications for both mother and father (86%) as reported in Study 2. The above findings are particularly promising since new criteria for identifying distinct attachment patterns were developed and inter-judge agreement was sought with two new judges who had not been involved in the development of the system and who possessed substantially less knowledge of attachment theory than the judge reported in Chapter 4. This was accomplished by the inclusion of many examples of anchor points for the majority of the CAI scales thus providing a point of reference for new judges employing the system. The results therefore support the view that new judges can rate the CAI in a reliable manner.

Test-Retest Reliability

In establishing the test-retest reliability for CAI scales in Study 1, all correlations were fairly high, with Emotional Openness, Dismissal with respect to both mother and father, and Coherence showing particular promise. The above results are not surprising in view of the fact that Emotional Openness, Dismissal, and Coherence are central in distinguishing those children who may show an avoidance/dismissing strategy from those who appear Secure.

The percentage of agreement within 1-scale point revealed considerable variability with Emotional Openness, Preoccupied Anger with respect to mother, Resolution of Conflict, and Self-Organisation most high in agreement. Percent of agreement within
1-scale point was somewhat lower for the remaining scales, in particular, for Idealisation with respect to father and Balance of Positive and Negative References to attachment figures. Whilst scale scores were shown to be very stable across the one-month period, main attachment classifications in addition revealed high stability with respect to mother and father respectively (82% and 79%). The above associations are comparable to stability rates reported in the attachment literature. For example, Lamb et al (1985) found an average of 77 percent stability of infant attachment status for middle-income families compared with 53 to 62 percent in low SES samples across a six-month period (see also Egeland & Farber, 1984; Thompson et al., 1982; Vaughn et al., 1979). Studies examining stability of attachment in adulthood employing the AAI have repeatedly demonstrated high stability across one to 15 months periods ranging from 77 to 90 percent (Bakermans-Kranenburg & van IJzendoorn, 1993; Benoit & Parker, 1994; De Hass et al., 1994; Sagi et al., 1994). In middle childhood, Main and Cassidy (1988) found 62 percent stability across a one-month period for four-way classifications (A, B, C and D) and 84 percent for three-way classifications.

Short-term stability of attachment sub-classification with respect to mother and father respectively was somewhat lower than main attachment classifications (71% and 68%) although certainly in keeping with the aforementioned stability of existing attachment measures.

Secure Versus Insecure Comparisons

In line with expectations, the results of studies 1 and 2 converged in demonstrating that security of attachment as assessed by the CAI was not associated with age, gender, ethnicity, SES, or one or two parent households. These results lend further support to the validity of the CAI as an adequate measure of attachment in middle childhood that is relatively uninfluenced by demographic variables.

Examining in Study 1 differences between ratings on the CAI scales as a function of security of attachment with respect to mother, statistically significant differences
were revealed on all scales with the exception of Preoccupied Anger with respect to mother and father. These two scales failed to significantly distinguish children classified as securely attached from their Insecure counterparts. As noted earlier, the above scales were used very narrowly with a mean rating of 1.1 with respect to mother and a score of 1 for the complete sample with respect to father across the two groups. The findings suggest that the existing Preoccupied Anger scale may not be sensitive enough in picking up differences in attachment status and highlight the need for further refinement. In addition, Dismissal with respect to mother and father only marginally differed between the those children judged Secure and those judged Insecure with respect to both mother and father \((p < .05)\). Whilst the mean rating between the two groups showed considerable difference (Mean=2.1, SD=1.2 for the Secure group and Mean=3.8, SD=2.2 for the Insecure group), the standard deviation for the Insecure group was fairly large, reflecting the variability of Dismissal scores across the Insecure group and highlighting the possibility that only a minority of children in the Insecure group had elevated Dismissal scores. Thus, it appears that although ratings on the above scales ranged from 1-7 across both groups, children judged Insecure were only marginally more likely to dismiss one or both parents. A larger sample size in future studies may reveal more clear differences that are only tentative in this study.

By contrast, in Study 2 a statistically significant difference between Secure and Insecure children was only shown for the Coherence scale. Marginally significant differences were in addition demonstrated in Emotional Openness, Use of Examples, and Resolution of Conflict \((p < .05)\). Several explanations can be brought forward to account for the above results: Firstly, as with any classificatory system, judges are forced to assign any case to a particular classification. In the majority of cases, a clear predominant strategy vis-à-vis attachment can be discerned which allows the judge to confidently rate the case. In the current study, five of the 22 children who were judged Secure were considered as borderline cases whereby representationally they displayed some Secure features along with more Dismissing ones. Whilst no clear Secure strategy was presented, dismissal and idealisation were not sufficiently elevated to warrant a Dismissing classification. In such cases,
children were assigned to the Secure category thereby potentially obscuring differences between the two groups. Secondly, the relatively small sample size may not have been sufficient to reveal differences that were only tentative in the current study. A considerably larger sample size in future studies may thus bring to light clear differences. In addition, it is important to note that there was a selection bias in the children who chose to take part in the present follow-up study. Of the 32 children who consented to participate in the study, 72 percent were judged Secure in the MCAST, completed two to three years previously. This ratio is also reflected in the predominance of Secure classifications assigned subsequently on the CAI (69%). Nevertheless, illuminating differences did emerge as reflected in the two examples provided in Section 5.7.7.

Whilst the extracts presented in Section 5.7.7 clearly illustrated distinct Secure and Dismissing attachment strategies, two of the children of the current sample did not fit neatly into the three organised patterns and appeared to describe bizarre associations that were incoherent in one or more ways. This was exemplified in the extract presented in the qualitative analysis section wherein the child’s disorganisation in response to a seemingly unthreatening question was evident. It may however prove fruitful to include questions concerning abuse that may more readily reveal disorganisation with respect to attachment.

5.8.3 Future Considerations

Questions concerning experiences of abuse were not included in the current version of the CAI. In assessing attachment organisation in adulthood, the AAI includes questions concerning abuse and loss that form the basis for assigning an Unresolved/Disorganised attachment classification. Such a classification is thought to indicate a distinct disorganised state of mind with respect to attachment and individuals assigned this classification are invariably assigned a best fitting organised attachment classification (F, D, or E). In infancy the Strange Situation also identified a distinct behavioural patterns that indicates disorganisation and these behaviours have been found to translate into controlling and punitive caretaking
behaviours in early and middle childhood (Cassidy & Marvin, 1989; Main & Cassidy, 1988; Solomon et al. 1995). Indeed, one of the children in the current study sample exhibited controlling behaviours that could well indicate a 'disorganised' state of mind with respect to attachment. Whether attachment classifications derived from the CAI will prove analogous to those identified in the AAI and the Strange Situation paradigm remains to be determined. However, whilst questions concerning experiences of loss have been included, in the absence of questions addressing experiences of abuse, potentially useful information that could be used in deriving a distinct and as yet unspecified Insecure pattern is lost. Future versions of the CAI protocol should thus include questions regarding abuse to address this and will be considered in Chapter 6.

5.9 CONCLUSIONS

In sum, the findings of the current chapter lend further support to the supposition that children can be directly asked about attachment relationships and experiences and that the observed differences in presentation reflect their attachment organisation. In examining the psychometric properties of the CAI coding and classification system overall high inter-rater reliabilities were shown for the scales in addition to high agreement on main category placement, sub-category placement for mother and father respectively. High inter-rater reliabilities were demonstrated with two separate judges who were not closely involved in the development of the CAI manual as an extension of the results presented in Chapter 4. Additionally, test-retest reliability showed considerable promise with relatively high stability for CAI scales, main attachment classifications and sub-classifications. Furthermore, whilst ratings on the CAI did not all reveal discernible differences between those children classified as Secure from their Insecure counterparts, some significant differences did emerge. The above discussion highlighted the need for further developments to the CAI protocol and coding and classification system, in particular, the inclusion of questions addressing trauma, and the development of criteria for the identification of the Disorganised attachment pattern.
Chapter 5 reported the establishment of criteria for the identification of Dismissing, Preoccupied and Secure attachment patterns. The detailed and systematic study of CAI narratives as reported in Chapter 5 revealed however that some narratives did not fall neatly into the three aforementioned attachment patterns.

A minority of children showed indications of behavioural disorganisation such as bizarre postures or facial expressions, and/or representational disorganisation as reflected in long lapses into silence and incoherent utterances during the interview. The above behaviours provided the foundations upon which criteria for the identification of Disorganisation as assessed through the CAI were developed.

In the following sections, markers of disorganisation as conceptualised in infancy and indices of unresolved status with respect to loss and/or trauma in adulthood are reviewed. Manifestations of disorganisation in early and middle childhood are subsequently presented, and levels of disorganisation are discussed.

6.1 MARKERS OF DISORGANISATION IN INFANCY AND UNRESOLVED STATUS IN ADULTHOOD

Main and Solomon (1990) coined the term “disorganised/disoriented” to capture diverse behaviours that were considered unclassifiable in the traditional tripartite scheme of the Strange Situation procedure (Ainsworth et al., 1978). Infants were considered disorganised/disoriented when they displayed fearful, odd and/or contradictory behaviours such as turning in circles while simultaneously approaching their parents, appearing disoriented, or freezing all movements in a trance-like state. Other disorganised infants showed considerable apprehension, cried, or fell huddled to the floor upon their parents return following a brief separation. Concurrently, the parents of children displaying some of the above
behaviours were observed to show frightened or frightening behaviours towards their children within the Strange Situation procedure. These ranged from creeping up from behind an infant and sliding both hands around the infant’s neck to incidents of sexual and physical abuse. Consequently, and on the basis of extensive observations, Main and Hesse (1990) described and conceptualised frightened parental behaviour as including entrance into dissociative, trance-like states, seeking safety and comfort from an infant, and/or viewing an infant as the source of the alarm. George et al., (1985) and Main and Goldwyn (1998) conceptualised dissociative processes in adults as manifesting at the level of mental representation in the lapses of monitoring of reasoning and/or discourse in the AAI.

Findings relating to the stability of disorganised attachment patterns across time have been equivocal. Several studies of maltreated and low socio-economic status (SES) samples have reported stability of the disorganised pattern from twelve to 18 months of 67 percent (see for example Barnett, Ganiban, & Cicchetti, 1999; Vondra, Hommerding, & Shaw, 1999) whilst others have reported much lower rates of stability (see for example Lyons-Ruth, Repacholi, McLeod, & Silva, 1991) primarily due to observed increases in the number of disorganised attachment behaviours from twelve to 18 months. A recent meta-analysis conducted by van IJzendoorn et al., (1999) indicated that the percentage of infants classified as Disorganised was 15 percent in middle-class, non-clinical groups in North America and 24 percent in low SES samples. Across nine samples from lower as well as higher SES backgrounds, the findings revealed significant stability of Disorganised attachment status across one to 60 months (r = .36).

Studies undertaken to investigate possible links between adults’ unresolved status and their infants’ attachment disorganisation, have repeatedly reported associations between infant disorganisation and early loss of a parent through death reported in the AAI (Main & Hesse, 1990; Lyons-Ruth et al. 1991; van IJzendoorn, 1995). However, early loss of a parent in itself is not considered inevitably to lead to infant disorganisation, rather it is the parents’ lack of resolution of the loss that foreshadows attachment disorganisation in their infants. The above association was
further supported by a meta-analytic study, revealing an effect size of .65 ($r = .31$) for the correspondence between child disorganisation and parental unresolved status (van IJzendoorn, 1995).

6.2 DISORGANISATION IN EARLY AND MIDDLE CHILDHOOD

Whilst there is a general consensus over what constitutes disorganisation in infancy and unresolved status in adulthood, conceptualisations of disorganisation in early and middle childhood have been the subject of considerable debate.

In a seminal paper, Main and Cassidy (1988) reported the development of a system for classifying attachment organisation at age six based on the study of children’s responses to unstructured reunions with parents in a laboratory system akin to the Strange Situation procedure. Of particular interest were those children who had been judged Disorganised in infancy. At six years of age, 75 percent of these children were considered to display behaviour conceptualised as Insecure-Controlling towards their parents upon reunion. Main and Cassidy (1988) described these children as seeming to attempt to control or direct the parent’s attention and behaviour upon reunion. They further identified two ways in which controlling behaviour was evident; punitive behaviour and overbright/caregiving behaviour. Children who acted to humiliate, embarrass or reject the parent upon reunion were considered Controlling-Punitive. By contrast, children who were solicitous and protective toward the parent, demonstrating concern or care in a manner suggesting that the parent is dependent on the child for guidance were considered Controlling-Caregiving.

Main and Cassidy (1988) argued that unlike disorganised behaviour in infancy, by age six, these children had become relatively well organised with respect to the parent, controlling the behaviour of the parent. They asserted that “as the child matures, a capacity to control and “organise” the parent’s behaviour may develop, either through direct attempts to lift and guide the parent’s mood or through simple directiveness” (p423).
Drawing upon Main and Cassidy's system for six-year-olds, Cassidy, Marvin and the MacArthur Working Group (Cassidy & Marvin, 1989)\textsuperscript{13} developed a comparable system for the assessment of attachment in the preschool years. In addition to the traditional tripartite A, B and C patterns, a fourth Insecure-Controlling pattern was identified, similar in its indices to the Controlling pattern identified by Main and Cassidy (1988). Within this fourth category, three sub-classifications emerged; Controlling-Caregiving; Controlling-Punitive; and Controlling-General to describe controlling behaviours that were not overall caregiving nor controlling but contained elements of both.

In keeping with the notion of the Controlling attachment pattern as an "organised" form of relating, Crittenden (1992, 1995) described within the Preschool Assessment of Attachment (PAA)\textsuperscript{14} the caregiving and punitive behaviour as patterns that appear to serve the child strategically in accessing the attachment figure in times of stress. Caregiving forms part of the PAA's Defended classification whereby a behavioural strategy that allows access to the parent whilst minimising emotional involvement and engagement is mobilised. Similarly, punitive controlling behaviour forms part of the PAA's Coercive classification indicating a strategy aimed at forcing the involvement of the parent using threatening, helpless, coy or punitive behaviour.

Whereas the aforementioned schemes assessed disorganisation principally within the behavioural domain, Solomon et al. (1995) attempted to examine security of attachment at both the behavioural and representational levels. They assessed six-year-olds using Main and Cassidy's (1988) separation-reunion procedure concomitant with a doll-play story completion task (Bretherton et al., 1990). Based upon the manner in which children represented attachment relationships in their narrative responses to the doll-play procedure, Solomon et al. (1995) classified children into one of the following four groups; confident (in the availability of the caregiver), casual (avoidance of caregiver), busy (stories characterised by

\textsuperscript{13} For a detailed description of the measure see Chapter 2.
\textsuperscript{14} For a detailed description of the PAA see Chapter 2.
distraction and irrelevancies), or frightened (out-of-control fear and destruction, or marked fright and inhibition). Strong concordance was observed between attachment classifications derived from the separation-reunion procedure and the doll-play narrative with a hundred percent of Controlling and Unclassifiable children also classified as Frightened. Importantly, the controlling group’s doll-play was characterised either by marked danger and chaos (attachment figures represented as frightening and children as helpless), or by marked inhibition, in which the children themselves appeared frightened and unwilling to participate in the task. Moreover, doll-play narratives in which chaos predominated were more closely associated with Controlling-Punitive children (80%), whereas doll-play narratives marked by inhibition were more closely associated with Controlling-Caregiving children (71%).

Adopting doll-play methodology to access attachment representations, Green, Stanley, Smith and Goldwyn (1999) developed the Manchester Child Attachment Story Task (MCAST) as a way of assessing attachment representation in five to seven year olds. Consistent with existing attachment measures, Green et al. (1999) identified four strategies of attachment comparable to those identified in infancy and adulthood. Along with broad dimensions such as attachment-related behaviours, and narrative coherence, Green et al. (1999) identified various Disorganised phenomena drawing upon disorganised and disoriented attachment behaviours identified in the Strange Situation procedure (Main & Solomon, 1990) and the lapses in discourse concerning trauma and/or loss as operationalised in the AAI. Four different forms of Disorganisation were described, broadly comparable to those identified in the studies above: Pervasive Disorganisation (chaos), wherein narratives are characterised by a complete lack of over-arching strategy and have no goal direction; multiple strategies wherein incompatible strategies for assuagement are manifest in the narratives, none of which are very effective; control of the caregiver wherein coercive/angry control or solicitous control of the caregiver forms the main strategy instead of expressions of distress and need; and episodic disorganised/disoriented behaviour in which such behaviours are transient and may occur at a critical point within the narrative but do not characterise the interview as

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15 For a detailed description of the MCAST see Chapter 2.
Based upon the severity of episodic disorganisation and the presence of pervasive disorganisation, multiple models, and control of the caregiver, a categorical disorganisation is assigned. Employing the above criteria, 14 out of 53 children (26%) were judged Disorganised. Stability over a five-month period was reported as being at 69 percent with those children judged Insecure as well as Disorganised showing increased instability. Of notice however was the age variation, with younger children rated more disorganised and less coherent, a variation that largely disappeared when children over seven years were excluded. The above findings thus raise questions concerning the effects of developmental maturation upon narrative coherence and disorganisation.

6.3 MENTAL AND BEHAVIOURAL DISORGANISATION

The review above highlights a confusing use of the term Disorganisation to capture the diverse array of behaviours observed in early and middle childhood. Main and Cassidy (1988), Crittenden’s (1992) and Solomon and George (1999a) all converge in arguing that the controlling behaviour patterns are both organised and strategic with respect to drawing the attention of the parent and maintaining accessibility.

Teti (1999) suggested that two levels of disorganisation thus emerge; behavioural and representational. Whilst, children who exhibit coercive or caregiving behaviour show an organised strategy at the level of behaviour, representationally they display considerable disorganisation, as reflected in highly dysfluent or irrational narratives containing underlying themes of fear, chaos and confusion (e.g. Main et al. 1985; Solomon et al. 1995).

Controlling/caregiving strategies may constitute compensatory strategies for dealing with maternal hostility or withdrawal, originating in disorganisation in infancy. By contrast, children who show considerable behavioural disorganisation (i.e. not controlling or caregiving) have not been able to develop a compensatory strategy and are therefore developmentally at greater risk than those who have developed controlling strategies. (Teti, 1999). A reconceptualisation in terms of levels of
disorganisation could therefore account for a wider array of disorganised phenomena.

The question however remains whether conceptualisation of unresolved status with respect to loss and/or trauma in adulthood can be validly applied to middle childhood. Whilst Green et al. (1999) drew upon some of the central markers of unresolved status in deriving the Disorganised attachment classification using doll-play, Ammaniti et al. (2000) applied a modified version of the AAI, namely, the Attachment Interview for Childhood and Adolescence (AICA: Ammaniti et al. 1990)\textsuperscript{16} in a study of the stability of attachment patterns from ten to 14 years. Although the study was not undertaken with the primary aim of studying attachment disorganisation, two of the 31 (7\%) children were assigned the Unresolved classification at ten years of age, with a single child (3\%) classified thus at 14 years of age.

The above study raises questions concerning the applicability of Unresolved markers in adulthood to children in the ten to 14 age range. As Ammaniti et al. (2000) themselves point out, children are much more susceptible to violations of Grice's maxims of coherence whereby they exhibit difficulties in differentiating between present and past experiences, difficulty in reaching an abstract level of description, and a proclivity to normalisation as reflecting continuity of experiences rather than a dismissing stance. Four related issues arise: firstly, if the process by which children become disorganised is directly linked to their mothers' Unresolved status vis-à-vis losses and/or trauma and through their frightening or frightened behaviour then those children would not be expected to show any Unresolved markers but would be expected to show behavioural and/or representational disorganisation comparable to the disorganised phenomena identified in infancy; secondly, children in the aforementioned age range are undoubtedly less likely to have experienced many losses. The absence of significant losses and the focus upon Unresolved markers would therefore not permit a discourse analysis of the narrative around loss to be undertaken; thirdly, if losses of significant others have taken place, can it be

\textsuperscript{16} For a description of the AICA see Chapter 2.
assumed that children have undergone a process of resolution similar to that assumed to have taken place in some adults; and fourthly, the applicability of markers of Unresolved status to the narratives of children in middle childhood rests upon the assumption that children understand the concept of death in a similar manner to adults. The above limitations make the task of establishing lapses in the monitoring of discourse particularly difficult as per the AAI coding and classification system.

6.4 THE CURRENT STUDY

As noted previously, a minority of children in the samples hitherto reported showed considerable incoherence and bizarre communications both verbal and non-verbal that did not fit neatly into the CAI three-way classification reported in Chapter 5. These observations formed the basis for modifications and extensions to the CAI protocol and coding and classification system described in the following sections.

It is however important to note that this chapter is not intended to confirm or disconfirm conceptualisations of disorganisation reported by existing studies. Hence, no a priori assumptions concerning the manifestation of disorganisation as controlling within the CAI were made. The criteria for the identification of disorganisation were informed by the principles of attachment theory in addition to empirical findings, and a detailed analysis of CAI narratives. Furthermore, the findings reported in the current study are preliminary in nature and constitute the first step in understanding the manifestations of disorganisation in middle childhood.

By way of developing the CAI coding and classification system further, a new sample of clinic-referred children was recruited.

The aims of the current chapter were three fold: to include additional questions that may access memories and bring forth descriptions of potentially traumatic attachment-related and non attachment-related experiences; to extend the coding and classification system to include possible indices of disorganisation in middle
childhood; and finally, to establish preliminary findings relating to the reliability and validity of the CAI following the aforementioned refinements.

The analyses will take a similar form to those reported in Chapters 4 and 5.

6.5 METHOD

6.5.1 Participants

The sample comprised 47 children who formed a sub-sample of a larger study, based at the Anna Freud Centre (AFC), of children referred to a number of clinics for assessment. Children were recruited from three sources; through two inner London child guidance clinics, and through referrals made to the AFC. Children were predominantly referred for emotional or behavioural problems and those with pervasive developmental disorder and IQs lower than 70 were excluded. Letters inviting the children to participate in the study were sent out to parents (see Appendix A) along with information sheets explaining the nature of the project and what would be required of both the child and the parent (see Appendix A) along with parental and child consent forms (see Appendix A). The sample consisted of 40 boys and 17 girls ranging in age from eight years and one month to eleven years and nine months (Mean= 9.8; SD=1.1). Children came from predominantly white (84%), working-class families (63%). Approximately equal numbers came from one or two-parent households (50%). Table 6.1 presents the demographic data of the study sample.
Table 6.1 Demographic Data of the Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=47)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 9.7 (SD = 1.1)</td>
</tr>
<tr>
<td>Range</td>
<td>8.1 – 11.9</td>
</tr>
<tr>
<td>Females</td>
<td>17 (36%)</td>
</tr>
<tr>
<td>Caucasian(^1)</td>
<td>37 (84%)</td>
</tr>
<tr>
<td>2-Parent Family(^2)</td>
<td>22 (50%)</td>
</tr>
<tr>
<td>Social Class(^3) I-II</td>
<td>16 (37%)</td>
</tr>
<tr>
<td>III-V</td>
<td>27 (63%)</td>
</tr>
</tbody>
</table>

\(^1\)For three children information concerning ethnicity was not available.
\(^2\)Includes re-marrriages. For three children family status was missing.
\(^3\)Based on employment status-Classification of Occupation (1990). For four children SES was missing.

6.5.2 Measures

6.5.2.1 The CAI protocol

*Version V of the CAI*

The results and discussion presented in Chapter 5 pertaining to Version IV of the CAI protocol highlighted the need for the inclusion of questions designed to elicit information concerning potentially traumatic events both with attachment figures and with significant others.

Whilst none of the CAI protocol versions reported hitherto directly elicited information relating to experiences of abuse, physical and/or sexual, by attachment figures or others, this has been of importance alongside loss experiences in the assessment of unresolved status with respect to attachment in adulthood.

However, by contrast to the AAI protocol, wherein adults are directly questioned about experiences that they might consider abusive, in the CAI the questions were to be phrased in a more specific, direct, and child appropriate manner since it was
considered that most children might not understand what is meant by “abuse”. Even adults’ definitions of abuse as reflected in their AAI transcripts vary considerably as Main and Goldwyn (1998) noted in the AAI manual, with some describing very severe forms of physical or emotional punishments or threatening behaviours by parents that they did not consider abusive. As a way of eliciting children’s accounts of potentially traumatic experiences, question concerning physical abuse were thus included. The additional questions were inserted to bring forth instances of physical abuse or severe punishment by parents, siblings, other family members and significant others outside of the family. The emphasis in the questions upon an older child or adult was designed to filter out detailed descriptions of minor altercations with peers within the school setting. Further, a question concerning experiences of potential sexual abuse was in addition included. It was hoped that the wording of the question would be easily understood and sensitive whilst once again avoiding eliciting descriptions of what would be considered normal sexual curiosity or experimentation between peers.

Concomitant with the introduction of the aforementioned questions, clearer instructions for the administration of the CAI including guidelines for appropriate prompting were provided.

Version V of the CAI protocol is presented in Appendix B.

6.5.2.2 CAI coding and classification system

By way of a natural progression from the development of indices for the classification of Dismissing, Preoccupied and Secure attachment patterns reported in Chapter 5, it was considered important to attempt to capture and systematically describe those children whose narratives did not seem to fall into the three aforementioned patterns using the criteria laid out in Version III of the CAI coding and classification system. CAI narratives from samples described in Chapter 4, 5, and 6 that were regarded as incoherent in one of the ways described below were carefully re-examined, in consultation with Dr Mary Target and Prof. Peter Fonagy
and formed the basis for the development of the Disorganised/Disoriented classification descriptors.

During this process, it was very important to distinguish disorganised verbal as well as non-verbal behaviour that was limited or specific to a particular question within the interview context from a more pervasive behavioural and/or verbal disorganisation that characterised the interview as a whole. For this reason, videotaped CAI narratives were viewed along with additional tasks the children were asked to complete in order to ascertain the degree of engagement and focus of the child in the particular task at hand. Several children were found to be able to complete other tasks relatively successfully whilst remaining attentive and engaged but showed considerable disquiet and behavioural disorganisation/disorientation within the CAI.

Driven conceptually by indices of disorganisation in infancy and unresolved status in adulthood and through a recursive process of detailed observations of CAI narratives the following indices were identified:

Sudden switches of affect in response to loss, trauma, and/or frightening experiences, as for example, reflected in shifts from animated descriptions to complete silence in response to a loss or trauma question were considered particularly informative. Other indications included, interrupted speech (e.g., freezing, or long pauses), excited and/or frightened oscillation, turning one feeling to another feeling. Affect states that were irreconcilable or incompatible with the context and content of the description relayed, and any bizarre behaviour, bizarre descriptions of death including loss of pet when the description of loss clearly stands out in relation to the rest of the interview.

In addition to the above descriptors, examples of each of the indices identified hitherto were appended in order to illustrate and guide judges in assigning a Disorganised attachment classification. It is however important to note that the indices above were by no means assumed to constitute a definitive or exhaustive list
of all possible indications of disorganisation but rather were offered as a guide to
judges in the process of coding.

Unlike other CAI scales, Disorganisation was not operationalised along a nine-point
scale but rather ratings were initially to be based upon the presence or absence of
any indications of Disorganisation. If any of the aforementioned indices of
Disorganisation/Disorientation were present, an Insecure-Disorganised classification
was automatically assigned.

A complete description of the Disorganised indices is presented in Appendix C.

6.5.3 Procedure

6.5.3.1 Administration

Administration of the interviews was undertaken by the author and several of the
research staff at the AFC. Whilst the majority of children were assessed at the AFC,
a small proportion of children were assessed at home when parents expressed a
preference for a home assessment. The CAI formed part of a larger battery of
measures including, amongst others, measures of expressive language and IQ,
administered over two to three sessions. The interview was always completed first on
the second session and conducted in a private and quiet room with interviewer and
child sitting face to face. Before the beginning of each assessment, the interviewer
explained the nature of the study and ensured that the child felt at ease and consented
to take part. The interview was then formally introduced and ranged in duration from
20 minutes to one hour depending upon the individual child’s response and the
sessions were videotaped throughout.

In addition, concurrent parental assessments were conducted at the AFC and included
the AAI, along with self-report measures concerning the child. Assessments were
completed in a private and quiet room in order to minimise any disturbance over two
to three sessions. At the beginning of the first assessment the aim of the study was
explained to each parent and consent forms were completed.
6.5.3.2 Coding

Whilst the majority of interviews were coded by the author, ten of the 47 interviews were coded by two students who were undertaking the MSc course in psychoanalytic developmental psychology at the AFC (HVD & AC). Both HVD and AC completed formal reliability training for 15 cases with the author as the reliable judge prior to their independent coding. During this process, HVD and AC rated one interview at a time and this was followed by a close examination of the ratings with the author and a discussion concerning agreements and discrepancies. Where ambiguities arose, these were addressed and clarified with respect to the coding and classification of interviews before HVD and AC proceeded to rate the next interview. Following the above training process, HVD and AC rated ten of the 47 interviews independently.

6.6 PLANNED DATA ANALYSIS

Similar analyses to those reported in Chapters 4 and 5 were undertaken. In addition however to comparisons between Secure and Insecure children on ratings of the CAI scales, differences between children judged Secure, Dismissing, Preoccupied and Disorganised will be further examined descriptively.

6.7 RESULTS

6.7.1 Descriptive Results

CAI Scale

Ratings on all CAI scales were not restricted to a narrow band of low or high scores. (Mean ranged from 1.6 to 5.1, SD ranged from 1.4 to 2.2). Whilst ratings for Preoccupied Anger with respect to mother and father respectively ranged from 1-8, and 1-7, the means obtained suggest a narrower use of the scale (Mean=1.6 for
mother and Mean = 1.7 for father). See Appendix D for Table D17 of descriptive data.

**Two-Way Attachment Classifications**

Two-way attachment classifications with respect to mother revealed that 13 (28%) children were classified as Secure and 34 (72%) were classified as Insecure. A similar distribution emerged with respect to father with ten (24%) children judged Secure and 32 (76%) children judged Insecure (see Appendix D for Tables D18 and D19 of the distribution of two-way attachment patterns).

**Three-way Attachment Classifications**

The distribution of three-way attachment status with respect to mother, taking into consideration the best fitting alternative classification for those children who were judged Disorganised, showed that 28 (59%) of the children were classified as Dismissing, six (13%) as Preoccupied and 13 (28%) judged Secure. Similarly, with respect to father, 26 (62%) of the children were judged Dismissing, six (14%) were considered Preoccupied and ten (24%) were judged Secure (see Appendix D for Table D20 and D21 of the distribution of three-way attachment patterns).

**Four-Way Attachment Classifications**

Examining the distribution of four-way attachment classifications with respect to mother, 53 percent of the children were judged Dismissing, 11 percent were judged Preoccupied, 28 percent were judged Secure, and eight percent were judged Disorganised with respect to mother. Interestingly, none of the children classified as Disorganised were alternatively assigned to the Secure group. Three of the four children judged Disorganised received a best fitting Dismissing classification, with only one child assigned to the Preoccupied group. Four-way attachment distribution with respect to father revealed that across the 42 children, 55 percent were judged Dismissing, 14 percent were judged Preoccupied, 23 percent were judged Secure,
and only seven percent were judged Disorganised. Similar to the pattern observed with mother, none of the three children classified as Disorganised were alternatively assigned to the Secure group as shown in Table 6.2.

Table 6.2 Four-Way Attachment Classifications with Respect to Mother and Father

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>Mother</th>
<th>Father¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Secure</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Disorganised</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>42</td>
</tr>
</tbody>
</table>

¹In five cases fathers were absent and thus no classification was assigned with respect to father.

6.7.2 Inter-Correlations Between CAI Scales

Similar to Chapters 4 and 5, inter-correlations between the CAI scales were computed using Pearson Product Moment correlations. Positive correlations ranged from \( r(42) = .09 \) to \( r(42) = .96 \) and negative correlations ranged from \( r(42) = -.02 \) to \( r(42) = -.72 \), with all correlations in the expected direction. Appendix D presents Table D22 of inter-correlations.

6.7.3 Internal Consistency of CAI Scales

Internal consistency between the CAI scales was further calculated and yielded Cronbach's alpha of .83 for both mother and father, considered high (an alpha coefficient of .70 is considered acceptable for reliability; Kline, 1993).
6.7.4 The Relationship Between CAI Classifications and Demographic Variables

Similar to the findings reported in Chapters 4 and 5, no significant associations emerged between attachment security with respect to mother and father and age, gender, SES, and one or two parent households.

6.7.5 Differences Between Classifications on the CAI Scales

Two-Way Comparisons

As in Chapters 4 and 5, with the exception of the scales of Preoccupied Anger with respect to mother and father and Idealisation with respect to father the remaining CAI scales revealed highly statistically significant differences in ratings as a function of security of attachment to mother and father ($p < .001$). Whilst, differences between Secure and Insecure children on Preoccupied Anger did not reach statistical significance, Idealisation with respect to father was marginally significant [$t(40) = -.04, p < .05$] as a function of security of attachment with father (see Appendix D for Tables D23 and D24 of secure versus insecure comparisons).

Three-Way Comparisons

Due to the small number of children classified as Preoccupied (6) an examination of the differences between ratings assigned for Secure, Dismissing and Preoccupied children was confined to the descriptive level. Because very slight differences emerged with respect to attachment status with respect to mother and father, only the means and standard deviations for the three groups on the CAI scales with respect to mother are presented in Table 6.3. For three-way comparisons with respect to father see Appendix D, Table D25.
Table 6.3 Comparison of Three-Way Attachment Classification to Mother on CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=13) Mean (SD)</th>
<th>Dismissing (N=28) Mean (SD)</th>
<th>Preoccupied (N=6) Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>6.8 (1.0)</td>
<td>4.0 (1.2)</td>
<td>6.1 (1.2)</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.6 (1.4)</td>
<td>4.1 (1.1)</td>
<td>4.0 (1.1)</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.5 (1.3)</td>
<td>4.3 (1.5)</td>
<td>5.5 (1.77)</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.4 (.70)</td>
<td>1.2 (.64)</td>
<td>3.7 (3.1)</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.5 (.84)</td>
<td>1.4 (1.1)</td>
<td>3.0 (2.7)</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.6 (1.1)</td>
<td>3.8 (1.8)</td>
<td>2.6 (1.5)</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.4 (.90)</td>
<td>2.6 (2.1)</td>
<td>2.2 (1.3)</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.8 (1.1)</td>
<td>4.7 (2.1)</td>
<td>3.3 (1.9)</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>1.9 (1.0)</td>
<td>4.9 (2.1)</td>
<td>3.2 (1.7)</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>6.0 (1.1)</td>
<td>3.4 (1.1)</td>
<td>4.0 (1.9)</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.3 (1.2)</td>
<td>3.4 (1.2)</td>
<td>3.7 (1.4)</td>
</tr>
</tbody>
</table>

As shown in Table 6.3 considerable differences as reflected in the means and standard deviations of those children judged Secure, Dismissing and Preoccupied with respect to mother and father emerged in the expected direction. Marked differences were observed in particular between the Secure group and the Dismissing group. Particularly striking differences in the expected direction were shown for Emotional Openness, Dismissal with respect to mother and father, Resolution of Conflict, and Coherence. Marked, albeit noticeable differences, in the means and standard deviations emerged between the Secure group and the Preoccupied group on all the CAI scales. As expected, differences between the two aforementioned groups were particularly pronounced for the scales of Preoccupied Anger with respect to mother and father. However, the standard deviations for these scales suggest high variability in scores. Further, differences between the Dismissing and Preoccupied groups were less discernible with the exception of the Preoccupied Anger scales.
**Four-Way Comparisons**

Similar to three-way classifications, due to the small number of children classified as Preoccupied (5), and Disorganised (4) an examination of the differences between ratings assigned for Secure, Dismissing and Preoccupied children was confined to the descriptive level. Further, because very slight differences emerged with respect to attachment status with respect to mother and father, only the means and standard deviations for the four groups on the CAI scales with respect to mother are presented in Table 6.4. For four-way comparisons with respect to father see Appendix D, Table D26.

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=13) Mean (SD)</th>
<th>Dismissing (N=25) Mean (SD)</th>
<th>Preoccupied (N=5) Mean (SD)</th>
<th>Disorganised (N=4) Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>6.8 (1.0)</td>
<td>4.1 (1.3)</td>
<td>6.0 (1.3)</td>
<td>4.0 (1.7)</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.6 (1.4)</td>
<td>4.2 (1.1)</td>
<td>3.8 (1.1)</td>
<td>4.1 (1.0)</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.5 (1.3)</td>
<td>4.3 (1.5)</td>
<td>5.5 (.87)</td>
<td>4.1 (1.3)</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.4 (.70)</td>
<td>1.3 (.67)</td>
<td>3.0 (2.9)</td>
<td>2.5 (3.0)</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.5 (.83)</td>
<td>1.4 (1.1)</td>
<td>3.4 (2.9)</td>
<td>1.3 (.67)</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.6 (1.1)</td>
<td>3.7 (1.7)</td>
<td>2.1 (1.1)</td>
<td>4.2 (2.2)</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.4 (.90)</td>
<td>2.5 (2.1)</td>
<td>1.9 (1.2)</td>
<td>3.5 (2.5)</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.8 (1.1)</td>
<td>4.8 (2.1)</td>
<td>3.8 (1.6)</td>
<td>3.2 (2.6)</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>1.9 (1.0)</td>
<td>5.1 (2.1)</td>
<td>3.6 (1.5)</td>
<td>2.3 (1.1)</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>6.0 (1.1)</td>
<td>3.6 (1.0)</td>
<td>4.4 (1.8)</td>
<td>2.0 (.81)</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.3 (1.2)</td>
<td>3.5 (1.2)</td>
<td>3.9 (1.5)</td>
<td>2.5 (.58)</td>
</tr>
</tbody>
</table>

As presented in Table 6.4 discernible differences on means and standard deviations between the four attachment classifications were observed for the CAI scales. Closer
observation of the standard deviations however revealed considerable variability in scores for some CAI scales and very low variability for others. Of particular note is the considerable variability in the Preoccupied Anger scores for mother and father within the Preoccupied group. Not surprisingly, marked differences between the four groups emerged for Coherence. In addition, whilst mean scores on the Idealisation scales and Preoccupied Anger with respect to mother suggest elevated scores for the Disorganised group, the large standard deviations highlight the considerable variability in scores assigned.

6.7.6 Qualitative Data Analysis

Following the refinements to the CAI protocol as outlined in section 6.5.2.1, only four of the children in the current sample were considered Disorganised with respect to attachment. In the following section, several extracts are presented by way of illustrating the diversity of responses identified as Disorganised using the criteria laid out section 6.5.2.2.

When asked to describe himself in three words, a nine-year-old boy replied “sad”, “sometimes funny” and “happy”. When subsequently prompted to recount an episode when he felt sad, the same boy said “Why, cause I am sad (he then pretends to cry, puts his head down on the table). When did you feel sad? Two days ago, get on with it (the child bullies and hits the interviewer). What happened? Don’t know, I can’t remember (the child makes a very dramatic voice and pretends to be crying)”.

When the same child was asked to think of three words to describe his relationship with his mother he replied, “Nice but if I choose two words will you please not ask me why I chose like nice please. Why? Because I don’t want to tell you the words. Why? Cause its boring. So what words would you choose? Nice, warm, and sexy. Tell me about a time when it was warm? When she gave me a hug. And you felt that was nice? Yes get on with it. O.k. tell me about a time when it was nice? She bought me nice shoes. When? Yesterday (looks at interviewer very aggressively and
hit him). What happened? Get on with it, sexy now do the other word, do the other word, why did you choose sexy (very hostile and threatening towards the interviewer...”

The above two extracts illustrate a very hostile controlling strategy the child adopted towards the interviewer throughout the task. Hostility and extreme aggression was expressed both verbally and through non-verbal behaviour such as hitting, hissing and making threatening faces.

When asked what happens when mum is cross with him, an eight-year-old boy replied,

"You said she then sends you to your room and then what happens? She said, she always says I have to stay in my room for the rest of the day but she don't really mean that. How do you feel when that happens? Oh I can't remember. So when she sends you to your room, what do you do then? Don't know, she hits me I just sit about for ten seconds later and then come out. When she hits me I ran up to my room and hide under the cupboard and I start to cry (laughs with large grin) Right, I see. I have to hide and once my mum was really angry with me and I blocked down the door and hid in my cupboard and she just, I don't know how she could just push open the door because there was my big heavy desk and I hid in the cupboard and I don't know why, I don't know how she knew I was in the cupboard and she opened the cupboard and I was there (tells the story with excitement, inappropriate to the content of the story). Oh so she found you. Do you get frightened sometimes when your mother gets upset? Ya it scares me. What would happen then, would it be resolved? I would say sorry and give her a cuddle (laughs).

The above extract exemplifies incongruity between the child's external affective expression and the content of his response.

In response to being asked to describe herself in three words, an eight-year-old girl replied, “nice”, “good at writing stories” and “self-determined”. The girl then goes
on to recount an episode when she was nice “I went to the chemist. When? A few years ago. You fell? Had an operation, I was already down stairs and I tried to scratch her back and mum fell and whacked it, it really hurt her. What did mum have? Yeah when I helped and she nearly fell and killed herself. What about good at telling stories?” The child goes on to recount a story she wrote about a little boy he saw on old man sitting on a chair, “Half-dead, half alive and he said push push and he touched a snake, a poisonous snake and he died...he was killed. My mum’s grandfather killed himself, her aunty died and mum’s grandfather couldn’t live without his daughter so he took painkillers”

The above extract illustrates the child’s morbid preoccupation expressed by her repeated reference to death that have not been called for by the interviewer.

When asked whether someone close to her has died, the same child replied,

“No but my aunty’s husband died, he was called uncle. When did he die? Few months ago. How did you feel? Very upset. Did you go to the funeral? Yeah, I was only a baby”.

The above illustration suggest some kind of disorganisation with respect to time and lack of monitoring as her uncle could not have only died a few months ago if she was just a baby at his funeral.

6.8 DISCUSSION

As part of the development of the CAI, the current study was undertaken with the aim of establishing criteria for the identification of disorganisation with respect to attachment. In the following sections the main findings are briefly summarised and discussed in turn.
6.8.1 The CAI Protocol

The final version of the CAI protocol was further refined with the inclusion of questions designed to tap experiences of abuse that were not included in preceding versions of the protocol. Responses to the additional questions were expected to provide additional information that would be central in identifying disorganisation within the interview.

As described in section 6.5.2.1, questions concerning physical and sexual abuse were phrased in order to avoid eliciting accounts of fights with older siblings or older children at school. However, despite the careful wording, some children did recount episodes of bullying and fights with older siblings. Across the current sample, only a minority of children described parents hitting them although without exception, these usually described instances of smacking that were not considered to constitute abuse. Furthermore, perhaps not surprisingly, none of the children responded to the sexual abuse question disclosing such experiences.

The CAI narratives however, demonstrated that children were able to respond meaningfully to the questions suggesting that the CAI remained a developmentally appropriate interview with the additional questions.

6.8.2 The CAI Coding and Classification System

As noted in section 6.5.2.2, the coding and classification system was subject to considerable development of which the identification of the disorganised indices formed a central part. In the following sections, the findings concerning the psychometric properties of the CAI with a clinic-referred sample are summarised and discussed in turn.

By comparison to the normal sample reported in Study 2 of Chapter 5, the distribution of three-way attachment patterns with respect to mother and father in the current study was skewed with a predominance of Dismissing classifications.
(59% and 62% respectively), and a minority of Preoccupied classifications (13% and 14% respectively). The findings also stand in contrast to those reported by van IJzendoorn and Bakermans-Kranenburg (1996) in a meta-analytic study of adult attachment status in clinical populations. In clinic-referred adults the distribution of three-way attachment classifications included 41 percent Dismissing, 13 percent Secure, and 46 percent Preoccupied. The distribution of four-way attachment classifications with respect to mother and to father in the current study was similarly skewed with 53 percent Dismissing, 29 percent Secure, 10 percent Preoccupied, and eight percent Disorganised. By contrast, the distribution of four-way attachment classifications reported by van IJzendoorn and Bakermans-Kranenburg (1996) showed a predominance of Unresolved and Cannot Classify (40%), a minority of Secure (9%) and approximately equal numbers of Dismissing (26%) and Preoccupied adults (25%).

Whilst the current sample comprised clinic-referred children thus providing some explanation for the predominance of Insecure classifications, two possible explanations may be put forward to account specifically for the preponderance of Dismissing children in the current sample. Firstly, as noted in Chapter 5, the increasing importance of autonomy that marks early adolescence may result in greater detachment from attachment figures as expressed in a Dismissing stance towards attachment relationships (Grossmann et al. 1999). It is therefore possible that a similar process may take place in middle childhood as reflected in the high proportion of the Dismissing patterns in the CAI. Evidence from a recent study, albeit focusing upon adult populations, provide some initial support for this hypothesis. In a study of the continuity of attachment patterns in a high-risk sample, Weinfield et al. (2000) reported that the Dismissing classification was the predominant pattern (59.6%) in early adulthood. Moreover, Weinfield et al. (2000) found no evidence for the continuity of attachment patterns from infancy to early adulthood, explained in part by the transition from security of attachment in infancy to a Dismissing stance in early adulthood. Alternatively, it is possible that some of the children in the current sample were judged Dismissing with respect to attachment erroneously, in part due to the considerable narrative restrictions
expressed in the presence of some unelaborated episodic examples, limited references to emotional states, and lack of explicit valuing of attachment figures. As noted in Chapter 5, whilst in the majority of cases, a clear predominant strategy with respect to attachment was evident, in several cases a confident judgement was difficult to arrive at. Similarly, several of the children in the current sample were considered as borderline cases whereby representationally they displayed some secure features along with more dismissing ones. It is thus possible that the aforementioned cases were forced into the Dismissing category. Nevertheless, the clinical status of the current sample may account in large part for the prevalence of the Dismissing pattern in the current study and raises the question of whether higher externalising behaviour scores would be associated with the Dismissing pattern. This will be addressed in Chapter 9.

Additionally, only eight percent of the children in the sample were considered Disorganised. This raises the question of whether present criteria for the identification of disorganisation fail to capture the diversity of disorganised phenomena manifested in middle childhood. As stated previously, the findings are necessarily preliminary and identified indices of disorganisation within the CAI are not intended as an exhaustive list of the possible manifestation of disorganisation in the middle childhood years. It is thus possible that several cases that may have been Disorganised were not classified thus. The further identification of markers of Disorganisation may capture better the phenomena in future samples.

Nevertheless, the current study does provide initial findings concerning the manifestations of Disorganisation in middle childhood. Four children were classified as Disorganised with respect to mother in the current study and as illustrated in Section 3.5 markers of disorganisation were diverse with disorganisation evident in both the representational and behavioural levels. Whilst some children displayed episodic or transient disorganisation that was limited to one part of the interview and in relation to a particular question, others exhibited pervasive disorganisation that was reflected in the highly incoherent quality of the narrative. For example, one of the children displayed considerable controlling behaviour reflected both in his verbal
and non-verbal communication. Another child showed considerable confusion in her verbal accounts of death and with respect to time concerning the death of her uncle. Whilst such confusion may be explicated in terms of poorly developed temporal understanding, the child's morbid preoccupation throughout the interview was considered to reflect disorganisation with respect to attachment. The above findings echo those reported by Green et al. (1999) in the development of the MCAST. Although the distinction between episodic and pervasive disorganisation suggests different patterns of disorganised attachment, further study of the manifestations of disorganisation with respect to attachment in middle childhood is warranted.

In line with previous studies, inter-correlations between CAI scales were all found to be in the expected direction. Whilst, the correlations reported support theoretically expected associations, the Preoccupied Anger scales failed to correlate significantly with the remaining CAI scales. These results are disappointing as it was anticipated that manifest preoccupied anger would be more prevalent in the clinical group. By contrast to previous studies, the range of scores was not limited to a narrow band (1-8) although the mean score across the sample was very low (1.6) and so too was the standard deviation (1.4) suggesting low variability in scores. Upon closer observation, the distribution of scores confirmed this with approximately 90 percent of anger scores no higher than 2.5 and only four percent of elevated anger scores of 7 or 8. As discussed in Chapters 4 and 5, the scarcity of Preoccupied Anger as currently operationalised within the CAI highlights the need to broaden the definition of Preoccupation that is not solely limited to expressions of involving anger.

Internal consistency of the CAI scales for the current sample was very high, consonant with findings reported in Chapters 4 and 5.

Security of attachment as assessed by the CAI was not associated with age, gender, ethnicity, SES, or one or two parent households. The above results are particularly promising in support of the validity of the CAI as an adequate measure of attachment in middle childhood that is not associated with demographic variables.
Compatible with the findings reported in Chapters 4 and 5, differences between ratings on the CAI scales for the dichotomous Secure versus Insecure classifications were all statistically significant with the exception of Preoccupied Anger with respect to mother and father. Although three-way and four-way attachment classification comparisons were restricted to the descriptive level due to the small cell size of the Preoccupied and Disorganised groups, tentative differences between the groups with respect to mother and father for the CAI scales were shown in the expected direction. Not surprising, the Dismissing category showed elevated mean scores on the scales of Idealisation and Dismissal and low to moderate scores on the remaining scales. Whilst the Preoccupied group showed elevated Preoccupied Anger scores as anticipated, the large standard deviations highlighted the variability in the scores across the Preoccupied category. In keeping with expectations, the Secure group showed low mean scores on the scales of Preoccupied Anger, Idealisation and Dismissal coupled with moderate to high score on the remaining CAI scales. Interestingly, the Disorganised group showed some elevation in the mean scores for the three aforementioned scales suggesting that it is a fairly heterogenous group. This is however not surprising in considering that those children who were judged Disorganised were also assigned to other insecure categories as best fitting alternative classifications. The differences observed are necessarily tentative and it would only be possible to draw clearer conclusions with a larger sample size.

6.9 CONCLUSIONS

To summarise, the findings of the current study go some way to further establish the reliability and validity of the CAI protocol and coding and classification system. The distribution of attachment classifications showed a predominance of the Dismissing patterns and this finding was discussed with reference to recent findings of the transition from a secure to a dismissing stance in adolescence. High internal consistency was demonstrated and correlations between particular CAI scales illuminated distinct attachment patterns. Furthermore, ratings on the CAI did reveal discernible differences between children classified Secure and their Insecure counterparts, as well as differences between Secure, Dismissing, Preoccupied and
Disorganised children. It is however important to note that the findings provide a preliminary account not least because of the complex nature of disorganisation and the inherent difficulties in identifying such phenomena. Indeed one question that arises is whether disorganisation is age related. This issue will be addressed in the following chapter.
CHAPTER 7. CONSIDERATIONS OF THE MINIMUM AGE AT WHICH THE CHILD ATTACHMENT INTERVIEW IS A VALID PROCEDURE

In the literature there has been generally a consensus over when self-report measures can be validly used with children. The prevailing view with respect to the appropriateness of direct interviewing with children has been that, “Young children will simply not respond to standard interview procedures. Unschooled in proper interviewee behaviours, they must be won over, cajoled, and supported...To the extent that the interviewer relies on open-ended questions and standard probes, he or she is likely to elicit only blanket refusals to talk or vague, tangential, disorganised, and brief answers” (Bierman, 1983, pp218-219).

In the following introduction, young children’s conceptions of emotions, the self, and time and memory will be reviewed and supported by the relevant literature. The question of whether young children can respond meaningfully to direct questioning will subsequently be addressed, piloting the CAI on children aged six to eight years.

7.1 THE DEVELOPMENT OF EMOTIONAL LANGUAGE

As noted in Chapter 3, the development of emotional language begin with the emergence of emotion words such as happy, sad and scared, and references to their own mental states first appear in children’s speech late in the second year (Bretherton & Beeghly, 1982). At that age however, children’s understanding of emotions is confined to the notion that certain situations give rise to corresponding emotional reactions (e.g. birthdays make me happy), are restricted to action-dispositions (e.g. if I’m sad, I’m likely to cry), and are simply caused by objects. A major shift between the ages of seven and eleven occurs from a situationist understanding of emotions to a mentalistic understanding of inner experiences (Harris, 1989; Wellman, Harris, Banerjee, & Sinclair, 1995). This is partly evidenced by children’s growing ability to conceptualise both positive and negative emotions and express ambivalence. The capacity to conceive of two emotions being provoked either successively or simultaneously and to integrate two opposing
emotions develops only at the latter part of middle childhood at about ten years of age (Harter, 1983; Harter & Buddin, 1987).

7.2 CONCEPTIONS OF THE SELF

Corresponding developments in children’s conceptions of the self have been shown suggesting that until the age of seven years the self is conceived in terms of physical characteristics and favourite activities (Damon & Hart, 1982). Thus, children will typically describe themselves with reference to observable physical attributes such as hair colour or body size (“I have brown hair”) and play activities (“I like football”). Researchers (e.g. Harter, 1983; Shantz, 1981) informed by Piagetian theory have contended that young children do not possess the necessary mental sophistication in order to view themselves in global integrated terms and are thus limited to concrete, ability-specific (e.g. “I run fast”) conceptions of the self. Harter (1983) argued that “children would not be able to make meaningful judgements about their worth as a person until approximately the age of eight. The very concept of “personness,” as a generalisation about the self, is not yet firmly established among younger children” (p143). Harter (1983) supported her contention with the findings that young children’s responses to the global self-esteem component of her scale did not consistently load on a particular factor as they did with older children. Age eight marks a transition from a concrete to a more psychological self, and children are able to draw comparisons between their own competencies and others. However, only in adolescent years does conceptual integration occur of the dimensions of the self, stable personality characterisation, and true self-reflection (Kovacs, 1986). This suggests that children under eight years of age are likely to be restricted to physicalistic, action-related descriptions that lack more sophisticated, psychological and introspective qualities.

7.3 THE DEVELOPMENT OF TIME CONCEPTION

The emergence of language as the means to communicate about and to represent the past, the present and the future, consolidates the child’s conception of time.
Research on the development of temporal awareness suggests that constructs of clock time and calendar time only begin to emerge around age seven to nine (Wessman & Gorman, 1977). Further, conceptions of temporal order (i.e. the succession of events) and temporal duration (i.e. the length of interval between events) develop only with the advent of concrete operational thinking at around the ages of eight to nine. This is supported by studies suggesting that younger children show a tendency to judge recent events as further back in time compared with older children’s temporal ordering (Friedman, 1978). Furthermore, an elaborated sense of personal and historical time emerges only in adolescent years (Wessman & Gorman, 1977). Whilst adolescents show an awareness of personal continuity in the sense of past and future selves, younger children show a tendency to describe themselves in terms of the immediate present (Damon & Hart, 1982). The focus upon the present is also evident in children’s memory and recall capacity, with younger children demonstrating a memory bias towards recent events (Fitzgerald, 1981).

7.4 THE CURRENT STUDY

Whilst undoubtedly a generalisation, the foregoing introduction suggests that children under the age of eight are confined to a situationist understanding of emotions, hold a self-concept that is restricted to physicalistic, action-based terms, and demonstrate a rudimentary understanding of temporality, and considerable memory bias for recent events.

Guided by the above, the present study was undertaken in an endeavour to examine the applicability of CAI to children under the age of eight. Two related questions will be addressed: i) are children under the age of eight developmentally competent in order to comprehend the CAI and engage in the task, ii) would attachment-related narratives reliably reflect their internal attachment organisation.

By way of addressing the above questions, a pilot sample of clinic-referred children was recruited. Although children of a similar age may vary considerably in their developmental stage, it was thought that normal children may be more cognitively
advanced than clinical children and thus be able to meet the demands of the interview task in a competent manner. Using a clinical sample was considered to provide a more stringent test of the applicability of the CAI to children under the age of eight years. This was borne out by Kovacs (1986) who argued that the findings pertaining to the developmental competencies of normal children may not generalise to children diagnosed with psychiatric problems. Furthermore, Kovacs (1986) contended that such children often hold a poor command of psychological constructs and thus show a proclivity to mis-label emotions.

7.5 METHOD

7.5.1 Participants

Sixteen clinic-referred children under the age of eight years were administered the CAI (Mean = 7.1, SD = .72). The gender distribution was eleven (69%) boys and five (31%) girls, with approximately equal numbers from single (46%) and two parent (54%) households. The majority of children were Caucasian (83%) and came from working-class families (62%). Table 7.1 presents the demographic characteristics of the sub-sample.
Table 7.1 Demographic Data of the Clinical Sub-Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (n=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 7.1 (SD = .72)</td>
</tr>
<tr>
<td>Range</td>
<td>5.5 – 7.7</td>
</tr>
<tr>
<td>Females</td>
<td>5 (31%)</td>
</tr>
<tr>
<td>Caucasian(^1)</td>
<td>10 (83%)</td>
</tr>
<tr>
<td>2-Parent Family(^2)</td>
<td>8 (54%)</td>
</tr>
<tr>
<td>Social Class(^3) I-II</td>
<td>5 (62%)</td>
</tr>
<tr>
<td>III-V</td>
<td>8 (38%)</td>
</tr>
</tbody>
</table>

\(^1\)For four cases, ethnicity was missing.
\(^2\)Includes re-marriages. For three cases family status was missing.
\(^3\)Based on employment status-Classification of Occupation (1990). For three cases SES was missing.

7.5.2 Measures

The CAI protocol as described in detail in Section 6.5.2.1 of Chapter 6 was applied in the current study.

7.5.3 Procedure

For a complete description of the procedure see Section 6.5.3 of Chapter 6.

7.6 RESULTS

7.6.1 Descriptive Results

**CAI Scales**

Table 7.2 presents the descriptive results relating to the CAI scales for the 16 children. With the exception of the scales of Preoccupied Anger with respect to mother and father, ratings on CAI scales were not restricted to a narrow band of low or high scores (Mean ranged from 2.6 to 4.4, SD ranged from 1.5 to 2.6).
Noteworthy however is that none of the children received the maximum score on any of the CAI scales.

Table 7.2 Descriptive Data Relating to the CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Mean (SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>4.4 (1.9)</td>
<td>1.5-7.5</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>4.2 (1.9)</td>
<td>2-8</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>4.4 (1.7)</td>
<td>1-7.5</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.3 (.72)</td>
<td>1-3</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.1 (.55)</td>
<td>1-3</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>2.6 (1.8)</td>
<td>1-5.5</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>3.2 (2.6)</td>
<td>1-8</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>4.1 (2.2)</td>
<td>1-7.5</td>
</tr>
<tr>
<td>Dismissing of Father</td>
<td>3.4 (2.2)</td>
<td>1-7</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>3.4 (1.5)</td>
<td>1-7</td>
</tr>
<tr>
<td>Coherence</td>
<td>3.4 (1.9)</td>
<td>1-7</td>
</tr>
</tbody>
</table>

Two-Way Attachment Classifications

Two-way attachment classifications with respect to mother revealed that only three (19%) children were classified as Secure and the remaining 13 (81%) were classified as Insecure. A similar two-way attachment distribution to the above was shown with respect to father with only two (14%) children classified as Secure and twelve (86%) children classified as Insecure.
Three-Way Attachment Classifications

The distribution of three-way attachment status with respect to mother and father, taking into consideration the best fitting alternative classification for those children who were judged Disorganised, was similar to the two-way distribution presented above as none of the 16 children were considered Preoccupied with respect to attachment.

Four-Way Attachment Classifications

Examining the distribution of four-way attachment classifications, 37 percent of the children were judged Dismissing, 19 percent were judged Secure, and 44 percent were judged Disorganised with respect to mother. Interestingly, none of the children classified as Disorganised were alternatively assigned to the Secure group but rather all received a best fitting Dismissing classification (100%) as shown in Table 7.3

Table 7.3 Four-Way Attachment Classifications with Respect to Mother

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>6</td>
<td>37</td>
</tr>
<tr>
<td>Secure</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Disorganised</td>
<td>7</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>100</td>
</tr>
</tbody>
</table>

As presented in Table 7.4, the four-way attachment distribution with respect to father revealed that across the 14 children, 43 percent were judged Dismissing, 14 percent were judged Secure, and 43 percent were judged Disorganised. Similar to the pattern observed with mother, none of the children classified as Disorganised were alternatively assigned to the Secure group and all of the children judged Disorganised received a best fitting Dismissing classification (100%).
Table 7.4 Four-Way Attachment Classifications with Respect to Father\textsuperscript{1}.

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td>Secure</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Disorganised</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>100</td>
</tr>
</tbody>
</table>

\textsuperscript{1}In two cases fathers were absent and thus no classification was assigned with respect to father.

7.6.2 Qualitative Data Analysis

In the following sections a qualitative analysis of narratives elicited from under eights will be presented.

\textit{Descriptions of the self}

Children appeared to fall into one of three main groups in describing the self; i) children who used descriptive words to refer to aspects of their character or personality; ii) children who described themselves in largely physicalistic, action-based terms; and iii) children who were unable to meet the demands of the question and either failed to provide descriptive words or provided descriptions that were bizarre. Illustrations of each of the aforementioned groups follows.

\textit{“Psychological” Self}

Whilst typically young children showed an initial proclivity to describe themselves in physicalistic terms, following appropriate prompts to describe, “Not what they look like but what kind of person they are” four of the 16 children demonstrated a capacity to conceive of the self in terms of personality characteristics.
This is exemplified by a seven-year-old girl who following prompting described herself as “kind”, helpful” and “playful” and was able to provide relevant examples to support her choice of words.

Similarly, a seven-year-old boy described himself to begin with by stating his name and following prompting replied that he was “funny”, happy” and “generous”. When asked to recall a time when he was “generous”, the boy recounted a story where he helped a friend after falling on the floor as an illustration of his generosity.

A further example of a child able to conceive of herself in psychological terms was given by a seven-year-old who described herself as “clever”, “helpful” and “friendly”. The girl proceeded to describe an episode when she was helping a friend who was hurt, by telling the teacher.

“Physicalistic” Self

A predominance of children demonstrated self-concept that was restricted to physicalistic, action-based descriptions.

To illustrate, a six-year-old girl described herself as an “animal lover” and “really like stroking my dog”.

A seven-year-old boy initially described himself by saying, “I am seven”. When prompted to try and describe what kind of person he is, he responded by reporting what his favourite cartoons and type of food were.

A similar response was elicited from a six-year-old boy who described himself by reporting, “I like ice-cream”, “I like Neil” and “I like Billy”. When asked to think of what kind of person he is, the same boy replied, “I would be like a basketballer, a tennis player”. 
Failure to Respond and Bizarre Descriptions

Five of the 16 children responded by saying they did not know how to describe themselves, and despite considerable prompting from the interviewer, refused to think of words to describe themselves.

Two of the children gave somewhat bizarre responses with one six-year-old boy describing himself as, “I scream in my ear sometimes”, “sometimes I hit myself” and “boring to wait for my parents to get me a new toy”.

Another six-year-old boy described himself as an “electricity cable” and when asked to provide a specific episode when he felt like that he replied, “If someone punches me, if a wasp stung me I didn’t start crying, I started shivering like I got an electricity shock and I started chasing it”.

Coherence of Narrative

A qualitative analysis of the narratives elicited revealed striking variability in the competence of children, with some responding fairly coherently to the interview whilst others showed considerable difficulties in comprehension and engagement. Due to the over-representation of the disorganised pattern in the current sample, particular attention was given to narrative extracts that were considered to potentially reflect disorganisation.

When asked whether she had been touched in her private body part by someone older, a six-year-old girl replied thus,

“Mummy and daddy took me to the hospital where I was born. How did you feel? I still had to go to school (very excited, makes faces). That must have been tough? The child then starts singing “Do you ever dare to scare your mum and dad’s underwear, do you ever dare to scare your brother or your sisters’ or your mum’s or your dad’s underwear...” Some children I’ve talked to have told me they’ve been
touched in their private body parts, Has that happened to you?........28 seconds pause (becomes frozen, sombre, very serious expression on face). Can you say that again? Some children I've spoken to have told me that they've been touched in their private body parts, has that ever happened to you? Uhm...no.

The above child was markedly distracted throughout the interview but in response to the question a sudden mood shift was evident as well as a long unlicensed pause, both of which were considered as possible indications of Disorganisation.

Whilst, the above was considered to reflect disorganisation and was not assumed to be age specific, the same child did at the beginning of the interview describe her imaginary friend, the cricket, and went on to say, “I brought the stupid cricket with me again, he follows me around everywhere”.

When the same girl was asked whether anyone close to her has ever died, she replied,

“A few men have died that I don’t know, I don’t know their names, they died from the first world war, lots of people died but I don’t remember their names, I heard it in Blue Peter (a children’s programme)”.

Further, in response to the loss question several children showed marked incoherence reflected in bizarre associations.

A seven-year-old girl responded thus,

“I also felt sad when my animal died nan got a friend and her mum’s budgie died. I’m going to cry when I tell it, she didn’t even tell me that she gave the budgie away, she kept on telling me that it flew out the window. How did you feel? Sad, I cried, in fact I’m just going to start crying now. Did you love the budgie? I loved it with all my heart, it sat on my finger. It was your friend? My only friend. Why did your grandmother give it away? Because the woman would be crying for the rest of her life, my aunts friend’s mum. Why? When had a special dinner. Get cucumber
and feed it to the budgie. I think she thought the woman was upset but what she
didn’t know was that when one of my pet dies so I soon go over it but nan didn’t
know that she could get over it. Who could get over it? My aunts friend’s mum’s
budgie died but before then my dog died but I’m over it. Were you upset? I was a
baby, it was a German Shepherd, I was zero when it died, no I was one year old.
The cat died but we got another one. We took the cat to the vet and it died at the
vets. (Playing with her ear) I’m just looking at my earings, last night I looked at it
and had stuff behind the ear, found some green stuff but its absolutely clear
(changes subject).

Asked to describe herself, the same child replied that she was “clever”. When
prompted to describe a time when she felt clever, the child recounted,

“When I was a baby was the first time I felt clever, when granddad died. How old
were you when he died? I was one year old, my granddad was clever, my nan isn’t
very clever, she’s a bit clever but granddad taught me all that stuff. When you were
one year old? He taught me how to sum, my nan, I don’t know what age she is, she
may have been born before you (addressing the interviewer)”.

The above child showed a number of other unusual features that were considered as
potential indicators of disorganisation of attachment. She displayed bizarre
associations or intrusion of catastrophic images (e.g. talking about getting lots of
presents, everything she ever wanted, she describes an advertisement showing how
not having a smoke alarm can lead to child being killed in fire, however many
presents there are). The same child however, showed no difficulties in describing
her self in psychological terms and in providing at times relevant and coherent
episodes in support of her semantic descriptors.

A seven-year-old responded to the question concerning the loss of his mother twelve
months previously thus,
Has anyone close to you every died? Mum died? Nobody close to me, she wasn’t close to me. How old were you? six years. Was it sudden? Look at this (changes subject). How did you feel? Cross, sad, I cried. Who told you? Someone told nanny. Did you go to the funeral? Yeah of course I did, I was praying, some people were crying, sometimes I feel happy with my mum cos she makes me warm and looks after me. Do you want to die? No do you? Yeah. Why? To see my mum. I want you to go home now, when are going home (wants to send interviewer home)

The foregoing extracts illustrate incoherence that was limited to one part or question within the interview and did not constitute a pervasive quality of the interview as a whole. By contrast, some children showed pervasive incoherence that may reflect limited cognitive competence in meeting the demands of the interview.

To illustrate, when a seven-year-old boy was explained what the CAI was about and told that he would be asked to think of examples and that there were no right or wrong answers, the child replied, “I don’t want any examples and there are right and wrong, take it and correct it”.

When asked to describe his relationship with his father, the same boy replied, “Not that nice, he’s not that kind, he’s mad, used to be ten time good, ten times better. You know if I would eat two tablets with water that is ten times stronger, twenty times strongest. Did your father have a stroke? Yeah, When? Three months ago. Can you think of how it was to be with your dad before the stroke? I was really sad. When? In the hospital, the picture you gave me in the hospital with that boy (refers to one of the photographs used as part of the SAT, completed a week earlier). Can you think of other words to describe your relationship with your dad? If he has a stroke that means he’s (inaudible) If I was acting (coughs), if I was acting like that, I would not act so I could go to the park. If I would act or not act I would still get what I want. Dad is not acting (makes a noise). What was it like with your dad before he went to hospital? Don’t know, S for secret”.

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The above two extracts provide an illustration of what constituted pervasive incoherence across the interview as a whole. In addition, the boy’s reply of “S for secret” repeatedly appeared as a way of warding off further questions and prompts.

In response to the question to think of three words to describe his relationship with his mother, a six-year-old boy chose as one word “a bit unhappy”. When asked to provide a specific example the child replied,

“Yes I felt happy cos I got lots of presents. Why did you feel unhappy? Cos it was my birthday, mummy took me somewhere and someone who I know was at the vote... I was unhappy and happy and happy and happy equals unhappy”.

When asked about particular examples throughout the interview, the same boy repeatedly replied by specifying the exact time at which a certain event had apparently occurred. To illustrate, when asked “When were you happy with dad?” At 14 o’clock. When were you hurt? At 16 o’clock.

In addition, when asked about a time when he was separated from his parents, the above child told a fantastical story about being lost for ten months. He replied thus,

“I’ve been away. Where? To some places. Without mum and dad? Yes. How long for? ten, I was far away for ten months, they could still see me (shows on the floor). Were you away for a holiday? I was lost, couldn’t find them for ages, couldn’t find the house, so what do you do when you’re lost, sleep on the street. What happened then? Then burglar comes up and steals you away”.

Several of the children in the current sample displayed considerable incoherence manifested in controlling and withholding behaviour that was directed at the interviewer.

To illustrate, in response to the question to think of three words to describe her relationship with her mother, a seven-year-old girl chose as one word “don’t get on
with her very well”. When asked to provide a specific example the child replied thus,

"Usually when I go to bed. What happens? We argue. What about? I don’t go to sleep, I can’t, don’t get to bed till 12 o’clock. Tell me what happens before you go to bed? No I’m not telling you, No way. Why not? No way. Does mum ask you to go to bed? Yeah, can’t sleep, keep getting up. What does mum say? I ask her for sleeping tablets. Does she give you? She hasn’t got any. Why do you have trouble to get to sleep? I don’t know, I’m getting kind of mad. I’ll ask you one more question about this? No I’m not going to answer them. Why? I don’t want to, I don’t like being bored anyway. It’s important we finish this interview? I don’t have to answer, I’m not going to answer”.

The above child repeatedly attempted to control the interview by withholding information and refusing to speak. The above features were coupled with behavioural displays such as hiding under the table, sitting hunched in a foetal position, in the corner of the room away from the interviewer.

As previously presented, when asked to describe himself in three words, a six-year-old child replied, “I scream in my ear sometimes”, “sometimes I hit myself” and “boring to wait for my parents to get me a new toy”. When prompted to describe a time when he hit himself, the child replied,

“All the time. Why do you hit yourself? Because I really hate myself. Why do you hate yourself? Because I really hate myself, because I want to die, I think it’s going to be great if I die. Did you hit yourself today? I go to school I never play, I hate it, it’s boring for me, I like to play with myself...”

When the same child was asked what happens when he is hurt, he replied,

“Sometimes I cry and sometimes I don’t...when I tell mum that Richard’s hit me, I turn into a killing machine”.

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In addition to narratives characterised by considerable incoherence as exemplified in the foregoing extracts, other narratives were characterised by the absence of affective references, by predominantly action-based accounts, and sometimes by the absence of dyadic interactions.

To illustrate, a seven-year-old boy described his relationship with his mother as “good”, “friendly” and “happy”. When prompted to recall an episode when it was good with his mother, the boy offered the following account,

“When we went to Regent’s Park with my dad and my sister. What happened? We were sitting in a boat, we had a journey all around Regent’s Park. What else happened? I went to the shop and buy some sweets. What was good with your mum? Me and my sister and my sister was happy and I brought my car, an electric one”.

An additional illustration of an action-based interaction was given by a six-year-old girl who described her relationship with her mother as “fun”, “joyful” and “nice”. In response to prompts eliciting a specific example of when it was fun with mum, the child replied,

“When she let my friends come in and do headstands cause I can do headstands...”. In describing a time when it was joyful, the same girl recounts an episode where she and her mother were playing a game of cards and her mother “Always pokes me and hangs me upside down... How do you feel? It hurts but I laugh. Why do you laugh? I don’t know why”.

When the same child was asked to remember a time when it was nice with her mum, the girl replied, “When I cleaned the kitchen, scrubbed the walls and the towel got wet”.
7.7 DISCUSSION

The current chapter was undertaken with the primary aim of establishing the suitability of the CAI for the assessment of attachment of children under the age of eight.

In examining the distribution of attachment classifications, a preponderance of Insecure-Dismissing children with respect to mother and father was observed (81% and 86% respectively). Moreover, with respect to four-way attachment classifications, a predominance of Dismissing (37% and 43% respectively) and Disorganised (44% and 43% respectively) children emerged with none of the children considered Preoccupied.

The high proportion of Dismissing children in the current sample is in keeping with the results reported in Chapter 6, highlighting the predominance of Insecure classification in a clinic-referred sample. However, it stands in contrast to reported attachment distributions in adult clinical populations (see for example, IJzendoorn and Bakermans-Kranenburg, 1996). The distribution of the Disorganised pattern in the current study is however comparable to the predominance of Unresolved and Cannot Classify (40%) found among adult clinical populations (IJzendoorn and Bakermans-Kranenburg, 1996). However, it is markedly higher than the frequency of Disorganised attachment narratives among clinic-referred children over eight years old.

It is the predominance of children considered as Disorganised that raises more serious doubts concerning the applicability of the CAI to children under the age of eight. The findings indicate that children under the age of eight years may not be cognitively competent or mature enough in order to meet the high demands of the interview task.

This may be exemplified in one girl's description of the imaginary friend, a description that could be conceived as developmentally understandable at the age of
six years but would be considered more bizarre if described by a nine year old. Thus, developmentally appropriate behaviour at six or seven years of age, whether verbal or non-verbal, may indicate disorganisation in an older child. Further, the above child was not unique in being distracted throughout, again suggesting a frequent difficulty in fully engaging younger children in the task, for reasons which cannot be assumed to relate to attachment.

Another illustration of the difficulties in distinguishing developmentally appropriate behaviour from Disorganised behaviour was presented in the extract of the seven-year-old girl who learnt to add when she was still a baby. The most striking feature of the narrative extracts presented was the girl's magical thinking and her poor conception of time. To elucidate, in the former extract the girl reported having been very upset at the loss of her dog when she was zero or one years of age. In the latter extract, the same girl described how she was taught to sum by her grandfather when she was just one year of age as an illustration of feeling clever. Both instances illustrated the child's limited temporal awareness and may in addition reflect the child's magical thinking seen in her description of her precocious development at the age of one year. These indications could constitute manifestations of disorganisation due to trauma with the attachment figures (known to have happened to her) or may simply reflect cognitive immaturity.

Poor temporal awareness was in addition exemplified in another child's confusion vis-à-vis his mother's death. The boy, aged seven years, initially described his mother as not close but then shifted to the present, reporting that he feels happy with his mother as if she was still among the living. Whilst the above extract could potentially indicate the child's disorganisation with respect to attachment, the confusion may have arisen due to the child's restricted temporal understanding explained in part by his young age.

Magical thinking also featured in the narrative of the six-year-old boy telling the story of his ten months separation from his parents. The example was considered to reflect the child's immaturity and difficulties in responding in a coherent and
plausible manner to the interview. The child’s telling of the separation story may be understandable given his age but would be considered highly inappropriate for a nine or ten year old.

Further, several narratives were characterised by concrete, action-based descriptions of relationships that were considered to represent a Dismissing stance with respect to attachment. Moreover, some episodes recounted to support the choice of descriptive words either lacked a relational component or were somewhat contradictory. Whilst these are considered central markers of the Dismissing pattern, it is very important not to confuse developmental immaturity with an avoidant strategy towards attachment. Thus, younger and less verbally intelligent children may not attend sufficiently to the demands of the interview in terms of the focus upon relationships and thus tend to focus on characteristics of the attachment figures which would explain the absence of interactions. Young children may in addition show a proclivity to describe relationships with their parents in relatively concrete and unelaborated ways and thus may be erroneously judged Dismissing.

The difficulties in determining whether younger children can understand and respond meaningfully to the CAI are also highlighted in children’s conception of the self. The majority of children in the current sample displayed considerable difficulties in describing the self in terms of personality characteristics and were thus restricted to physicalistic, action-based descriptions. This finding is consistent with the view that young children do not possess the necessary mental sophistication in order to view themselves in global integrated terms and are thus limited to concrete, ability-specific conceptions of the self (Damon & Hart, 1982; Harter, 1983). It is however difficult to conclude unequivocally what contribution age makes and what contribution attachment makes to conceptions of the self within the CAI.

Nevertheless, several of the children in the current sample did demonstrate an ability to engage in the interview task and were able to respond in a coherent, emotionally open, and collaborative manner, suggestive of cognitive and emotional
maturity. The difficulty remains that some children under the age of eight years display considerable socio-emotional and cognitive constraints that do not permit reliable and consistent coding of the CAI.

7.8 CONCLUSIONS

In sum, the findings of the current study suggest that children under the age of eight may not be developmentally competent in order to meet the demands of the interview. Whilst a predominance of Dismissing and Disorganised patterns emerged, the difficulties in determining to what extent age and developmental immaturity may have influenced classification argue for the applicability of the CAI only to children of eight years and above. Nevertheless, the findings of Chapters 4 and 5, and the current chapter tentatively highlight potential differences between normal and clinic-referred children that will be more fully addressed in the subsequent chapter.
CHAPTER 8. THE DISCRIMINATIVE POWER OF THE CHILD ATTACHMENT INTERVIEW: CLINICAL AND NON-CLINICAL COMPARISONS

The findings reported in Chapters 4, 5, 6, and 7 converge in establishing the reliability and validity of the Child Attachment Interview (CAI). High inter-rater reliabilities were demonstrated in Chapters 4 and 5, across different judges, in addition to high internal consistency. Furthermore, the discriminant validity of the CAI was repeatedly demonstrated, highlighting the relative independence of attachment classifications from demographic variables such as age, gender, socio-economic status (SES), and one or two parent households. Finally, scale scores were shown to differ significantly as a function of security of attachment for the Secure/Insecure dichotomy as well as for three-way and four-way schemes.

Whilst reliability and discriminant validity constitute an important stage in the development of a new measure, of further pertinence is the instrument's sensitivity in discriminating among different populations (Kline, 1993). Although the CAI was not conceived of as a diagnostic interview, it nevertheless was considered important to establish whether it could discriminate between clinical and normative samples.

8.1 THE DISTRIBUTION OF ATTACHMENT PATTERNS

Addressing the distribution of attachment patterns in diverse populations, the findings pertaining to existing measures are unequivocal in demonstrating an over-representation of insecure attachment patterns in clinical populations. Van Ijzendoorn, Goldberg, Kroonenberg and Frenkel (1992) examined meta-analytically the distribution of attachment patterns in infancy, comparing diverse samples defined by the presence of maternal problem such as depression and by the presence of child problems such as failure to thrive with the attachment distribution in normative samples. Overall, maternal problems showed the most deviating distributions with an over-representation of Disorganised/Disoriented children assessed in the Strange Situation procedure. For child problems, the distribution of attachment patterns was similar to that observed in normative samples, although Disorganised classifications
were more prevalent. A similar pattern has been demonstrated in adulthood with clinical populations showing a strong over-representation of insecure attachment patterns for both three-way and four-way schemes (van IJzendoorn & Bakermans-Kranenburg, 1996). Investigating the links between attachment security, clinical status, and behaviour problems in preschoolers, Greenberg, Speltz, DeKlyen, and Endriga (1991), and DeKlyen (1996) found that 80 percent of the clinic-referred children were classified as Insecure, compared with only 28 percent in the normal comparison group. Moreover, a high proportion of the clinic-referred children showed a controlling pattern of attachment (32% compared with 4% in the normative sample).

8.2 THE CURRENT STUDY

Although the above studies present a somewhat mixed picture, it was anticipated that an over-representation of insecure attachment patterns would be revealed when psychiatrically referred children were assessed using the CAI.

The main objectives of the current study were thus: firstly, to establish whether the distribution of attachment patterns differed between the normative and the clinical samples for the Secure/Insecure dichotomy and for three-way and four-way classifications; secondly, to examine the significance of attachment security in the prediction of clinical status.

8.3 METHOD

8.3.1 Participants

8.3.1.1 Normal sample

The normal sample reported in the current study consisted of two independent samples; a sample of 28 normal children described fully in Study 1 of Chapter 5, and a sample of 32 normal children described in Study 2 of Chapter 5. As noted in Chapter 5, the sample presented in Study 1 consisted of children from predominantly middle-class, two-parent households. By contrast, the sample reported in Study 2 was
more diverse in terms of SES with a larger proportion of working-class families. This combined sample was therefore considered as more representative of the population at large. The characteristics of the combined subject group are presented in Table 8.1.

The sample consisted of 28 boys and 32 girls ranging in age from eight years to twelve years and five months (Mean = 9.8; SD = 1.0). Children came from predominantly white (75%), middle-class families (75%), 2-parent households (85%).

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 9.8 (SD = 1.0)</td>
</tr>
<tr>
<td>Range</td>
<td>8.0 – 12.4</td>
</tr>
<tr>
<td>Females</td>
<td>32 (53%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>47 (75%)</td>
</tr>
<tr>
<td>2-Parent Family¹</td>
<td>51 (85%)</td>
</tr>
<tr>
<td>Social Class² I-II</td>
<td>45 (75%)</td>
</tr>
<tr>
<td>III-V</td>
<td>15 (25%)</td>
</tr>
</tbody>
</table>

¹Includes re-marriages.
²Based on employment status-Standard Occupational classifications (1990)

8.3.1.2 Clinical sample

The clinical sample comprised 47 children. A detailed description of the demographic characteristics of the clinical sample is presented in Section 6.5.1 of Chapter 6.

8.3.2 Normal Versus Clinical Comparisons on Demographic Variables

By means of exploring whether normal children differed from their clinical counterparts on demographic variables, the relationship between age and clinical
status was determined by independent sample t-tests and was found to be not significant \( t(105) = -0.07, ns \).

In examining the relationships between clinical status and gender, one or two parent households, SES, and ethnicity, highly significant differences between the normal and clinical samples emerged for one or two parent households \( \chi^2(3, N=104) = 14.15, p < .01, \) with continuity correction, and SES \( \chi^2(4, N=103) = 17.75, p < .001, \) with continuity correction. Normal and clinical children did not differ as a function of gender \( \chi^2(1, N=107) = 2.47, ns \), or ethnicity \( \chi^2(1, N=104) = 3.17, ns \).

### 8.3.3 Differences on Ratings of CAI Scales as a Function of Demographic Variables

Due to the observed differences between normal and clinical children as a function of one or two parent households and SES, it was considered important to establish whether differences on the CAI scales would emerge as a function of the abovementioned variables. Addressing these potential differences may account for potential differences between normal and clinical children on the CAI scales as examined in the following section.

T-tests were therefore computed for the combined clinical and normal samples comparing children from single parent households from those of two parent households on all CAI scales. A statistically significant difference emerged for the Resolution of Conflict scale \( t(102) = -2.53, p < .02 \) along with marginally significant differences for the scales of Preoccupied Anger with respect to mother and father \( t(102) = 1.88, p < .07 \) and \( t(99) = 1.77, p < .09 \) respectively]. The findings indicated that children from single parent households were less likely to describe the resolution of conflicts and were more likely to express preoccupied anger with respect to both mother and father than children from two parent households. For the remaining CAI scales, differences did not reach statistical significance.
When comparing children from middle-class families with those from working-class families on the CAI scales, marginally significant differences were shown for the scales of Balance of Positive and Negative References to attachment figures \( t(97) = 1.93, p < .06 \) and Resolution of Conflict \( t(101) = 1.78, p < .08 \). The findings suggested that children from middle-class families were more likely to present their attachment figures in a balanced light and clearly describe the resolution of conflict than children from working-class families. Statistically significant differences did not emerge for the remaining CAI scales.

8.3.4 Measures

The CAI protocol and coding and classification system are described in detail in Sections 5.5.2.1 and 5.5.2.2 of Chapter 5.

8.3.5 Procedure

For a complete description of the administration and coding procedures see Section 5.5.3 of Chapter 5.

8.4 RESULTS

8.4.1 Normal Versus Clinical Comparisons Relating to the CAI Scales

Comparisons between clinical and normal children were undertaken for ratings assigned on the CAI scales. Due to the demonstrated statistically significant differences between clinical and normal children as a function of one or two parent households and SES, ANCOVAs were computed with each the aforementioned demographic variables as covariates and each CAI scale in turn as the dependent variable with clinical status as the independent variable. Table 8.2 presents the means, standard deviations and F-statistics for each of the scales.
Table 8.2 Normal Versus Clinical Comparisons Relating to the CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Normal Sample (N=60)</th>
<th>Clinical Sample (N=43)</th>
<th>F-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Emotional Openness</td>
<td>5.8 (1.4)</td>
<td>5.0 (1.7)</td>
<td>4.53*</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>4.9 (1.6)</td>
<td>4.5 (1.4)</td>
<td>.43</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>5.8 (1.4)</td>
<td>5.1 (1.7)</td>
<td>4.31*</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.1 (.87)</td>
<td>1.6 (1.4)</td>
<td>.94</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.0 (.13)</td>
<td>1.7 (1.4)</td>
<td>7.22**</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>2.3 (1.5)</td>
<td>3.0 (1.8)</td>
<td>3.86*</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>2.4 (1.5)</td>
<td>2.2 (1.8)</td>
<td>.32</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>2.7 (1.6)</td>
<td>3.7 (2.2)</td>
<td>3.24</td>
</tr>
<tr>
<td>Dismissing of Father</td>
<td>2.7 (1.6)</td>
<td>3.8 (2.2)</td>
<td>5.20*</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.5 (1.3)</td>
<td>4.2 (1.7)</td>
<td>11.21***</td>
</tr>
<tr>
<td>Coherence</td>
<td>5.5 (1.5)</td>
<td>4.2 (1.7)</td>
<td>10.74***</td>
</tr>
</tbody>
</table>

1For four children SES information was missing and thus these cases were excluded from the analysis.

Key: *p < .05, **p < .01, ***p < .001

Ratings on all CAI scales with the exception of Preoccupied Anger with respect to father (range 1-2) were not restricted to a narrow band of low or high scores. Further, as shown in Table 8.2, statistically significant differences between the clinical and normal samples were demonstrated for ratings on the scales of Emotional Openness, Use of Examples, Preoccupied Anger with respect to father, Idealisation with respect to mother, and Dismissal with respect to father. In addition, highly statistically significant differences emerged for Resolution of Conflict and Coherence. A marginally significant difference was further shown for Dismissal with respect to mother \[F(1, 96) = 3.24, p < .08\]. None of the remaining main effects reached statistical significance.
8.4.2 The Distribution of Attachment Patterns as a Function of Clinical Status

Table 8.3 presents the distribution of the dichotomous attachment pattern (Secure versus Insecure) with respect to mother for the normal and clinical samples.

<table>
<thead>
<tr>
<th>Attachment Classifications</th>
<th>Normal</th>
<th>Clinical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>39</td>
<td>13</td>
<td>52</td>
</tr>
<tr>
<td>Insecure</td>
<td>21</td>
<td>34</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>47</td>
<td>107</td>
</tr>
</tbody>
</table>

As shown in Table 8.3, whereas 65 percent of normal children were classified as Secure with respect to mother, only 28 percent of clinical children were classified thus \( \chi^2 (1, N=107) = 14.71, p < .001 \).

Table 8.4 shows the distribution of the dichotomous attachment pattern (Secure versus Insecure) with respect to father for the normal and clinical samples.

<table>
<thead>
<tr>
<th>Attachment Classifications</th>
<th>Normal</th>
<th>Clinical(^1)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>38</td>
<td>10</td>
<td>48</td>
</tr>
<tr>
<td>Insecure</td>
<td>22</td>
<td>32</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>42</td>
<td>102</td>
</tr>
</tbody>
</table>

\(^1\)For five of the children fathers were absent.
Similar to the distribution reported with respect to mother, a high percentage of normal children were classified as Secure (63%) as compared with the clinical sample [24%; \( \chi^2 (1, N=102) = 15.49, p < .001 \)].

The distribution of three-way attachment patterns with respect to mother (Dismissing, Secure and Preoccupied), using the best fitting classification when a Disorganised category was assigned, revealed that whereas 60 percent of clinical children were classified as Dismissing with respect to mother, only 28 percent of normal children were classified thus. Sixty-seven percent of normal children were classified as Secure compared with 28 percent of clinical children. A minority of children in both groups were considered Preoccupied with respect to mother, with 5 percent in the normal group, and 13 percent in the clinical group. Table 8.5 presents the three-way attachment distribution with respect to mother.

Table 8.5 Three-Way Attachment Patterns with Respect to Mother for Normal and Clinical Samples

<table>
<thead>
<tr>
<th>Attachment Classifications</th>
<th>Normal</th>
<th>Clinical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>17</td>
<td>28</td>
<td>45</td>
</tr>
<tr>
<td>Secure</td>
<td>40</td>
<td>13</td>
<td>53</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>47</td>
<td>107</td>
</tr>
</tbody>
</table>

In addition, highly statistically significant differences between the clinical and normal samples in the distribution of three-way attachment classifications with respect to mother were shown [Likelihood ratio \( \chi^2 (2, N=107) = 16.57, p < .001 \)].

Similarly, for three-way attachment patterns with respect to father 62 percent of clinical children were classified as Dismissing as compared with only 30 percent of
the normal children. As shown in Table 8.6, for security, 65 percent of normal children were classified as Secure, compared with 24 percent of clinical children. Very few children were judged Preoccupied in both samples (5% and 14% respectively).

Table 8.6 Three-Way Attachment Patterns with Respect to Father for Normal and Clinical Samples

<table>
<thead>
<tr>
<th>Attachment Classifications</th>
<th>Normal</th>
<th>Clinical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>18</td>
<td>26</td>
<td>44</td>
</tr>
<tr>
<td>Secure</td>
<td>39</td>
<td>10</td>
<td>49</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>42</td>
<td>102</td>
</tr>
</tbody>
</table>

Similar to attachment with respect to mother, highly significant differences between the normal and clinical samples were demonstrated for three-way attachment classifications with respect to father [Likelihood ratio $\chi^2 (2, N=102) = 17.62, p < .001$].

Examining the four-way attachment classification distribution with respect to mother, whereas in the clinical sample a high proportion of children were classified as Dismissing (53% compared with 23%), the Secure classification predominated within the normal sample (65% compared with 28%). As shown in Table 8.7, only a handful of children in both samples were assigned a Preoccupied (3% and 10% respectively) or Disorganised (8% and 9% respectively). Differences in the four-way attachment distribution between the normal and clinical samples were highly significant [Likelihood ratio $\chi^2 (3, N=107) = 16.60, p < .001$].
Table 8.7 Four-Way Attachment Patterns with Respect to Mother for Normal and Clinical Samples

<table>
<thead>
<tr>
<th>Attachment Classifications</th>
<th>Normal</th>
<th>Clinical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>14</td>
<td>25</td>
<td>39</td>
</tr>
<tr>
<td>Secure</td>
<td>39</td>
<td>13</td>
<td>52</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Disorganised</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>47</td>
<td>107</td>
</tr>
</tbody>
</table>

A very similar four-way attachment distribution emerged with respect to father as shown in Table 8.8. Whereas 55 percent of clinical children were classified as Dismissing with respect to father, only 25 percent of normal children were classified thus. The distribution of the Secure pattern with respect to father indicated that 63 percent of normal children were classified as Secure, compared with 24 percent of clinical children. A minority of children in both groups were considered Preoccupied (3% and 14% respectively) or Disorganised (8% and 7% respectively).

Table 8.8 Four-Way Attachment Patterns with Respect to Father for Normal and Clinical Samples

<table>
<thead>
<tr>
<th>Attachment Classifications</th>
<th>Normal</th>
<th>Clinical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>15</td>
<td>23</td>
<td>38</td>
</tr>
<tr>
<td>Secure</td>
<td>38</td>
<td>10</td>
<td>48</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Disorganised</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>42</td>
<td>102</td>
</tr>
</tbody>
</table>
The observed differences between the two samples were highly statistically significant [Likelihood ratio $\chi^2 (3, N=102) = 18.51, p < .001$].

8.4.2 Security of Attachment as a Predictor of Clinical Status

Stepwise logistic regressions were conducted in order to determine whether security of attachment to mother and father respectively could predict clinical status after the predictive contribution of the demographic variables including one or two parent households and SES had been entered. Clinical status was entered as the dependent variable with the demographic variables entered in Block 1 of the regression. In Block 2, the dichotomous attachment classification, that is, Secure versus Insecure was entered into the equation to determine whether security of attachment significantly added to the prediction of clinical status.

Because SES and one or two parent households were not originally binary variables (SES had 5 levels, and one or two parent households had 4 levels) recoding was undertaken, dividing SES into two categories, children who came from middle-class families and those from working class families. Similarly, the one or two parent household variable was recoded with 1 denoting single parents, foster care and extended families, and 2 denoting two biological parents and reconstituted families. As a consequence, SES, and one or two parent households could be defined as categorical variables. Chi-square test for differences between normal and clinical children on the newly computed binary variables showed that differences remained statistically significant [for one or two parent households $\chi^2 (1, N=104) = 13.24, p < .001$ and for SES $\chi^2 (2, N=103) = 14.81, p < .001$].

After the inclusion of SES and one or two parent households in Block 1, prediction had improved from 58 percent (with only the constant entered into the equation) to 70 percent through the predictive value of SES (odds ratio = 4.35) and one or two parent households (odds ratio = 3.94) which was statistically significant [$\chi^2 (2, N=103) = 23.22, p < .01$]. The findings indicated that children were less likely to come from middle class families and more likely to come from single parent
households if they belonged to the clinical group. The crucial test of the predictive power of the CAI classification with respect to mother, as tested in Block 2, was that it improved prediction further to 79 percent (odds ratio = 3.70) which was statistically significant \( \chi^2 (1, \ N=103) = 7.77, \ p < .01 \). The above result suggested that children were 3.7 times more likely to be classified Secure if they came from the normal sample than the clinical sample.

A similar pattern of results in considering attachment security with respect to mother emerged for attachment security with respect to father. After the inclusion of SES and one or two parent households in Block 1, prediction had improved from 61 percent (with only the constant entered into the equation) to 70 percent through the predictive contribution of SES (odds ratio = 4.17) and 1 or 2 parent households (odds ratio = 3.49) which was statistically significant \( \chi^2 (2, \ N=99) = 19.75, \ p < .02 \). Thus, normal children were 4.17 times more likely than clinical children to come from middle class families. Normal children were in addition 3.49 times more likely to come from intact families. The introduction of attachment classifications with respect to father into the equation in Block 2 revealed that it improved prediction further to 79 percent (odds ratio = 4.35) which was statistically significant \( \chi^2 (1, \ N=99) = 9.21, \ p < .01 \). Children judged Secure were thus 4.35 times more likely to be drawn from the normal sample.

8.5 DISCUSSION

The current chapter was undertaken in an attempt to evaluate the power of the CAI in discriminating between a sample referred for psychiatric assessment and a normative sample. Comparisons between the normal and clinical samples were therefore conducted for CAI scales in addition to the distribution of attachment patterns. The utility of the CAI in predicting clinical status was further examined.

Preliminary analyses comparing the normal and clinical samples on demographic characteristics revealed highly significant differences as a function of one or two parent households and SES. Not surprisingly, the findings indicated that children
drawn from a clinical population were more likely to come from single parent, working-class households. The above findings are consonant with the reported associations within the field of developmental psychopathology wherein SES and single parenting have been considered as psychosocial risk factors and have repeatedly been shown to be related to a range of difficulties in childhood ranging from psychiatric disorder to compromised socio-emotional and cognitive development (Cicchetti, Rogosch, Lynch, & Holt, 1993; Fonagy, Steele, Steele, Higgitt, & Target, 1994; Rutter, 1979; Seifer, Sameroff, Baldwin, & Baldwin, 1992).

In addressing possible associations between the aforementioned demographic characteristics and ratings assigned on the CAI scales, a significant association emerged indicating that children from two parent households were significantly more likely to describe the resolution of conflicts when discussing times of conflict than children of single parents. Additionally, a trend wherein children from single parent households were more likely to show Preoccupied Anger with respect to both parents was indicated. The above findings raise an interesting question concerning the link between the child’s family context and the development of a Preoccupied strategy with respect to attachment. A possible interpretation may suggest that the child’s experience of being parented by a single parent may contribute to greater involvement and identification with the parent that may result in an enmeshed/preoccupied stance towards relationships. It is thus possible that the presence of a second caregiver, as is the case in intact families, may partly function to reduce the likelihood of an over-involved, exclusive relationship with a single attachment figure. Furthermore, the link between increased Preoccupied Anger and the absence of Resolution of Conflict seems to have face validity. As Crittenden (1992) postulated in describing patterns of attachment behaviour in the preschool years, when anger is displayed by a defended child, the anger will not be apparent to the attachment figure and thus will not be acknowledged with the result being the absence of resolution or reconciliation. It is however important to stress that the present findings offer a tentative link and should therefore be viewed with caution. This is particularly the case because of the extensive number of statistical tests undertaken and thus the increased likelihood of a
Type I error. A replication of the current study may hence contribute to a greater understanding of the possible links between Preoccupied Anger and parental status and may in addition shed further light on the relationship between parental status and an ability to express the resolution of conflicts.

Interestingly, a marginally significant association emerged with children from middle-class families shown to present attachment figures and relationships in a more balanced light and to discuss more freely the resolution of conflicts. The results however are not surprising in light of the established associations between higher SES, intact families, and security of attachment (Belsky, 1996; Fonagy, 1998). Both Balance of Positive and Negative References to attachment figures and the Resolution of Conflicts constitute important markers of security of attachment and thus the observed differences are consonant with the above links. The question of why significant differences had not emerged for the remaining CAI scales remains an interesting issue.

Comparisons between the normal and clinical samples on CAI dimensions revealed significant main effects for the dimensions of Emotional Openness, Use of Examples, Preoccupied Anger with respect to father, Idealisation with respect to mother, Dismissal with respect to father, Resolution of Conflict, and Coherence. In keeping with predictions, the findings indicated that clinical children were less likely to: converse about their attachment relationships in an emotionally open and coherent manner; and provide consistent and relevant episodic accounts; clearly describe the resolution of conflicts than normal children. Further, clinical children were more likely to dismiss the importance of attachment relationships, in particular the importance of the relationship with father, and showed a greater tendency to idealise their relationship with their mother than normal children. Contrary to expectations, Idealisation with respect to father did not significantly differ as a function of clinical status. The finding that clinical children expressed more Preoccupied Anger with respect to father to some degree reflects the very narrow use of the scale within the normal sample. Whereas none of the normal children were assigned a score above 2
for Preoccupied Anger with respect to father, seven (16%) of the clinical children received scores above 2.

Whilst clinical children were shown to be less coherent and emotionally open than normal children, the question of the influence of intelligence and expressive language competence upon attachment status as assessed by the CAI remains open and will be addressed in the subsequent chapter.

Furthermore, although the current study highlighted the association between clinical status and insecurity of attachment, it is not clear to what extent symptomatology plays an important role in the child’s quality of attachment relationships. Notwithstanding this difficulty, it is important to emphasise that clinical status is by no means synonymous with increased levels of symptomatology. On the contrary, it has been well documented that referral status may be indicative of family pathology but has no direct bearing upon the level of symptomatology of the child (see for example Beidel & Turner, 1997). Convergent findings suggest that a high proportion of children who meet diagnostic criteria for various childhood disorders do not get referred for assessment (Keller, Lavori, Wunder, Beardslee, Schwartz, & Roth, 1992). Nevertheless, the relationship between security of attachment and symptomatology will be addressed in the following chapter.

In examining the distribution of attachment as a function of clinical status, consistent with reported findings (see for example Greenberg et al. 1991; DeKlyen, 1996), significant differences emerged demonstrating an over-representation of Insecure patterns in the clinical sample. Comparing meta-analytically the distribution of attachment patterns across diverse samples, van IJzendoorn et al. (1992) cautioned that individual studies reporting significant differences between clinical samples and comparison samples may be exaggerated because of the careful selection of undisturbed mother-child relationship characteristics. Thus, many studies of normative samples have tended to focus upon white, middle-class families who have experienced little or no adversity. The current sample however, comprised a heterogenous normative group where recruitment was not the subject of careful
selection with respect to undisturbed mother-child relationship and thus the likelihood of the observed differences being exaggerated was considered to be significantly reduced. Although the findings of the current study stand in contrast to those reported by van Ijzendoorn et al. (1992) with respect to infancy data, it is noteworthy that differences of age and the specific clinical status of the sample play an important role. Whilst the samples used in his study were diverse with problems ranging from prematurity to deafness to pervasive developmental disorders, none of the child problem samples included were diagnosed with mental health disorders of the kind that would be prevalent in middle childhood.

The finding of a preponderance of Dismissing children within the clinical sample and the relative rarity of the Preoccupied strategy have been addressed in preceding chapters. Surprisingly, an approximately equal number of children were considered Disorganised in the clinical and the normal samples (9% and 8% respectively). One possible interpretation of the above findings relates to the heterogenous nature of the normal sample as noted above. Although none of the normal children had been formally diagnosed with behavioural or emotional problems, it is possible that a small proportion of the normal children would have met diagnostic criteria for a childhood disorder but had not been referred. It is therefore possible that more stringent inclusion criteria would have resulted in fewer Disorganised children within the normal group. However, a more likely explanation, addressed in Chapter 6, suggests that criteria for the identification of Disorganisation as manifested in the CAI are currently insufficiently specified thus resulting in the under-representation of Disorganisation, which might obscure a difference between normal and clinical samples.

Examining the application of the CAI in predicting clinical status, emergent findings suggest that attachment classifications with respect to mother and father contributed significantly to the prediction of clinical status over and above the predictive contribution of parental status and SES. The results indicated that children of single parents and from lower SES families were more likely to be drawn from the clinical group than the normal group, predicting 70 percent of the variance. The inclusion of
attachment classification to the prediction increased the explained variance to 79 percent and demonstrated that Secure children were less likely to be drawn from the clinical group than the non-clinical group. The finding that SES and parental status constitute significant predictors of clinical status is consistent with the evidence linking low SES and single parenthood conceptualised as potential risk factors and maladjustment as presented in the foregoing discussion. Whilst the current study was not undertaken with the aim of elucidating the process of resilience in light of risk and protective factors, the results lend further support to the notion that the quality of the parent-child relationship represents an important factor in the developmental trajectory of children, with Secure attachments constituting a potential protective factor. Although as noted previously, the CAI was not conceived of as a diagnostic interview, the current findings support the utility of the CAI in discriminating between clinical and normal children.

8.6 CONCLUSIONS

To conclude, the findings of the current study converge in demonstrating the ability of the CAI to discriminate between normative and clinical populations. Significant differences on the CAI scales emerged between children drawn from a normal and a clinical sample in the expected directions. Further, the clinical and normal samples significantly differed with respect to the distribution of attachment patterns with an over-representation of Insecure strategies within the clinical sample. Lastly, attachment security as assessed by the CAI was shown to significantly increase the prediction of clinical status indicating that clinic-referred children were more likely to be judged as Insecure with respect to attachment. In order to elucidate further the associations demonstrated in the current study, it is considered important to assess whether security of attachment is related to developmental aspects such as intelligence, expressive language competence, along with symptomatology and will thus be addressed in the following chapter.
CHAPTER 9. DISCRIMINANT VALIDITY: THE RELATIONSHIP BETWEEN ATTACHMENT STATUS, IQ, EXPRESSIVE LANGUAGE AND SYMPTOMATOLOGY

The findings of preceding chapters converge in support of the reliability of the CAI and its criterion validity. In the following chapter, the discriminant validity of the CAI will be explored, focusing upon the relationship between attachment security, intelligence, expressive language competence and behavioural problems.

9.1 THE RELATIONSHIP BETWEEN ATTACHMENT STATUS, INTELLIGENCE AND LANGUAGE COMPETENCE

A growing body of literature has drawn a clear link between the quality of parent-child communications and development across other domains (e.g. Bretherton, 1985). Bowlby (1973) argued that secure parent-child relationships are typified by "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" (p323). Consonant with Bowlby's characterisation of secure relationships, Bretherton (1999) postulated that "emotionally open communication within an attachment relationship is likely to facilitate the child's construction of a more coherent, and therefore more accessible, well-cross-referenced organisation of working models that, in turn, fosters the ability to retrieve relevant memories and evaluations on-line and thus to generate coherent narratives about attachment experiences in response to questions from a non-judgmental interviewer" (p348).

Open and sensitive communication between caregiver and infant thus constitutes the foundation on which a supportive and secure parent-child relationship can develop during the preschool years and beyond (Etzion-Carasso & Oppenheim, 2000). As children's verbal skills develop, parent-child dialogues about emotions assume a central role and it is through conversations that parents can help children organise their thoughts and feelings, and consolidate the construction of a coherent emotional world (Greenberg, DeKlyen, Speltz, & Enrigia, 1997; Fivush, 1998). These ideas have gained support from a study by Strage and Main (1985) in which clear
associations between attachment status and mother-child communication emerged. Children at aged six, who were securely attached to mother in infancy, had dyadic communication patterns that were fluent, laden with expression of emotions, and were rich in conversational topics. By contrast, children judged insecurely attached to their mother in infancy showed dyadic communication patterns that were non-fluent, restricted and unelaborated. Attachment classifications are thus considered to indicate in part the quality of communication between parent and child, as reflected in the coherence of the attachment-related narrative.

An alternative interpretation holds that the quality of the narrative as captured principally in the overall coherence of the narrative is primarily a product of the child’s logical reasoning and verbal expressiveness and is not a measure of the quality of the attachment relationship (Bakermans-Kranenburg & van IJzendoorn, 1993). The majority of existing attachment measures in early and middle childhood rely to a lesser or greater extent upon an analysis of the coherence of the narrative as an index of attachment security (e.g. Bretherton et al., 1990; Green et al. 1999). Thus, children who are cognitively and linguistically more advanced and are able to avoid logical inconsistencies in their narrative may erroneously be considered more Secure. Differences in cognitive abilities may also contribute to the production of rich and complex narratives. Children whose verbal competencies are well developed may convey their attachment-related experiences in a more fluent and sophisticated manner than those with less developed linguistic abilities and hence be considered Secure.

Attempts to address this issue, employing existing attachment measures, have produced mixed results. In a meta-analytic study examining the relationship between intelligence, language development, and attachment security in infancy, van IJzendoorn et al. (1995) found no significant association between intelligence and security of attachment. Significant differences, however, did emerge between secure and Insecure children with respect to language competence. In adulthood, studies focusing upon the discriminant validity of the AAI have repeatedly demonstrated no or low associations between IQ and attachment classifications (Bakermans-Kranenburg & van IJzendoorn, 1993; Crowell et al., 1996; Sagi et al., 1994; Steele
& Steele, 1994), in addition to trait-like discourse style (Crowell et al., 1996). Studies addressing the relationship between intelligence, verbal abilities, and attachment status in the early and middle childhood years have been scarce. In early childhood, McCarthy (1998) examined the relationship between attachment representations as assessed by the SAT and verbal IQ in four to six year olds. The results failed to find a significant relationship between scores on the British Picture Vocabulary Test and SAT scores. By contrast, Verschueren and Marcoen (1999) found a significant association between verbal intelligence and security of attachment to mother but not to father. In middle childhood, Easterbrooks and Abeles (2000) reported a significant association between verbal intelligence as assessed by the Peabody Picture Vocabulary Test and security of attachment representations using the SAT in eight year olds. Similar findings in an Icelandic sample were reported by Jacobsen and Hofmann (1997) who found that Secure children scored higher on IQ than their Insecure counterparts. The above results highlight the need to further explore the relationship between attachment security, intelligence and verbal competence in middle childhood.

As the review underscores, when attachment assessments are in part narrative based and thus rely upon a level of linguistic competence, it is important to ascertain that attachment measures for this age group are not merely assessing intelligence and language competence. Whilst in infancy, the confound of language does not play a role, and in adulthood the guiding assumption is that adults have developed a relatively stable cognitive and linguistic level, early and middle childhood marks a period of considerable development in these areas.

Focusing upon the CAI, attachment classifications may merely reflect differences in intelligence and verbal expressiveness. One of the key criteria for classifying a CAI narrative as Secure or Insecure constitutes the coherence of the interview. Coherence as operationalised within the CAI captures how well the child’s story “hangs together” and is plausible and consistent. Violations of coherence such as idealisation and/or dismissal of attachment figures, lack of emotional openness in the telling of the story and the absence of episodic support as manifested in the narrative are evaluated
along with evidence of reflectiveness, spontaneity and flexibility in discourse, all considered as positive indices of coherence. Secure children are those who through their story, present attachment figures and attachment-related experiences in a coherent manner. It can be argued that security of attachment may lead to a genuine facilitation of cognitive development and thus partialling out cognitive differences will underestimate the true causal relationship between security and narrative coherence. Nevertheless, it seems important to explore whether this relationship holds even after taking cognitive differences into account.

9.2 THE RELATIONSHIP BETWEEN ATTACHMENT STATUS AND PSYCHOPATHOLOGY

The idea that early parent-child relationships play a central role in the emergence of psychopathology is shared by most developmental theories, including attachment theory. Advances in methodologies for the assessment of attachment quality beyond infancy have provided the tools for studying the possible links between the quality of early as well as current attachment relationships and psychopathology. To this end, two approaches have been adopted: longitudinal studies, using the Strange situation in infancy and following the children for various periods of time; and concurrent studies, focusing upon clinical populations. Each of these strategies will be briefly reviewed in turn.

As discussed in Chapter 8, it is important to make clear the distinction between clinical status and behavioural problems or symptomatology. A predominance of children who present with symptoms meeting criteria for a diagnosis of childhood disorders do not receive treatment (e.g. Keller et al. 1992; Beidel & Turner, 1997). By the same token, clinic-referred children are not necessarily those who exhibit increased behavioural symptomatology but rather their referral status may reflect underlying family pathology.

The findings of longitudinal studies have been equivocal in elucidating the relationship between infant attachment and subsequent behaviour problems. Several
studies have found that Insecure children are more likely to develop behaviour problems in the preschool and early school years than Secure children (Erickson, Sroufe, & Egeland, 1985; Lewis, Feiring, McGuffog, & Jaskir, 1984; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989). Findings from the Minnesota High Risk Project (e.g. Egeland & Sroufe, 1981b; Sroufe, 1988) demonstrated that Insecure attachment in infancy is associated with later behaviour problems, more specifically, externalising behaviours, especially for boys who have experienced stressful life events. Convergent findings were reported by Lewis et al. (1984), showing significant associations between insecure attachments and behaviour problems at age six, but only for boys. More recently, Lyons-Ruth, Alpern and Repacholi (1993) found that infant Insecure-Disorganised attachment was the best predictor of teacher rating of hostile behaviour in five year olds. However, Bates, Maslin and Frankel (1985) and Goldberg, Lojkasek, Minde and Corter (1990) failed to find significant associations between behaviour problems at three-and-a half and four years of age and security of attachment assessed in infancy.

Whilst the above studies focused primarily upon the relationship between insecurity of attachment and symptomatology, other studies have addressed more specifically the relationship between clinical status and Insecure attachment patterns along with symptomatology, adopting cross sectional designs. Greenberg et al. (1991) and Greenberg et al. (1997) undertook two studies addressing the role of attachment in the early development of disruptive behaviour problems. Comparing three to six year old children diagnosed with oppositional defiant disorder (ODD) and attention deficit hyperactivity disorder (ADHD), with a sample of normal children, the first study found a predominance of Insecure clinical boys, classified as Controlling (40%). However, significant differences failed to emerge on behaviour problems between differential attachment classifications in the clinical group. Whilst the second study also found a large proportion of clinical boys classified as Controlling, it failed to find significant associations between externalising scores and insecurity of attachment. Moreover, a trend whereby Controlling children were viewed by parents as less problematic than Secure or Avoidant children emerged.
Attempts to move beyond the Secure/Insecure dichotomy and map more closely the relationship between specific attachment patterns and particular behavioural problems have equally produced divergent results (see for example, Lewis et al., 1984; Greenberg et al., 1991; DeKlyen, 1996) with some studies finding higher risk status associated with the controlling classification (Greenberg et al., 1991; Spetz, Greenberg, & DeKlyen, 1990), and others finding no evidence of higher risk for the controlling group (see for example, Cicchetti & Barnett, 1991, Goldwyn et al. 1999; Cohn, 1990).

One particular study illustrates the complexity and inconclusive nature of the findings of such studies. Goldberg et al. (1995) reported a study in which children diagnosed with cystic fibrosis (CF), with congenital heart disease, and a control group were followed from infancy to middle childhood. At four years of age, for the Secure/Insecure dichotomy assessed in infancy, children did not differ significantly on Internalising, Externalising and Total behaviour scores as assessed by the Child Behaviour Checklist (CBCL: Achenbach & Edelbrock, 1983). Significant differences however did emerge on the above variables when Avoidant children were compared with their Secure counterparts. When the same children were grouped by concurrent attachment status at four years of age, no significant differences were shown for behaviour problems related to attachment status.

Concurrent assessments of security of attachment and behavioural problems highlight the problem that presenting psychopathology can alter or obscure the underlying nature of attachment. Caution must therefore be exercised when interpreting concurrent results because what may be erroneously examined are the effects of a disorder on attachment and not the other way around.

Similar to intelligence and linguistic competence, attachment security could simply measure the degree of behavioural problems and social adaptation. In attempting to examine further the discriminant validity of the CAI, it is thus important to assess the relationship between attachment security as assessed by the CAI and concurrent behaviour problems as assessed by the CBCL. Drawing upon previous findings, the
expectation is to observe moderate differences between Secure and Insecure children on the CBCL.

9.3 THE CURRENT STUDY

Guided by the above, the aim of the current study was threefold: to examine the relationship between concurrent attachment security and intelligence; to explore the relationship between attachment security and expressive language; and to further determine the associations between concurrent attachment security, behavioural problems, and social adaptation. The current chapter is thus divided into three separate studies, each addressing one of these relationships.

STUDY 1. THE RELATIONSHIP BETWEEN ATTACHMENT SECURITY AND INTELLIGENCE

9.4 METHOD

9.4.1 Participants

Twenty-eight normal children described in detail in Section 5.2.1 of Chapter 5 and 4517 clinical children described in full in section 6.5.1 of Chapter 6 were combined for the purpose of the current study. Combining the two aforementioned samples enabled an examination of the relationship between intelligence and security of attachment in a diverse and heterogenous population, reducing the likelihood of a ceiling effect if examination was restricted to each sample individually. The demographic characteristics of the combined sample are presented in Table 9.1.

As shown in Table 9.1, the sample comprised 43 boys and 30 girls ranging in age from eight years to twelve years and five months (Mean= 9.9; SD=1.1).

17 For two children IQ scores were not available.
Approximately equal numbers of children came from middle-class (52%) and working class families (48%). Sixty-three percent came from two-parent households and only a minority of children were non-Caucasian (19%).

Table 9.1 Demographic Data of the Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=73)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 9.9 (SD = 1.1)</td>
</tr>
<tr>
<td>Range</td>
<td>8 – 12.4</td>
</tr>
<tr>
<td>Females</td>
<td>30 (41%)</td>
</tr>
<tr>
<td>Caucasian¹</td>
<td>57 (81%)</td>
</tr>
<tr>
<td>2-Parent Family²</td>
<td>46 (66%)</td>
</tr>
<tr>
<td>Social Class³ I-II</td>
<td>36 (52%)</td>
</tr>
<tr>
<td>III-V</td>
<td>33 (48%)</td>
</tr>
</tbody>
</table>

¹For three children ethnicity was not known.
²Includes re-marriages. For three children information concerning family status was not available.
³Based on employment status-Standard Occupational Classification (1990). For four children information on SES was unavailable.

9.4.2 The Relationship Between Attachment Status and Demographic Variables

Similar to Chapter 8, the relationship between demographic characteristics and security of attachment was explored. The findings indicated that the relationship between age and attachment security with respect to mother and father did not reach statistical significance \[ t(71) = 1.65, ns \] and \[ t(66) = 1.64, ns \] respectively. In addition, Secure children did not differ significantly from their Insecure counterparts as a function of SES \[ \chi^2(1, N=69) = .42, ns \] and \[ \chi^2(1, N=65) = 1.03, ns \] respectively and ethnicity \[ \chi^2(1, N=70) = 2.12, ns \] and \[ \chi^2(3, N=66) = 5.37, ns \] respectively.

However, statistically significant differences did emerge between Secure and Insecure children with respect to mother for gender \[ \chi^2(1, N=73) = 5.10, p < \]
and one or two parent households \( \chi^2(1, \ N=70) = 4.75, \ p < .03 \). The findings indicated that boys and children from single parent households were more likely to be classified as Insecure with respect to mother, than girls and children from intact families. Whereas 13 (33\%) of the 43 boys in the sample were classified as Secure with respect to mother, 17 (57\%) of the 30 girls in the sample were classified thus. Additionally, only six of the 24 (25\%) children came from single parent households were considered Secure with respect to mother compared with 24 of 46 (52\%) children from intact families.

Differences as a function of security of attachment to father did not reach statistical significance for gender \( \chi^2(1, \ N=68) = 2.79, \ ns \) but approached significance for one or two parent households \( \chi^2(1, \ N=68) = 3.13, \ p < .08 \) Of the 21 (24\%) children from single parent households only five were considered Secure whereas of the 45 children from intact families 21 (47\%) were judged thus.

9.4.3 Measures

9.4.3.1 The CAI

Chapters 4, 5 and 6 provide a detailed description of the development of the CAI. For the current study Version II of the CAI Protocol and Coding and Classification system was administered to the normal sample as described in Chapter 5, and Version VI of the same measure was applied to the clinical sample, as described in full in Chapter 6.

9.4.3.2 Wechsler Intelligence Test for School Children – III (WISC-III UK)

The WISC-III UK is a well established and validated measure of intellectual abilities of children in the six to 16 years age range. The WISC-III UK comprises 13 sub-tests, each measuring a different aspect of intelligence from which three composite scores can be derived; Verbal, Performance, and Full Scale IQ. For the purposes of the current study a WISC-III UK shortened form was used, including the following
four subtests; (1) Similarities requires the child to state how two words are alike; (2) Vocabulary requires the child to explain the meanings of words presented; (3) Picture Arrangement requires the child to assemble a series of cards presented in a mixed order in order to tell a logical and ordered story; and (4) Block Design requires the child to arrange a series of blocks in a given pattern. The above sub-tests were chosen because they were considered as good measures of general intelligence ($g$), and for their specificity. From the aforementioned four sub-tests, Verbal, Performance and Full Scale IQ scores were subsequently prorated (see Appendix E for a WISC form).

9.4.4 Procedure

The complete description of the procedures is presented in Section 5.2.3 of Chapter 5 and Section 6.5.3 of Chapter 6.

9.5 RESULTS

9.5.1 Descriptive Results

Table 9.2 presents the means, standard deviations and ranges of IQ scores for the normal sample as a whole.

<table>
<thead>
<tr>
<th>WISC - IQ (N=73)</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal IQ</td>
<td>106.57</td>
<td>19.32</td>
<td>67-155</td>
</tr>
<tr>
<td>Performance IQ</td>
<td>94.84</td>
<td>18.97</td>
<td>52-154</td>
</tr>
<tr>
<td>Full Scale IQ</td>
<td>101.64</td>
<td>18.70</td>
<td>62.5-146</td>
</tr>
</tbody>
</table>
As shown in Table 9.2, the means for Verbal and Full Scale IQ were slightly above average with Performance IQ slightly below average. Further, a broad range of scores for Verbal, Performance and Full IQ was observed.

By way of examining whether Verbal, Performance and Full IQ scores were correlated with the Coherence scale of the CAI, Pearson Product Moment correlations were computed, none of which reached statistical significance \( r (73) = .10, ns; r (73) = .14, ns \) and \( r (73) = .17, ns \) respectively.

9.5.2 The Relationship Between Security of Attachment with Respect to Mother and Intelligence

As presented in Table 9.3, Insecure children with respect to mother showed lower mean scores on Verbal IQ, Performance IQ and Full Scale IQ than their Secure counterparts.

<table>
<thead>
<tr>
<th>IQ</th>
<th>Secure (n=30)</th>
<th>Insecure (n=43)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Verbal IQ</td>
<td>109.42 (21.30)</td>
<td>104.58 (17.79)</td>
</tr>
<tr>
<td>Performance IQ</td>
<td>97.07 (16.99)</td>
<td>93.29 (20.29)</td>
</tr>
<tr>
<td>Full Scale IQ</td>
<td>105.47 (17.75)</td>
<td>98.98 (19.08)</td>
</tr>
</tbody>
</table>

In order to establish whether Verbal, Performance, and Full Scale IQ scores differed significantly as a function of security of attachment with respect to mother, analysis of covariance (ANCOVA) was computed for each of the above variables. The demographic variables of one or two parent households and gender as were defined as covariates in order to partial out the variance attributable to them. Three
cases were excluded from the analysis due to missing information pertaining to one or two parent households.

The results of the ANCOVA with respect to Verbal IQ indicated that there was no statistically significant main effect for gender \( F(1, 66) = .20, ns \), one or two parent households \( F(1, 66) = 2.11, ns \), and attachment security \( F(1, 66) = .36, ns \). Similarly, with respect to Performance IQ, no statistically significant main effects were demonstrated for gender \( F(1, 66) = .71, ns \), one or two parent households \( F(1, 66) = .94, ns \) and attachment security \( F(1, 66) = .02, ns \). With respect to Full Scale IQ, there were no statistically significant main effects for gender \( F(1, 66) = .48, ns \), one or two parent households \( F(1, 66) = 2.02, ns \) and attachment security \( F(1, 66) = .64, ns \).

### 9.5.3 The Relationship Between Security of Attachment with Respect to Father and Intelligence

As shown in Table 9.4 and similar to attachment with respect to mother, Secure children with respect to father showed higher mean scores on Verbal, Performance and Full Scale IQ than their Insecure counterparts.

<table>
<thead>
<tr>
<th>IQ</th>
<th>Secure (n=21)</th>
<th>Insecure (n=42)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Verbal IQ</td>
<td>110.61 (22.15)</td>
<td>104.17 (18.12)</td>
</tr>
<tr>
<td>Performance IQ</td>
<td>96.35 (17.39)</td>
<td>94.40 (20.91)</td>
</tr>
<tr>
<td>Full Scale IQ</td>
<td>105.83 (18.78)</td>
<td>99.39 (19.34)</td>
</tr>
</tbody>
</table>

1For five of the 73 children, fathers were absent.
Similar analysis of covariance (ANCOVA) presented above in relation to attachment with respect to mother were computed for attachment with respect to father with two cases excluded from the analysis due to missing information pertaining to one or two parent households.

For Verbal IQ, no statistically significant main effects were demonstrated for one or two parent households \([F(1, 63) = 1.45, \text{ ns}]\) and attachment security \([F(1, 63) = 1.22, \text{ ns}]\). Similarly, with respect to Performance IQ, no statistically significant main effects were shown for one or two parent households \([F(1, 63) = .62, \text{ ns}]\), and attachment security \([F(1, 62) = .01, \text{ ns}]\). Further, no statistically significant main effects were found for Full Scale IQ as a function of one or two parent households \([F(1, 63) = 1.45, \text{ ns}]\), and attachment security \([F(1, 63) = 1.11, \text{ ns}]\).

STUDY 2. THE RELATIONSHIP BETWEEN ATTACHMENT SECURITY AND EXPRESSIVE LANGUAGE COMPETENCE

9.6 METHOD

9.6.1 Participants

The sample reported in the present study was comprised three independent samples; a sample of 27\(^{18}\) normal children described in detail in Study 1 of Chapter 5, a sample of 32 normal children presented in Study 2 of Chapter 5, and a sub-sample of 26 clinical children drawn from the sample described in full in Chapter 6. The demographic characteristics of the combined sample are presented in Table 9.5. As shown in Table 9.5, the sample comprised approximately equal number of boys (52%) and girls (48%), ranging in age from eight years to twelve year and five months of age (Mean = 9.9; SD = 1.0). Children came from predominantly white (86%), middle-class (65%), two parent households (75%).

\(^{18}\) For one child expressive language scores were not available.
Table 9.5 Demographic Data of the Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 9.9 (SD = 1.0)</td>
</tr>
<tr>
<td>Range</td>
<td>8 – 12.4</td>
</tr>
<tr>
<td>Females</td>
<td>41 (48%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>73 (86%)</td>
</tr>
<tr>
<td>2-Parent Family(^1)</td>
<td>64 (75%)</td>
</tr>
<tr>
<td>Social Class(^2) I-II</td>
<td>55 (65%)</td>
</tr>
<tr>
<td></td>
<td>III-V</td>
</tr>
</tbody>
</table>

\(^1\)Includes re-marriages.  
\(^2\)Based on employment status-Standard Occupational Classification (1990).

9.6.2 The Relationship Between Attachment Status and Demographic Variables

Similar to Study 1, the relationship between age and attachment security with respect to mother and father did not reach statistical significance \([t(83) = 1.05, ns\) and \([t(80) = 1.18, ns\) respectively]. Further, no statistically significant differences emerged as a function of SES \([\chi^2(1, N=85) = 1.40, ns\) and \([\chi^2(1, N=82) = 2.50, ns\) respectively] and ethnicity \([\chi^2(1, N=85) = 1.05, ns\) and \([\chi^2(1, N=82) = 3.22, ns\) respectively].

Secure and Insecure children were however shown to significantly differ as a function of gender \([\chi^2(1, N=85) = 5.41, p <.02\) and \([\chi^2(1, N=82) = 4.06, p <.05\) respectively], and one or two parent households \([\chi^2(1, N=85) = 5.44, p <.02\) and \([\chi^2(1, N=82) = 4.31, p <.04\) respectively]. The findings indicated that girls and children from intact families were more likely to be classified as Secure with respect to mother and father than boys and children from single parent households. Of the 44 boys in the sample 19 (43%) were classified as Secure with respect to mother and of the 41 girls in the sample 28 (68%) were classified thus. Similarly, for attachment classifications with respect to father, of the 43 boys in the
sample 18 (42%) were judged Secure and of the 39 girls in the sample 25 (64%) were judged Secure. Whilst only seven of the 21 (33%) children from single parent households were considered Secure with respect to mother, 40 of the 64 (62%) children from intact families were judged thus. A similar pattern was shown for attachment security with respect to father with six of the 19 (31%) children from single parent households considered Secure and 37 of the 63 (59%) children from intact families judged thus.

9.6.3 Measures

9.6.3.1 The CAI

Chapters 4, 5 and 6 include a detailed description of the development of the CAI. Similar to study 1, for the current study Version II of the CAI Protocol and Coding and Classification system was administered to the normal sample as described in Chapter 5, and Version VI of the same measure was applied to the clinical sample, as described in full in Chapter 6.

9.6.3.2 Clinical Evaluation of Language Fundamentals-Revised (CELF-R: Semel, Wiig & Secord, 1987)

The CELF-R is an established and widely used standardised language measure designed to assess receptive and expressive language skills in children from five years to 16 years of age. For the purposes of the current study, only sub-tests of the CELF-R (UK version) specifically developed to assess expressive language for children of eight years and above were employed. Three sub-tests were used; (1) Formulated Sentences for the assessment of formulation of simple, compound and complex sentences, (2) Recalling Sentences for the assessment of recall and reproduction of surface structure as a function of syntactic complexity, and (3) Sentence Assembly for the assessment of the ability to assemble syntactic structures into grammatically acceptable and semantically meaningful sentences.
Raw scores derived from each of the CELF-R sub-tests were converted into norm-referenced standard scores. An expressive language standard score was then derived from adding the standard scores for each sub-test and converting the sum.

A CELF-R form is presented in Appendix E.

9.6.4 Procedure

The complete description of the procedures is presented in Sections 5.2.3 and 5.5.3 of Chapter 5.

Similar to Study 1, the 28 CAIs collected from the normal sample, as described in Chapter 5, were re-analysed applying Version VI of the CAI Coding and Classification system as described in Chapter 7 (for a detailed account see Study 1 of the current chapter).

9.7 RESULTS

9.7.1 Descriptive Results

Standardised expressive language scores for the combined sample were computed from the raw scores of the three sub-tests as described in the measures section. Expressive language scores ranged from 64-128 with a mean of 96.15, and a standard deviation of 13.90.

In establishing whether expressive language scores were correlated with the Coherence scale of the CAI, Pearson Product Moment correlation was computed which did not reach statistical significance [$r (85) = .11, ns$].
9.7.2 Expressive Language Competence as a Function of Security of Attachment to Mother

Examining expressive language scores as a function of security of attachment to mother, Secure children showed a higher mean expressive language score of 97.30 (SD = 12.24) than children judged Insecure with a mean expressive score of 94.74 (SD = 15.78).

In order to establish whether expressive language scores differed significantly as a function of security of attachment with respect to mother, analysis of covariance (ANCOVA) was computed with the demographic variables of one or two parent households and gender as covariates.

The results of the ANCOVA with respect to expressive language competence indicated that there were no statistically significant main effects for gender \([F(1, 81) = 2.83, \text{ns}]\), one or two parent households \([F(1, 81) = .74, \text{ns}]\), and attachment security \([F(1, 81) = .03, \text{ns}]\).

9.7.3 Expressive Language Competence as a Function of Security of Attachment to Father

Exploring expressive language scores as a function of security of attachment to father\(^{19}\), Secure children showed a higher mean expressive language score of 97.72 (SD = 12.41) than children judged Insecure with a mean expressive score of 94.74 (SD = 15.76).

In determining whether expressive language scores differed as a function of security of attachment with respect to father, analysis of covariance (ANCOVA) was computed with the demographic variables of one or two parent households and gender as covariates.

\[^{19}\text{For three children fathers were absent and thus no attachment classification was assigned.}\]
Similar to the findings reported in relation to attachment with respect to mother, no statistically significant main effects were demonstrated for gender \(F(1, 78) = 2.46, ns\), one or two parent households \(F(1, 78) = 0.59, ns\), and attachment security \(F(1, 78) = 0.16, ns\).

**STUDY 3. THE RELATIONSHIP BETWEEN ATTACHMENT SECURITY AND PSYCHOPATHOLOGY**

**9.8 METHOD**

**9.8.1 Participants**

The sample reported in the present study was comprised of four independent samples; a sample of 28 normal children described in detail in Study 1 of Chapter 5, a sample of 29\(^{20}\) normal children presented in Study 2 of Chapter 5, a sample of 45 clinical children described in full in Chapter 6, and four children drawn from the normal sample reported in Chapter 4. The demographic characteristics of the combined sample are presented in Table 9.6. As shown in Table 9.6, the sample comprised approximately equal number of boys (54%) and girls (46%), ranging in age from eight years to twelve years and five months of age (Mean = 9.8; SD = 1.1). Children came from predominantly white (83%), middle-class (61%), two parent households (70%).

\(^{20}\) For 4 of the children reported in Study 2 of Chapter 5 symptomatology scores were missing.
Table 9.6 Demographic Data of the Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=106)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>$X = 9.8$ (SD = 1.1)</td>
</tr>
<tr>
<td>Range</td>
<td>8 – 12.4</td>
</tr>
<tr>
<td>Females</td>
<td>49 (46%)</td>
</tr>
<tr>
<td>Caucasian$^1$</td>
<td>86 (83%)</td>
</tr>
<tr>
<td>2-Parent Family$^2$</td>
<td>72 (70%)</td>
</tr>
<tr>
<td>Social Class$^3$ 1-II</td>
<td>62 (61%)</td>
</tr>
<tr>
<td>III-V</td>
<td>40 (39%)</td>
</tr>
</tbody>
</table>

$^1$For three children ethnicity was not known.

$^2$Includes re-marriages. For three children family status was not known.

$^3$Based on employment status-Standard Occupational Classification (1990). For four children information on SES was unavailable.

9.8.2 The Relationship Between Attachment Status and Demographic Variables

Similar to Study 1 and 2, prior to examining the relationship between symptomatology and attachment security, potential differences between Secure children and their Insecure counterparts as a function of age, gender, socio-economic status (SES), one or two parent households, and ethnicity were determined. This was deemed particularly important in order to eliminate the possibility that potential associations could be accounted for by differences on the above demographic variables.

The relationship between age and attachment security with respect to mother and father was found to be marginally significant $t(104) = 1.86, p < .07$ and $t(99) = 1.81, p < .08$ respectively. The findings indicated that Secure children were more likely to be slightly older than their Insecure counterparts (for mother Mean = 10.00; SD = 1.0 Secure; Mean = 9.63, SD = 1.1 Insecure; for father Mean = 10.02; SD = 1.0 Secure; Mean = 9.64, SD = 1.1 Insecure).
Additionally, Secure children with respect to mother did not significantly differ from their Insecure counterparts as a function of SES \( \chi^2(1, N=102) = 2.14, \text{ns} \). However, a marginally significant difference in SES emerged as a function of security with respect to father \( \chi^2(1, N=98) = 3.32, p < .07 \). Children from middle-class families were more likely to be classified Secure with respect to father than children from lower SES, with 33 of the 61 (54%) children from middle-class families considered Secure and 13 of the 37 (35%) children from lower SES families judged thus.

Statistically significant differences also emerged between Secure and Insecure children with respect to mother and father for gender \( \chi^2(1, N=106) = 9.47, p < .01 \) and \( \chi^2(1, N=101) = 6.98, p < .01 \) respectively, and one or two parent households as a function of security of attachment to mother \( \chi^2(1, N=103) = 4.71, p < .03 \). A marginally significant difference in one or two parent households was shown as a function of security with respect to father \( \chi^2(1, N=99) = 3.22, p < .08 \). The results indicated that of the 57 boys in the sample only 19 (33%) were judged Secure with respect to mother, whereas of the 49 girls in the sample 31 (63%) were judged Secure. Similarly, of the 54 boys in the sample 18 (33%) were judged Secure with respect to father, whereas of the 47 girls in the sample 28 (60%) were judged Secure. Whilst only ten of the 31 (32%) children from single parent households were judged Secure with respect to mother, 40 of the 72 (56%) children from intact families were judged thus. A similar pattern was shown for attachment security with respect to father with nine of the 28 (32%) children from single parent households considered Secure and 37 of the 71 (52%) children from intact families judged thus.

Secure children did not differ significantly as a function of ethnicity from their Insecure counterparts \( \chi^2(1, N=103) = 1.43, \text{ns}; \chi^2(1, N=99) = 2.78, \text{ns} \) respectively.
9.8.2 Measures

9.8.2.1 The CAI

Chapters 4, 5, and 6 include a detailed description of the development of the CAI. Similar to study 1 and 2, for the current study Version II of the CAI Protocol and Coding and Classification system was administered to the normal sample as described in Chapter 5, and Version VI of the same measure was applied to the clinical sample, as described in full in Chapter 6.

9.8.2.2 Child Behaviour Checklist (CBCL: Achenbach, 1991; Achenbach & Edelbrock, 1983)

The CBCL is a well standardised assessment of child behaviour problems and social adaptation for children aged four to 18, completed by the parent. The CBCL includes 118 problem behaviour descriptions rated on a three-point scale (not at all, sometimes, or very often true). The revised CBCL produces nine clinical scales and three social scales. Scores on each of the scales are reported as T scores having a mean of 50 and a standard deviation of 10. In addition, the CBCL provides T scores for Internalising (e.g. social withdrawal, somatic complaints, depression), Externalising (e.g. aggression, inattentiveness, delinquency), and Total Problems. To identify whether a child is likely to have a diagnosable disorder, the CBCL allows calculating whether a score places a child in the “clinical range”. In general, Total scores of 60 and above constitute clinical scores (Achenbach, 1991; Goldberg et al. 1995). A CBCL form is included in Appendix E.

9.8.3 Procedure

The complete description of the procedures is presented in Chapters 5 and 6.
9.9 RESULTS

9.9.1 Descriptive Results

For the combined sample CBCL Internalising, Externalising and Total scores were computed. Table 9.7 presents the means, standard deviations, and ranges of scores.

Table 9.7 Means, SDs and Ranges for CBCL scores (N=106)

<table>
<thead>
<tr>
<th>CBCL</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internalising</td>
<td>56.89</td>
<td>12.66</td>
<td>33-86</td>
</tr>
<tr>
<td>Externalising</td>
<td>51.61</td>
<td>12.68</td>
<td>30-82</td>
</tr>
<tr>
<td>Total</td>
<td>53.55</td>
<td>13.97</td>
<td>24-84</td>
</tr>
</tbody>
</table>

As shown in Table 9.7, a large range was observed for Internalising, Externalising, and Total scores, with means well within the normal range of scores. Thirty-one (29%) of the children received Total scores above the clinical cut off score ($T > 60$).

9.9.2 The Relationship Between Security of Attachment with Respect to Mother and Symptomatology

In keeping with expectations, Secure children showed lower mean scores on Internalising, Externalising and Total CBCL scores than their Insecure counterparts, as shown in Table 9.8.
Table 9.8 Comparisons Between Secure and Insecure Attachment Classifications with Respect to Mother on CBCL Scores

<table>
<thead>
<tr>
<th>CBCL</th>
<th>Secure (n=50)</th>
<th>Insecure (n=53)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Internalising</td>
<td>52.52 (12.38)</td>
<td>60.64 (11.85)</td>
</tr>
<tr>
<td>Externalising</td>
<td>47.82 (11.92)</td>
<td>54.70 (12.47)</td>
</tr>
<tr>
<td>Total</td>
<td>49.20 (13.37)</td>
<td>56.92 (13.96)</td>
</tr>
</tbody>
</table>

In order to establish whether Internalising, Externalising and Total scores differed significantly as a function of security of attachment with respect to mother, analysis of covariance (ANCOVA) was computed for each of the above variables with the demographic variables of age, gender, and one or two parent households as covariates. Three cases were excluded from the analysis due to missing information pertaining to one or two parent households.

The results of the ANCOVA with respect to Internalising scores indicated that there was no statistically significant main effect for age \( [F(1, 98) = 1.81, ns] \), gender \( [F(1, 98) = .52, ns] \), or one or two parent households \( [F(1, 98) = 1.77, ns] \). A statistically significant main effect for attachment security \( [F(1, 98) = 8.17, p <.01] \) was demonstrated indicating that Secure children received lower Internalising scores than their Insecure counterpart.

With respect to Externalising scores, no statistically significant main effects were demonstrated for age \( [F(1, 98) = .08, ns] \), gender \( [F(1, 98) = 2.77, ns] \), or attachment security \( [F(1, 98) = 2.57, ns] \). A statistically significant main effect for one or two parent households \( [F(1, 98) = 6.03, p <.02] \) was observed suggesting that children from two parent households (Mean = 48.99, SD = 11.20) were rated by their mothers as showing fewer externalising symptoms than children from single parent households (Mean = 56.19, SD = 14.00).
Similarly, with respect to Total scores, no statistically significant main effects were demonstrated for age [$F(1, 98) = .37, ns$] or gender [$F(1, 98) = 1.72, ns$]. Similar to Externalising scores, a statistically significant main effect was shown for one or two parent households [$F(1, 98) = 6.11, p < .02$] indicating that children from two parent households (Mean = 50.11, SD = 12.99) were considered to display fewer overall behaviour problems than children from single parent households (Mean = 58.72, SD = 14.39). A marginally significant main effect in addition emerged for attachment security [$F(1, 98) = 3.68, p < .06$] highlighting that Secure children differed significantly from their Insecure counterparts on Total scores.

9.9.3 Symptomatology as a Predictor of Security of Attachment with Respect to Mother

Due to the significant differences observed between Secure and Insecure children with respect to mother as a function of Internalising and marginal differences indicated with respect to Total behaviour problems, a test of the contribution of the above variables to the prediction of attachment security was carried out. Because differences on demographic variables emerged as a function of security of attachment, the variables of age, gender, and one or two parent households were regarded as covariates. Attachment security (Secure versus Insecure) was entered as the dependent variable with the demographic variables entered in Block 1 of the regression. In Block 2, Internalising and Total behaviour score respectively were entered into the equation to determine whether the addition of the aforementioned variables into the model significantly added to the prediction of attachment security.

After the inclusion of age, gender, and one or two parent households in Step 3 of Block 1, prediction had improved from 51.5 percent (with only the constant entered into the equation) to 72 percent through the predictive value of age (odds ratio = 1.69), gender (odds ratio = 4.27), and one or two parent households (odds ratio = 3.97) which was statistically significant [$\chi^2 (3, N=103) = 21.70, p < .001$]. The findings indicated that the likelihood of being judged Secure was increased with older age, being a girl, and coming from an intact family. The introduction of
Internalising scores as a predictor of security of attachment in Block 2 only slightly improved the prediction to 73 percent (odds ratio = 1.05), which was statistically significant \[\chi^2 (1, N=103) = 7.97, p < .01\].

When logistic regression was computed with Total behaviour scores as the additional predictor of security of attachment entered in Block 2, identical results to the above were indicated for Block 1 with the demographic variables accounting for 72 percent of the variance. The addition of Total behaviour score did not significantly add to the prediction of security of attachment and was therefore not included in the model.

9.9.4 The Relationship Between Security of Attachment with Respect to Father and Symptomatology

Consonant with expectations, Secure children with respect to father showed lower mean scores on Internalising, Externalising and Total CBCL scores than their Insecure counterparts, as shown in Table 9.9.

Table 9.9 Comparisons Between Secure and Insecure Attachment classifications with Respect to Father on CBCL Scores\(^1\)

<table>
<thead>
<tr>
<th>CBCL</th>
<th>Secure (n=46)</th>
<th>Insecure (n=52)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Internalising</td>
<td>51.69 (12.50)</td>
<td>59.52 (10.97)</td>
</tr>
<tr>
<td>Externalising</td>
<td>47.48 (12.20)</td>
<td>54.04 (11.49)</td>
</tr>
<tr>
<td>Total</td>
<td>48.39 (13.64)</td>
<td>55.86 (12.77)</td>
</tr>
</tbody>
</table>

\(^1\)For five children fathers were absent, and for a further three information pertaining to SES was missing.

Similar analysis to those reported with respect to attachment security to mother were undertaken. Three cases were excluded from the analysis due to missing information pertaining to SES.
The results of the ANCOVA with respect to Internalising scores demonstrated that there were no statistically significant main effects for age \( F(1, 92) = 1.08, \text{ns} \), gender \( F(1, 92) = .15, \text{ns} \), or one or two parent households \( F(1, 92) = .01, \text{ns} \). A statistically significant main effect did however emerge for attachment security \( F(1, 92) = 7.57, p < .01 \) and unlike the findings reported above in relation to attachment security with respect to mother, a statistically significant main effect was also shown for SES \( F(1, 92) = 5.52, p < .03 \). The findings indicated that Secure children with respect to father were rated by their mothers as exhibiting fewer Internalising symptoms than Insecure children. In addition, children from middle-class families (Mean = 52.61, SD = 12.37) were also considered to show less Internalising symptoms than children from working-class families (Mean = 61.32, SD = 10.93).

With respect to Externalising scores, no statistically significant main effects were demonstrated for age \( F(1, 92) = .01, \text{ns} \), gender \( F(1, 92) = 1.07, \text{ns} \), or SES \( F(1, 92) = .23, \text{ns} \). Similar to results reported for attachment with respect to mother, a statistically significant main effect for one or two parent households \( F(1, 92) = 3.97, p < .05 \) was shown in addition to a marginally significant main effect for attachment security \( F(1, 92) = 3.36, p < .07 \).

As with attachment with respect to mother, whilst no statistically significant main effects were demonstrated for age \( F(1, 92) = .22, \text{ns} \), gender \( F(1, 92) = .73, \text{ns} \) or SES \( F(1, 92) = 2.60, \text{ns} \) on Total scores, a marginally statistically significant main effect was however found for attachment security \( F(1, 92) = 3.81, p < .06 \) indicating that Secure children with respect to father were rated as showing fewer behaviour problems than children judged Insecure. By contrast however, one or two parent households \( F(1, 92) = 2.09, \text{ns} \) did not emerge as a significant main effect.
9.9.5 Symptomatology as a Predictor of Security of Attachment with Respect to Father

Similar to the analyses conducted for attachment security with respect to mother, logistic regressions were computed as a way of determining the predictive contribution of CBCL scores upon attachment security, after the contribution of demographic variables.

The findings obtained were very similar with the inclusion of age, gender, and one or two parent households in Step 3 of Block 1 improving the prediction from 53 percent (with only the constant entered into the equation) to 71 percent through the predictive value of age (odds ratio = 1.64), gender (odds ratio = 3.36), and one or two parent households (odds ratio = 3.09) which was statistically significant [$\chi^2$ (3, N=98) = 16.13, $p < .001$]. The findings highlighted that older children, girls, and those from two parent households were significantly more likely to be classified as Secure on the CAI. However, the inclusion of SES did not make a significant improvement to the prediction of attachment security with respect to father and was therefore not included in the model. The introduction of Internalising scores as a predictor of security of attachment in Block 2 slightly improved the prediction to 74 percent (odds ratio = 1.06), which was statistically significant [$\chi^2$ (1, N=98) = 8.89, $p < .01$].

In a second logistic analysis, Externalising scores were entered as the additional predictor of security of attachment in Block 2. Similar findings to the above were indicated for Block 1 with the demographic variables accounting for 71 percent of the variance. The addition of Externalising behaviour scores did not significantly add to the prediction of security of attachment and was therefore not included in the model.

By contrast to the results reported with respect to security of attachment to mother, the inclusion of Total behaviour scores into the model improved slightly the prediction of security of attachment. Identical results to those reported in relation to
Internalising scores were shown indicating that the inclusion of the demographic variables of age, gender, and one or two parent households but not SES in Block 1 made a statistically significant improvement to the prediction. The introduction of Total scores as a predictor of security of attachment in Block 2 slightly improved the prediction to 72 percent (odds ratio = 1.04), which was statistically significant \( \chi^2 (1, N=98) = 4.67, p < .05 \).

9.10 DISCUSSION

In an attempt to establish the discriminant validity of the CAI, the current chapter examined the relationships between attachment security, intelligence, expressive language competence, and psychopathology in a sample comprising normal and clinic-referred children. In the following sections, the findings are briefly summarised and discussed in turn.

9.10.1 Attachment Security and Intelligence

Addressing the relationship between attachment security and demographic characteristics, the findings indicated that girls were more likely to be assigned a Secure classification than boys. The observed association between gender and security of attachment found in the current study stands in contrast to the non-significant associations reported in Chapters 4, 5 and 6. This discrepancy may be partly accounted for by the predominance of Insecure boys shown in the clinical sample (of the 47 clinic-referred children 30 were boys of which 24 were Insecure compared with ten Insecure girls). The above gender effect is consonant with the findings of Greenberg et al (1991), reporting that clinic-referred boys were more likely to be classified Insecure than clinic-referred girls. Gender effects in infancy and toddlerhood were in addition reported by Ziv, Aviezer, Gini, Sagi and Koren-Karie (2000) and Aber and Baker (1990) with boys more likely to be classified as Insecure (in particular Avoidant) than girls. Crittenden (1997) hypothesised that during the school years, boys would be subjected to cultural biases placing great
importance on the strength and invulnerability of males. Such cultural biases may be reflected in an increase in defended classifications for boys when the defence is especially against the display of vulnerability.

The finding that children of single parents were less likely to be classified as Secure is also in keeping with the reported associations between security of attachment and intact, two parent households in both normal and clinical populations (Greenberg et al. 1991; Solomon & George, 1999b). Belsky (1996; 1999) argued that multiple indications of “at risk” status due to lower level of parental psychological adjustment, poor marital quality, and lower SES amongst others, constituted the best prediction for Insecure attachment relationships.

In exploring the relationship between security of attachment and intelligence, the findings of Study 1 indicated that Secure children with respect to mother and father did not differ significantly from Insecure children on Verbal, Performance or Full Scale IQ. Furthermore, no associations were shown between intelligence scores and scores on the CAI coherence scale. The above findings are consistent with the reported absence of associations between intelligence and security of attachment in infancy (van Ijzendoorn et al. 1995) and in adulthood (Bakermans-Kranenburg & van Ijzendoorn, 1993; Crowell et al., 1996). Nevertheless, the relationship between intelligence and security of attachment in early and middle childhood is far from clear. Whilst the results of the current study are in keeping with those reported by McCarthy (1998), they stand in contradiction to recent studies reporting associations between verbal intelligence and security of attachment (Easterbrooks & Abeles, 2000; Jacobsen & Hofmann, 1997; Verschueren & Marcoen, 1999), albeit in the preschool years. Whilst the reported findings suggest that intelligence has no bearing upon security of attachment as assessed by the CAI, it is important to exercise caution in the interpretation of the results primarily because of a methodological limitation of the study concerning the use of a shortened form of the WISC-III UK. It is possible that the shortened form of the WISC-III UK may not constitute a sufficiently robust and valid measure of general intelligence and therefore differences in intelligence as a function of security of attachment failed to
emerge. Future studies applying the complete WISC-III UK may illuminate this association further. Nevertheless, the absence of associations reported in the present chapter are promising in demonstrating the discriminant validity of the CAI.

9.10.2 Attachment Security and Expressive Language Competence

Similar to the findings of Study 1, the findings of Study 2 demonstrated associations between attachment security and gender and one or two parent households. Interpretations of the above associations were addressed in the foregoing discussion.

Examining the relationship between security of attachment and expressive language competence, the findings indicated that Secure children did not significantly differ from their Insecure counterparts. Moreover, expressive language competence bore no relationship to narrative coherence as assessed by the CAI. Whilst to date, there have been no studies focusing upon the relationship between attachment status and expressive language, general language competence in preschool has been shown to be significantly associated with security of attachment in infancy (van IJzendoorn et al. 1992). However, in early and middle childhood, the relationship has not been specifically addressed. The results of the current study clearly support the notion that the quality of the narrative does not merely reflect the child’s level of logical reasoning and verbal sophistication and thus lends further support to the discriminant validity of the CAI. Notwithstanding these findings, based upon the supposition that emotionally open parent-child communications facilitate the child’s construction of coherent and organised internal working models (Bretherton, 1999), and the development of verbal skills, a modest relationship between expressive language and the coherence of the transcript may have been expected. Although necessarily tentative, the current findings suggest that whilst language development is undoubtedly consolidated through dyadic interactions, expressive linguistic abilities per se are not associated with security of attachment as assessed through the CAI.
9.10.3 Attachment Security and Psychopathology

Similar to the findings of Study 1 and 2, the findings of Study 3 indicated that girls and children from intact families were more likely to be judged Secure than boys and children from single parent households. Explanations for the above associations were put forward in the foregoing discussion. An additional finding however, highlighted a trend whereby older children were more likely to be assigned a Secure classification than younger children. Whilst Green et al. (1999) found significant associations between ratings of narrative coherence, disorganisation, and age in a normative sample, no such association was shown between age and ratings of narrative coherence in the CAI. Although evidence presented in Chapter 7 highlighted the difficulties in using the CAI with children under the age of eight years, it remains possible that ratings on the CAI are susceptible to the effects of maturation beyond eight years. Replications of the current study may shed further light on the above tentative association.

Further, the finding that children of lower SES were less likely to be considered Secure (a marginally significant difference) is in keeping with the notion that attachment is strongly influenced by its social context and social inequalities, both directly and indirectly (Fonagy, 1998). Social inequalities have consistently been shown to predict security of attachment with social advantage generally associated with secure attachment (Belsky, 1996; Murray et al., 1996; Shaw and Vondra, 1993).

The relationship between attachment security and concurrent behavioural problems and social adaptation as reported by mothers was subsequently explored. For Internalising problems, attachment security with respect to mother emerged as a significant main effect. Children in the Secure group were rated by their mothers as less withdrawn and depressed as expressed in lower Internalising scores than children in the Insecure group. Examining Internalising scores as a function of attachment security with respect to father, attachment security and SES emerged as significant main effects. In addition, children from working-class families were
rated by their mothers as higher for Internalising symptoms than children from middle-class families.

Examining the relationship between Externalising behaviour problems and security of attachment with respect to mother, children in the Secure group did not differ from their Insecure counterparts on Externalising behaviour. Children from single parent households were however considered by their mothers to display more Externalising behaviours than children from intact families. For Externalising problems as a function of attachment with respect to father, attachment security emerged as a marginally significant main effect indicating that children in the Secure group were rated by their mothers as less aggressive and inattentive than children in the Insecure group. Further, children from single parent households were rated by their mothers as more aggressive and delinquent than children from two parent households.

For composite Total scores as a function of security of attachment to mother and father, attachment security emerged as a marginally significant main effect indicating that children in the Secure group were rated by their mothers as less behaviourally problematic than children in the Insecure group. In addition, children from single parent households were rated by their mothers as displaying more behavioural problems than children from intact families.

The reported findings present a complex picture in keeping with the mixed results reported in the literature. Differences between Secure and Insecure children on Internalising, Externalising and Total behaviour observed stand in contrast to those reported by Cohn (1990), Cicchetti and Barnett (1991), Goldberg et al. (1990), and more recently Goldwyn et al. (1999) who failed to find significant associations between behavioural problems and security of attachment. However, differences between Secure and Insecure children on Internalising problems are consonant with the findings of Goldberg et al. (1995) wherein Secure children were rated by their parents as showing fewer Internalising problems than Insecure children (see also Easterbrooks, Davidson & Chazan 1993; Verschueren & Marcoen, 1999).
respect to Externalising behaviour, a trend emerged whereby Secure children with respect to father were less likely to display aggressive behaviour. This finding is in keeping with reported associations between Insecure attachment in infancy and later externalising behaviour (Erickson et al. 1985). Furthermore, evidence linking aggressive behaviour and the father-child relationship in adolescence confers with the findings (Allen, Moore, Kuperminc, & Bell, 1998) The absence of a main effect for Externalising behaviour as a function of security of attachment to mother converges with Goldberg et al., (1995) where for Externalising and Total scores no differences between Secure and Insecure children emerged (see also Greenberg et al. 1991). The trend that Secure children with respect to mother and father were rated as less problematic than Insecure children is also supported by previous studies (e.g. Easterbrooks et al., 1993).

The finding that children of lower SES families were considered to display more Internalising problems only for attachment with respect to fathers coupled with the finding that children from single parent households were considered to show more Externalising behaviours and overall behaviour problems only for attachment with respect to mother deserves special attention. Focusing upon aspects of family ecology relating to disruptive behaviour problems in early childhood, low SES (Sameroff, Seifer, Zax, & Barocas, 1987), and single parenthood (Webster-Stratton, 1990) have repeatedly emerged as significant factors. Easterbrooks et al. (1993) reported an association between increased family risk such as low SES, and maternal depression and concurrent Externalising and Total behaviour problems. In addition, security of attachment was associated with teacher and maternal reports of fewer Internalising, Externalising, and Total behaviour problems.

The current study was not undertaken with the aim of elucidating a transactional model of insecurity of attachment and behaviour problems. However as Greenberg and Speltz (1988) argued, findings linking early Insecure attachments and later behaviour problems of an externalising nature, especially for boys who had experienced negative life events support a transactional model in which insecurity is not synonymous with disorder. Rather, insecurity is viewed as a high-risk factor
interacting with other vulnerabilities in the child and family ecology. Vulnerabilities such as low SES and single parent households as indicated by the current study may thus play an important role in the development of behaviour problems.

Caution however should be exercised in interpreting the current results not least because only the mother was used as an informant of the child’s behaviour problems. The difficulty in using only the mother’s report has been highlighted by Bates et al. (1985) who reported a weak association between the perceptions of mothers and secondary caregivers of child behaviour problems at age three, alluding to possible biases in mothers representations of their children’s behavioural and emotional symptoms. Further evidence comes from a study by Stevenson-Hinde and Shouldice (1990) who found that mothers of Secure children assessed in infancy rated their children at two-and-a-half years of age as significantly lower on security using an Attachment Q-Sort than did the observers. In addition, mothers of Avoidant children showed a tendency to rate them as more Secure than did the observers. The above findings therefore highlight the potential usefulness of multiple informants of symptomatology. Using reports by fathers and/or teachers (for example, the Teacher Report Form) may provide a more complete picture of the child’s behaviour in different contexts and thus shed further light upon the relationship between behavioural problems and security of attachment.

The finding that Internalising and Total behaviour problems made a relatively small contribution, albeit significant, to the prediction of security of attachment holds considerable promise. The results suggest that demographic characteristics including age, gender and parental status provided the best predictive model for security of attachment. Younger children, boys and children from single parent households were more likely to be classified as Insecure than older children, girls, and those from intact families. The gender, age and parental status effects have been discussed at length in the preceding discussion, highlighting the importance of family ecology and constitutional factors in the development of secure attachment relationships. The findings that the degree of behaviour problems do not greatly enhance the prediction of attachment status underscores the notion that the CAI is not simply measuring the
level of symptomatology of the child as perceived by the mother. The fact that Externalising scores did not make any contribution to the prediction of security of attachment concurs with the findings of a marginally significant effect with respect to attachment security to father. It appears that Externalising behaviour problems do not vary significantly as a function of attachment status.

9.11 CONCLUSIONS

In sum, the results of the current chapter provide further support for the validity of the CAI as an instrument for the assessment of attachment status in middle childhood. In determining the relationship between attachment security, intelligence, expressive language abilities, and behavioural problems, Secure children were shown to significantly differ from their Insecure counterparts only as a function of symptomatology. Further, symptomatology was demonstrated to make a minor contribution to the prediction of security of attachment after the inclusion of demographic variables such as age, gender, and parental status. Taken together, the findings of the current studies lend further support to the validity of the CAI as measuring attachment security that is independent of intelligence and expressive language competence. In addition, the finding that security of attachment was associated with symptomatology suggests that the CAI is a sensitive interview. However, the question of whether the CAI is tapping attachment representations warrants further investigation and will be addressed in the subsequent chapter, focusing upon the predictive and concurrent validity of the CAI.
CHAPTER 10. THE PREDICTIVE AND CONCURRENT VALIDITY OF THE CHILD ATTACHMENT INTERVIEW

The preceding chapter established the discriminant validity of the Child Attachment Interview (CAI) and demonstrated the relative independence of security of attachment as assessed by the CAI from IQ, expressive language competence and psychopathology.

In endeavouring to develop a reliable and valid measure of attachment in middle childhood, establishing predictive and concurrent validity constitutes an important aspect in providing support for the value of an instrument. (Kline, 1993). It is important that the validity of the CAI is established not only in terms of rigorous empirical testing of psychometric properties, but also in terms of consistency with theory itself given the assumptions regarding the role of Internal Working Models (IWMs). These assumptions propose that parents’ mental representations of childhood experiences strongly influence the quality of their children’s attachment (van Ijzendoorn, 1995), that early IWMs have significant long-term implications for subsequent relationships, and that once organised IWMs tend to operate outside conscious awareness and are resistant to change.

10.1 PREDICTIVE VALIDITY

Studies establishing the relation between caregivers’ attachment status as assessed by the Adult Attachment Interview (AAI) and their infants’ attachment organisation as assessed by the Strange Situation have adopted one of three approaches; retrospective studies where infants’ Strange Situation classifications were collected prior to the parents’ AAI classifications; concurrent studies where Strange Situation and AAI classifications were assessed concurrently; and finally, prospective studies where AAI classifications were obtained prior to the birth of the child and Strange Situation behaviour was subsequently assessed.
Main et al. (1985) investigated retrospectively the correspondence between mothers’ and fathers’ attachment classification and their infants’ attachment status as assessed through the Strange Situation. Whilst a strong correlation (.62; \(p < .001\)) was reported for mother-infant dyads, a correlation of only .37 \((p < .05)\) was obtained for father-infant dyads (see also Grossmann et al., 1988). Similarly, Zeanah et al., (1993) concurrently assessed 60 mother-infant dyads and found 75 percent concordance for three-way classifications (see also Ainsworth & Eichberg, 1991). Findings from prospective studies also support the predictive validity of the AAI. Fonagy et al. (1991) reported a concordance rate of 75 percent between attachment status of the mother as assessed pre-natally and the attachment status of the child for the Secure/Insecure split, and a 66 percent three-way match. More recently, Benoit and Parker (1994) found that mothers’ AAI classifications during pregnancy were highly predictive of the infants’ attachment status at twelve months both for three-way and four-way classifications (81% and 68% respectively). Convergent evidence also comes from studies of high-risk samples (Ward et al. 1991; Ward and Carlson, 1995; Zeanah et al. 1995).

In a recent meta-analysis, van IJzendoorn (1995) reported a combined effect size of 1.06 in the expected direction for the Secure/Insecure split, with 70 percent concordance between infant and parent classifications for the three-way cross-tabulation, and 63 percent for the four-way cross-tabulation. Interestingly, van IJzendoorn (1995) reported that four of the nine studies utilising four-way classifications failed to find significant relations between the adult Preoccupied classification and the Ambivalent/Resistant infant classification. Small cell sizes coupled with the utilisation of the Unresolved adult category and the Disorganised/Disoriented infant category were suggested as possibly contributing to the ceiling effect.

The advent of methodologies for the assessment of attachment status in early and middle childhood has permitted the extension of the study of the predictive validity of the AAI to the attachment organisation of children beyond infancy. In the preschool years, DeKlyen (1996) reported a four-way match of 70 percent \((kappa =\)

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.54, p < .001) between mothers’ AAI status and their three to five year old children’s attachment as assessed by the Cassidy and Marvin (1989) separation-reunion procedure. In early to middle childhood, George and Solomon (1996) demonstrated a four-way match of 82 percent (kappa = .74, p < .001) between mothers’ AAI status and their six year olds’ attachment. Similarly, Ammaniti et al. (1996) reported a 95 percent match for the Secure/Insecure dichotomy between mothers’ AAI status and their six year olds’ attachment. By contrast, in a recent study, Goldwyn et al. (1999) explored associations between mothers’ state of mind with respect to attachment and their children’s attachment status at five to seven years of age, using the Manchester Child Attachment Story Task (MCAST). Whilst mothers’ AAI status (security) was not predictive of the child’s attachment status at five to seven years, a significant association between mothers’ Unresolved status and their children’s Disorganisation with respect to attachment was demonstrated (77%, kappa = .49, p < .01).

10.2 CONCURRENT VALIDITY

In the absence of a “benchmark” or “gold standard” test of attachment in early and middle childhood, the majority of studies have adopted multiple concurrent assessments of attachment organisation in the aforementioned age range. For example, studies employing the Separation Anxiety Test (SAT) have most commonly used concurrent separation-reunion procedures akin to the Strange Situation and adapted for use with older children, yielding attachment classifications that are analogous to those identified in infancy (Cassidy & Marvin, 1989; Main & Cassidy, 1988). Shouldice and Stevenson-Hinde (1992) assessed the attachment status of four-and-a-half year olds using the SAT and concurrent separation-reunion responses. Whilst associations between some of the SAT dimensions and separation-reunion responses were observed, Shouldice and Stevenson-Hinde (1992) concluded that it would be impossible to predict which children belonged to which attachment group. In an earlier study of 65 five year olds’ representations of separations from parents, Slough and Greenberg (1990) reported that of the three SAT dimensions identified, the avoidance scale showed the strongest relationship to the short
separation-reunion responses while the attachment scale showed only a weak association. Interestingly, the long separation-reunion assessment did not relate significantly to any of the SAT ratings. Slough and Greenberg (1990) put forward the order effects of the two separations (short separation followed by a long separation) and child fatigue as possible interpretations for the absence of associations. Exploring the concurrent validity of the MCAST in a sample of five year olds, Goldwyn et al. (1999) found MCAST-SAT agreement of 80 percent ($kappa = .41$) for the Secure/Insecure dichotomy.

The above findings highlight the inherent problems in demonstrating the concurrent validity of any new measure in the absence of existing highly reliable and valid measures.

10.3 CONTINUITY OF ATTACHMENT PATTERNS

A central assumption within attachment theory is that of the stability of IWMs across time and thus the continuity of attachment patterns in the absence of significant environmental changes. Several longitudinal studies have recently published their findings shedding light upon the extent to which early attachment security remains unchanged. Continuity from infancy to late adolescence was demonstrated by Waters et al. (2000) in which 64 percent ($kappa = .40, p < .01$) stability was reported for three-way attachment classifications. In the absence of major life events, continuity was increased to 72 percent ($kappa = .46, p < .01$). Similarly, Hamilton (2000) reported 63 percent continuity for the three-way nomenclature with infant attachment classification significantly predicting adolescent attachment classification [$t(4, n=30) = .23, p < .01$].

By contrast, studying a high-risk sample, Weinfield et al. (2000) failed to find significant continuity from infancy to early adulthood. These findings concurred with those reported by Lewis et al. (2000) who failed to find significant continuity of attachment from infancy to early adulthood in a middle-class sample. Examining continuity of attachment from infancy as assessed by the Strange Situation procedure
to middle childhood as assessed by the SAT, Bohlin et al. (2000) also failed to find significant continuity. Similarly, Bar-Haim et al. (2000) examined stability and change of attachment patterns at 14, 24, and 58 months of age measured behaviourally using the Strange Situation procedure and representationally using the SAT. Whilst continuity of attachment patterns between 14 and 24 months was demonstrated, stability between either 14 or 24 months and 58 months was not shown. Main et al. (1985) however found that security of attachment to mother in infancy was significantly related to the children’s emotional openness in discussing separation from parents at age six as assessed by the SAT. Early security of attachment to father bore little or no relation to responses on the SAT.

Main and Cassidy (1988) developed a comparable separation-reunion procedure for six year olds. In predicting the sixth-year classification to mother from Strange Situation classifications, 84 percent of the sample children were assigned to the same classification (for A, B & D classifications) with a somewhat weaker predictability for father-child dyads (61%). A replication of the Berkeley study completed in West Germany using a comparable sample of mother-child dyads first observed in the Strange Situation at twelve months obtained similarly high agreement in category placement of Strange Situation and sixth-year classifications (Wartner, 1987). First year A, B, C and D classifications predicted 78 percent of sixth-year attachment classifications with mother. Further, Solomon et al. (1995) found that doll-play classifications significantly predicted concurrent sixth-year reunion behaviour classifications (79%). Predictability was particularly strong for those children judged Controlling (D) in the separation-reunion procedure (100%) and somewhat weaker for those children judged Avoidant (55%).

10.4 THE CURRENT STUDY

As an important step in determining the validity of the CAI, the current chapter will explore the predictive and concurrent validity of the measure. In Study 1, the predictive validity of the CAI will be determined by examining the relationship between mothers’ state of mind with respect to attachment as assessed by the AAI and
their eight to twelve year old’s attachment status. Further, concurrent validity will be addressed in Study 2 by examining associations between attachment patterns as assessed by the CAI and concurrent attachment patterns as assessed by the SAT. Finally, Study 3 will explore the continuity of attachment patterns from early to middle childhood with assessments conducted at five to seven years of age utilising the MCAST and at eight to ten years of age using the CAI.

STUDY 1. PREDICIVE VALIDITY: CONCORDANCE OF ATTACHMENT PATTERNS IN MOTHER-CHILD DYADS

10.5 METHOD

10.5.1 Participants

The current sample comprised two samples reported in Study 1 and Study 2 of Chapter 5. As the main aim in the current chapter is to establish the predictive validity of the CAI, differences between the above samples were not considered central. Twenty-eight of the normal children were described in full in Study 1 of Chapter 5. The remaining 32 children formed a sub-sample of the clinical sample reported in full in Chapter 6. The characteristics of the combined subject group are presented in Table 10.1.

The sample consisted of 34 boys and 26 girls ranging in age from eight years to twelve years and five months (Mean = 10.1; SD = 1.1). Children were predominantly white (82%), with an equal number of children from middle-class (50%) and working-class (50%) families. Sixty-three percent of the children came from two parent households.
Table 10.1 Demographic Data of the Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 10.1 (SD = 1.1)</td>
</tr>
<tr>
<td>Range</td>
<td>8.0 – 12.4</td>
</tr>
<tr>
<td>Females</td>
<td>26 (43%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>47 (82%)</td>
</tr>
<tr>
<td>2-Parent Family(^1)</td>
<td>38 (63%)</td>
</tr>
<tr>
<td>Social Class(^2) I-II</td>
<td>30 (50%)</td>
</tr>
<tr>
<td>III-V</td>
<td>30 (50%)</td>
</tr>
</tbody>
</table>

\(^1\)Includes re-marriages.

\(^2\)Based on employment status-Classification of Occupation (1990). For four families SES was missing.

10.5.2 Measures

10.5.2.1 The CAI

Chapters 4, 5 and 6 provide a complete description of the development of the CAI. For the current study Version II of the CAI protocol and coding and classification system was administered to the normal sample as described in Chapter 5, and Version VI of the same measure was applied to the clinical sample, as described in full in Chapter 6.

10.5.2.2 The AAI (George et al. 1985)

The AAI was developed as a way of predicting infants' Strange Situation attachment classifications and was conceptualised as requiring individuals to recount and reflect upon early attachment related relationships and experiences whilst maintaining coherent and collaborative discourse without inconsistencies and contradictions (Main, 1995). The AAI is a semi-structured interview comprising 25 questions designed to assess the subject’s view of early as well as present relationships and how these may have changed and developed over time. The interview has been
devised so that questions are ordered chronologically from early childhood through adolescence and lastly into adulthood. Interviewees are required to provide five adjectives that describe their relationship to each parent and then offer specific episodic examples to support each adjective chosen. In addition, they are asked questions about whether they have experienced rejection, threat or abuse and whether they have suffered any major and traumatic losses and separations. Interviewees are also required to reflect upon these memories and are asked why they think their parents behaved as they did and how they think these early experiences have affected and shaped their adult personality. The AAI attempts to capture the subject’s current state of mind with respect to attachment with emphasis placed on the nature of representations of attachment figures and relationships as reflected in the narrative rather than the actual/probable experiences, although these are also considered when assigning a classification. The AAI attempts to identify analogues of attachment behaviour patterns in infancy with representational processes in adulthood and thus the classification system yields attachment classifications that are parallel to infant attachment patterns observed in the Strange Situation paradigm (Ainsworth et al. 1978).

For a complete description of the AAI protocol and coding and classification system see Chapter 2, Section 2.3.1. The AAI protocol is included in Appendix E.

10.5.3 Procedure

10.5.3.1 Administration

A detailed account of the administration procedure is presented in Section 5.2.3.1 of Chapters 5 and Section 6.5.3.1 of Chapter 6.

10.5.3.2 Coding

A complete description of the coding procedure for the CAIs is provided in Section 5.2.3.2 of Chapter 5 and Section 6.5.3.2 of Chapter 6. AAIs of mothers of the
normal sample reported in Chapter 5 were rated by Dr Mary Target. AAIs of mothers of clinical children reported in Chapter 6 were rated by Dr Target and the author. Both raters were blind to CAI classifications. The two raters had successfully completed the AAI institute training conducted by Mary Main and Erik Hesse, and David Pederson respectively, and had been certified as reliable judges before undertaking this coding.

10.6 RESULTS

Associations between CAI and AAI classifications were established using the kappa statistic. Kappa as found to be .39, p < .01 for the two-way (Secure versus Insecure) CAI-AAI attachment classification with respect to mother. Table 10.2 presents the frequencies for CAI attachment classifications to mother compared with AAI attachment classifications.

As shown in Table 10.2, overall percent of concordance was 70 percent, 42 of the 60 mother-child dyads were assigned the same classification. Of the 23 Secure mothers 16 (70%) had children who were judged Secure on the CAI. Of the 37 mothers judged Insecure, 26 (70%) had children classified as Insecure.

Table 10.2 Two-Way Concordance Between CAI Classifications with Respect to Mother and Mothers’ AAI Classifications

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Mother (N=60)</th>
<th>AAI Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>Secure</td>
<td>16</td>
</tr>
<tr>
<td>Secure</td>
<td>Insecure</td>
<td>11</td>
</tr>
<tr>
<td>Insecure</td>
<td>Secure</td>
<td>7</td>
</tr>
<tr>
<td>Insecure</td>
<td>Insecure</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>Secure</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>Insecure</td>
<td>37</td>
</tr>
</tbody>
</table>

In establishing three-way concordance (including best fitting alternative classification when Disorganised or Unresolved classifications were assigned) between CAI and
AAI classifications $\kappa = .21$, $p < .02$. Table 10.3 presents the frequencies for three-way CAI attachment classifications to mother and mothers' state of mind with respect to attachment assessed by the AAI. As shown in Table 10.3, overall percent of concordance was somewhat low with 29 of the 60 (48%) mother-child dyads assigned analogous attachment classifications. Of the 19 Dismissing mothers, ten (53%) had children who were judged Dismissing on the CAI. Of the 18 mothers judged Preoccupied, only three (16%) had children classified as such. For security percent agreement was high showing that of the 23 mothers judged Secure on the AAI, 16 (70%) had children classified as Secure on the CAI.

Table 10.3 Three-Way Concordance Between CAI Classifications with Respect to Mother and Mothers’ AAI classifications

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Mother (N=60)</th>
<th>AAI Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dismissing</td>
<td>Preoccupied</td>
</tr>
<tr>
<td>Dismissing</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Secure</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>18</td>
</tr>
</tbody>
</table>

In determining four-way concordance between CAI and AAI classifications $\kappa$ was found to be low and not significant ($\kappa = .08$, ns). Table 10.4 presents the frequencies for four-way CAI attachment classifications to mother and mothers’ state of mind with respect to attachment assessed by the AAI. As shown in Table 10.4, overall percent of concordance was found to be low with only 15 of the 57 (26%) mother-child dyads receiving the same attachment classification. Of the 14 Dismissing mothers, seven (50%) had children who were judged Dismissing on the CAI. Of the four mothers judged Preoccupied, only one (25%) had children classified as such. For security, percent agreement was higher showing that of the nine mothers judged Secure on the AAI, six (67%) had children classified as Secure on the CAI. Percent
concordance for the Unresolved-Disorganised pattern was very low with only one of the 30 (3%) Unresolved mothers having Disorganised children as judged by the CAI.

Table 10.4 Four-Way Concordance Between CAI Classifications with Respect to Mother and Mothers' AAI Classifications

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Mother (N=57)</th>
<th>AAI Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>Dismissing</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Preoccupied</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Secure</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Unresolved</td>
<td>10</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>Dismissing</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Preoccupied</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Secure</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Unresolved</td>
<td>3</td>
</tr>
<tr>
<td>Secure</td>
<td>Dismissing</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Preoccupied</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Secure</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Unresolved</td>
<td>16</td>
</tr>
<tr>
<td>Disorganised</td>
<td>Dismissing</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Preoccupied</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Secure</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Unresolved</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>Dismissing</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Preoccupied</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Secure</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Unresolved</td>
<td>30</td>
</tr>
</tbody>
</table>

1 For three mothers Unresolved status could not be rated due to insufficient information.

STUDY 2. CONCURRENT VALIDITY: THE RELATIONSHIP BETWEEN SEPARATION ANXIETY TEST AND CHILD ATTACHMENT INTERVIEW ATTACHMENT CLASSIFICATIONS

10.7 METHOD

10.7.1 Participants

Two samples reported in detail in Chapters 4 and 5 formed the current sample. As the main aim in the current chapter was to establish the concurrent validity of the CAI, differences between the above samples were not examined. Twenty-seven\(^{21}\) of the normal children were described in full in Study 1 of Chapter 5. An additional 37\(^{22}\)

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\(^{21}\) Although the original sample as reported in Chapter 5 comprised 28 children, for a single child SAT was not completed.

\(^{22}\) Three children from the original sample reported in Chapter 4 were excluded due to their age (younger than eight years).
children formed part of the sample reported in detail in Chapter 4. The characteristics of the combined subject group are presented in Table 10.5.

The sample consisted of 30 boys and 34 girls ranging in age from eight years to twelve years and nine months (Mean = 10.6; SD = 1.3). Children came from predominantly white (87%), middle-class families (70%), two parent households (84%).

Table 10.5 Demographic Data of the Study Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Sample (N=64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>X = 10.6 (SD = 1.3)</td>
</tr>
<tr>
<td>Range</td>
<td>8.0 – 12.7</td>
</tr>
<tr>
<td>Females</td>
<td>34 (53%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>56 (87%)</td>
</tr>
<tr>
<td>2-Parent Family(^1)</td>
<td>54 (84%)</td>
</tr>
<tr>
<td>Social Class(^2) I-II</td>
<td>45 (70%)</td>
</tr>
<tr>
<td>III-V</td>
<td>19 (30%)</td>
</tr>
</tbody>
</table>

\(^1\)Includes re-marriages.
\(^2\)Based on employment status-Classification of Occupation (1990).

10.7.2 Measures

10.7.2.1 The CAI

Chapters 4, 5, 6 and 7 present a full account of the development of the CAI. For the current study Version II of the CAI protocol and coding and classification system was administered to the samples as described in Chapters 4 and 5.
10.7.2.2 Separation Anxiety Test (SAT: Wright et al. 1995)

The SAT (Bowlby & Klagsburn, 1976; Slough & Greenberg, 1990; Wright et al. 1995) is a semi-projective test designed to assess children's narrative responses to representations of separations from parents. Nine SAT photographs were used in the current study following Wright et al (1995) and were labelled as “mild” or “severe” based on existing scoring systems (Shouldice & Stevenson-Hinde, 1992; Slough and Greenberg, 1990) based on face validity taking normative developmental factors into account.

The “separation” photographs were introduced in an ordered sequence as follows:

1. The boy/girl is going away on a school trip for two weeks. Here s/he is saying goodbye to his/her mum and dad (Severe)
2. Mum is going shopping and the boy/girl is staying at home alone (Mild)
3. Mum is going into hospital (Severe)
4. Mum and dad are going out for the evening (Mild)
5. Dad is leaving home after an argument (Severe)
6. The boy/girl is in town with his/her dad. Dad says “Go and spend your pocket money, I'll wait here”. (Mild)
7. It is the boy’s/girl’s first day at a new school (Severe)
8. The boy’s/girl’s dad is going away to work (Mild)
9. Mum and dad are going away for a few days and the boy/girl is staying with his/her uncle (Severe)

In keeping with previous studies (Klagsburn & Bowlby, 1976; Wright et al. 1995), for each of the photographs described above, the child was asked “How does the boy/girl feel?”, “Why does s/he feel that way?”, and “What does the boy/girl do next?” After each question the interviewer paused for the child’s reply. If the child did not respond to one of the questions or responded by saying “don’t know”, the question was re-phrased or a gentle neutral probe was used.
The child’s responses to the SAT were audiotaped and transcribed verbatim, including all the child’s utterances and indicating the tone of voice in brackets. The transcripts were coded using Resnick’s (1993) revised rating scales which gave rise to an overall classification (Secure or Insecure) and sub-classifications based upon five types of security (F1 = Some setting aside of attachment, F2 = Secure but restricted, F3 = Secure: Free valuing of attachment, F4 = Some preoccupation with attachment, F5 = Some preoccupation with attachment figures) and four types of insecurity (DS1 = Dismissing of attachment, DS2 = Devaluing of attachment, E1 = Passive, E2 = Angry/Conflicted).

Appendix E presents the SAT test administration.

10.7.3 Procedure

10.7.3.1 Administration

A detailed account of the administration procedure is presented in the Procedure sections of Chapters 4, 5 and 6.

10.7.3.2 Coding

A complete description of the coding procedure for the CAIs is provided in Chapters 5, 6 and 7. SATs of the children in the sample reported in Chapter 4 were rated by Adrian Datta (AD) who had received formal training in coding the SAT from Gary Resnick (Resnick, 1993) and had achieved satisfactory reliability (86% agreement, kappa = .70 for 15 reliability transcripts). SATs of the children comprising the sample reported in Study I of Chapter 5 were rated by Tania Pilley (TP) and the author. Whilst neither TP nor the author received formal training in the coding of SATs, reliability training was undertaken with AD as the reliable judge and satisfactory agreement was reached (82% agreement, kappa = .67 for 15 reliability transcripts). Ratings of the SAT were undertaken whilst judges were blind to CAI classifications.
The 40 CAIs as reported in Chapter 4 and the 28 CAIs collected from the normal sample as described in Study 1 of Chapter 5, were re-analysed applying Version VI of the CAI Coding and Classification system as described in Chapter 6. As outlined in Chapters 4 and Study 1 of Chapter 5, children comprising the normal sample were assigned a dichotomous Secure versus Insecure classification, concomitant with classifications along a four-point security continuum from Very Secure to Very Insecure. For the purposes of further analyses reported in the current as well as subsequent chapters, the above interviews were re-coded in order to assess three-way and four-way concordance of attachment classifications.

10.8 RESULTS

Associations between concurrent CAI and SAT classifications were established using the kappa statistic and were found to be highly significant (kappa = .35, p < .01) for the CAI-SAT attachment classification with respect to mother. Table 10.6 presents the frequencies for CAI attachment classifications to mother compared with SAT attachment classifications.

As shown in Table 10.6, overall percent of concordance between CAI classifications with respect to mother and SAT classifications was 69 percent, 44 of the 64 children were given the same classification. Of the 39 Secure children on the SAT, 28 (72%) were judged Secure on the CAI. Of the 26 children judged Insecure on the SAT, 16 (62%) were judged thus on the CAI.

Table 10.6 Two-Way Concordance Between CAI Classifications with Respect to Mother and SAT Classifications

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Mother (N=64)</th>
<th>SAT Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>Secure</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Insecure</td>
<td>10</td>
</tr>
<tr>
<td>Insecure</td>
<td>Secure</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Insecure</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64</td>
</tr>
</tbody>
</table>
In determining the association between concurrent CAI classifications with respect to father and SAT classifications, \( \kappa = .38, \ p < .01 \). Overall percent of agreement between CAI classifications with respect to father and SAT classifications was shown for 43 of the 62 children (69%). As shown in Table 10.7, of the 32 Secure children on the SAT, 25 (79%) were judged Secure on the CAI. Of the 30 children judged Insecure on the SAT, 18 (60%) were judged thus on the CAI.

Table 10.7 Two-Way Concordance Between CAI Classifications with Respect to Father and SAT Classifications

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Father (N=62)(^1)</th>
<th>SAT Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Secure</td>
<td></td>
</tr>
<tr>
<td>Secure</td>
<td>25</td>
<td>37</td>
</tr>
<tr>
<td>Insecure</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>30</td>
</tr>
</tbody>
</table>

\(^1\)For two of the children fathers were absent and thus no classification was assigned.

In seeking to determine the three-way concordance rate between concurrent CAI classifications with respect to mother and SAT classifications, \( \kappa = .42, \ p < .001 \). Overall, three-way percent of agreement between CAI classifications with respect to mother and SAT classifications was found for 44 of the 64 children (69%). As shown in Table 10.8, of the 21 children judged Dismissing on the SAT, 14 (67%) were judged thus on the CAI. Of the six children considered Preoccupied on the SAT, only two (33%) were similarly classified on the CAI. Lastly, of the 37 Secure children on the SAT, 28 (76%) were judged Secure on the CAI.
Table 10.8 Three-Way Concordance Between CAI Classifications with Respect to Mother and SAT Classifications

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Mother (N=64)</th>
<th>SAT Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dismissing</td>
<td>Preoccupied</td>
</tr>
<tr>
<td>Dismissing</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Secure</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Three-way agreement for attachment with respect to father was similar to that demonstrated for attachment with respect to mother \(kappa = .39, p < .001\). As shown in Table 10.9, of the 21 children judged Dismissing on the SAT, 14 (67%) were judged thus on the CAI. Of the six children considered Preoccupied on the SAT, three (50%) were similarly classified on the CAI. Finally, of the 35 Secure children on the SAT, 25 (71%) were judged Secure on the CAI. Overall agreement with respect to father was shown for 44 of the 64 children (66%).

Table 10.9 Three-Way Concordance Between CAI Classifications with Respect to Father and SAT Classifications

<table>
<thead>
<tr>
<th>CAI Classification with Respect to Mother (N=62)</th>
<th>SAT Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dismissing</td>
<td>Preoccupied</td>
</tr>
<tr>
<td>Dismissing</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Secure</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

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Further analyses to determine the four-way concordance rate between CAI and SAT classifications were not possible as the Resnick (1993) coding system does not yield a Disorganised classification.

A correlation analysis was subsequently undertaken for SAT and CAI scales that contained some overlap. Highly statistically significant correlations between CAI and SAT scales were shown for Emotional Openness \([r(62) = .38, p < .01]\), Dismissal with respect to mother \([r(62) = .37, p < .01]\), Resolution of Conflicts/Solutions \([r(62) = .42, p < .001]\), and Coherence \([r(62) = .49, p < .001]\). Additionally, a marginally significant correlation was indicated for ratings on the CAI scale of Dismissal with respect to father and SAT Dismissing/Devaluing ratings \([r(60) = .25, p < .05]\). Correlations did not reach statistical significance for the CAI scales of Preoccupied Anger with respect to mother and father and the SAT Preoccupied Anger scale \([r(62) = -.12, ns; r(60) = -.17, ns]\) respectively.

**STUDY 3. CONTINUITY OF ATTACHMENT PATTERNS OVER A THREE-YEAR PERIOD**

**10.9 METHOD**

**10.9.1 Participants**

The sample comprised 32 children recruited from a local primary school in the Manchester area. A complete description of the sample characteristics is presented in Study 1 of Chapter 5. As noted in Chapter 5, the sample came from predominantly middle-class, two parent households with an age range of eight to eleven years and approximately equal number of girls and boys.
10.9.2 Measures

10.9.2.1 The CAI

Version IV of the CAI protocol and coding and classification system was used as described in detail in Section 5.5.2.1 of Chapter 5.

10.9.2.2 The Manchester Child Attachment Story Task (MCAST: Green et al. 1999)

The MCAST is a semi-projective doll-play assessment akin to the attachment story completion task (Bretherton et al. 1990) developed to access internal representations of attachment relationships in young school aged children. The MCAST comprises five attachment-related “distress” vignettes in which the child is placed in a situation of specific distress with the caregiver close by but not with the child. In these scenarios the child experiences a nightmare, hurts his/her knee, suffers acute abdominal pain, has an argument with a friend at school, and find him/herself lost whilst shopping with the parent. For each of the five vignettes there is an induction phase where the interviewer amplifies the intensity of the distress represented in the child doll figure in order to get the child to feel involved and aroused by the predicament shown in the story. The second phase of the vignette calls upon the child to play out a story completion with the doll’s house and the doll representing his/her primary caregiver. This is followed by a series of structured probes aimed at clarifying the intention behind the child’s play and the degree of assuagement in addition to prompting mental state attributions to the dolls. The child is asked, “Can you tell me how the child/parent doll is feeling now?”, “Can you tell me what the child/parent doll is thinking now?”, and “What would the child doll like to do?”. The interview ends with a period of free play in which the child is asked to play out something the family like doing together as a way of “winding down” (see Appendix E for the MCAST protocol).
The corresponding coding system draws upon concepts and methods from the analysis of toddler attachment behaviour in the Strange Situation procedure and from discourse analysis in the AAI. For each vignette 33 codings are made, most on nine point continuous scales falling broadly into four groups; a) attachment-related behaviours represented in the story completion including for example, pattern of proximity and caregiving behaviour, b) narrative coherence adapted from the AAI and coded in terms of Grice’s maxims of discourse, c) Disorganised phenomena coded both at the behavioural and representational levels, and d) bizarreness of narrative content, predominant affect, and the child’s mentalising ability and meta-cognition. Based upon the above dimensions and overall “strategy of assuagement” is derived and a categorical A, B, C, D and CC is assigned for each vignette analogous to Strange Situation classifications. An overall attachment classification is subsequently assigned according to the predominant classification across the vignettes.

10.9.3 Procedure

10.9.3.1 Administration

MCAST interviews were administered in the school setting, three years prior to the administration of the CAI, by Dr Charlie Stanley and Vicky Smith from the Manchester group.

A detailed account of the administration procedure of the CAI is presented in Section 5.2.3.1 of Chapter 5.

10.9.3.2 Coding

With respect to MCAST coding, 33 of the 53 original MCAST interviews were double coded blind by two raters from the Manchester group with consensus ratings made for difficult cases. High inter-rater reliability was achieved for two-way classifications (B vs A/C/CC; 94%, \(kappa = .88\)), three-way classifications (A/B/C; 80%, \(kappa = .62\)), and D versus non-D classifications (82%, \(kappa = .41\)).

The CAIs of the current sample were coded by the author whilst being blind to MCAST classifications.
10.10 RESULTS

Associations between CAI and MCAST classifications were established using the \textit{kappa} statistic and were found to be highly significant (\textit{kappa} = .63, \textit{p} < .001) for the CAI-MCAST attachment classification with respect to mother and father\textsuperscript{23}. Table 10.10 presents the frequencies for CAI attachment classifications to mother compared with MCAST attachment classifications. As shown in Table 10.10, overall concordance between CAI classifications with respect to mother and MCAST classifications was found for 27 of the 32 (84\%) children. Of the 23 Secure children on the MCAST, 20 (87\%) were judged Secure on the CAI. Of the nine children judged Insecure on the MCAST, seven (78\%) were judged thus on the CAI.

<table>
<thead>
<tr>
<th>CAI Classification (N=32)</th>
<th>MCAST Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Secure</td>
<td>Insecure</td>
</tr>
<tr>
<td>Secure</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Insecure</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>9</td>
</tr>
</tbody>
</table>

In establishing three-way concordance (including best fitting alternative classification when Disorganised classification was assigned) between CAI and MCAST classifications, \textit{kappa} = .29, \textit{p} < .03. Table 10.11 presents the frequencies for

\textsuperscript{23} As noted in Chapter 6, children were did not differ in terms of their attachment classification with respect mother and father.

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three-way CAI and MCAST attachment classifications. As shown in Table 10.11, examination of overall concordance demonstrated that 22 of the 32 (69%) were assigned analogous attachment classifications on the MCAST and CAI. Of the five children considered Avoidant on the MCAST, only two (40%) were judged Dismissing three years later on the CAI. Of the four children judged Resistant on the MCAST, none were classified thus in the CAI. For security, percent agreement demonstrated that of the 23 children judged Secure on the MCAST, 20 (87%) were assigned a Secure classification on the CAI.

Table 10.11 Three-Way Concordance Between CAI Classifications with Respect to Mother and MCAST Classifications

<table>
<thead>
<tr>
<th>CAI Classification</th>
<th>MCAST Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Avoidant</td>
<td>Resistant</td>
</tr>
<tr>
<td>Dismissing</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Secure</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

With respect to four-way concordance between CAI and MCAST classifications, \( \kappa = .45 \), \( p < .001 \). Table 10.12 presents the frequencies for four-way CAI and MCAST attachment classifications. As shown in Table 10.12, overall percent of concordance showed that 23 of the 32 (72%) were assigned analogous attachment classifications on the MCAST and CAI. Of the two children considered Avoidant on the MCAST, both (100%) were judged Dismissing three years later on the CAI. None of the children were considered Resistant on the MCAST or Preoccupied on the CAI three years later once the Disorganised classification was utilised. Of the 21 children judged Secure on the MCAST, 18 (86%) were classified thus on the CAI. For the Disorganised classification, percent agreement showed that of the nine children judged Disorganised on the MCAST, three (33%) were assigned a Disorganised classification on the CAI.
Table 10.12 Four-Way Concordance Between CAI Classifications with Respect to Mother and MCAST Classifications

<table>
<thead>
<tr>
<th>CAI Classification (N=32)</th>
<th>MCAST Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Avoidant</td>
<td>Resistant</td>
</tr>
<tr>
<td>Dismissing</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Secure</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Disorganised</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>

Whilst dimensions that formed part of the coding system diverged considerably between the CAI and the MCAST, Coherence was central to both and thus an examination of the correlation between the two was undertaken. A highly statistically significant correlation between Coherence on the MCAST and Coherence on the CAI was shown ($r(32) = .51, p < .01$).

10.11 DISCUSSION

In developing a reliable and valid measure of attachment in middle childhood, the current chapter had three main aims. Firstly, to establish the predictive validity of the CAI by determining the association between children’s attachment status and their mothers state of mind with respect to attachment. Secondly, to determine the concurrent validity of the CAI, focusing upon the relationship between SAT and CAI attachment classifications. Thirdly, to examine further the predictive validity of the CAI, focusing upon the continuity of attachment patterns over a three-year period using the MCAST at five to seven years of age and the CAI at eight to ten years of age. The summary and discussion of findings will address the above in turn.
Determining associations between mothers’ AAI status and their children’s attachment status using the CAI, a high percentage of concordance was demonstrated for the dichotomous Secure/Insecure classification (70%; agreement was statistically significant although kappa was only moderate). This finding is in keeping with reported correspondence rates between mothers’ attachment classification and their infants’ attachment status conducted retrospectively, concurrently and prospectively (see for example Fonagy et al. 1991; Main et al. 1985; Zeanah et al. 1993; van IJzendoorn, 1995). The AAI-CAI two-way concordance reported in the current study also concurs with the findings of studies examining the correspondence between mothers’ AAI status and their children beyond the infancy period (e.g. Ammaniti et al. 1996; DeKlyen, 1996; Main et al. 1985). Whilst three-way AAI-CAI correspondence was statistically significant, kappa was low, accounted for partly by the low observed correspondence for insecurity. For the Dismissing pattern, 53 percent of mothers had Dismissing children. It appeared that a considerable proportion of Dismissing mothers had children who were considered Secure on the CAI (31%). Moreover, a relatively high proportion of children who were judged Dismissing on the CAI, had mothers classified as Preoccupied (38%) or Secure (23%) on the AAI. The above figures suggest that whilst correspondence was high for the Secure/Insecure split, a match with respect to the specific type of insecurity was not demonstrated. Two possible interpretations of the above results may be put forward. Several recent studies have demonstrated considerable discontinuities in attachment patterns from infancy to early adulthood (e.g. Lewis et al. 2000; Weinfield et al. 2000), explained in part by intervening major life events such as parental divorce. In addition, a recent study of the stability and change of attachment patterns from 14, 24, and 58 months failed to find significant continuity for the three time periods, explicated in part by changing life circumstances and negative life events (Bar-Haim et al. 2000). It is thus possible that children comprising the current sample may have shifted from security to insecurity and vice versa in the years beyond infancy. This shift could have occurred in considering the impact of major life events upon the quality of the mother-child relationship, particularly given the high-risk status of
approximately half of the sample (53% of the children were clinic-referred). By the same token, it is possible that in the absence of major life events, a shift from insecurity to security had occurred. The assessment of attachment status in infancy and of major life events in the period from infancy to middle childhood was however beyond the scope of this study leaving the question of discontinuity of attachment patterns to be explored further. Alternatively, the identification of a Preoccupied strategy has proven particularly difficult not least because of the rarity of manifested Preoccupied Anger within the CAI, as reflected in the narrow use of the scale. These findings concur with the relatively low associations between mothers’ Preoccupied state of mind and their children’s Ambivalent/Resistant status (van IJzendoorn, 1995). Nevertheless, the distinction between derogation and preoccupied anger has in some cases been quite a subtle one and it is thus possible that indications of Preoccupied Anger were erroneously rated as dismissal or derogation of attachment.

Of note is the fact that the distribution of attachment patterns in mothers showed approximately equal numbers of mothers judged Dismissing (32%), Preoccupied (30%) and Secure (38%). As noted in Chapter 8, the standard distribution of attachment patterns in normal populations shows a much higher proportion of Secure mothers (58%) and smaller proportion of Preoccupied mothers (18%). By contrast, in clinical populations, only a minority of mothers are considered Secure (12%) whilst Dismissing (41%) and Preoccupied (47%) mothers predominate (van IJzendoorn & Bakermans-Kranenburg, 1996). The skewed distribution observed in the current sample could however be explained in the composition of the sample, including mothers drawn from both a clinical, high-risk sample and a normal, middle-class sample.

The current study failed to demonstrate significant four-way AAI-CAI concordance, with low percentage of agreement for type of insecurity. Closer observation of the distribution of AAI classifications revealed a high percentage of Unresolved (53%) mothers with respect to loss and/or trauma. Further, when the classification of Unresolved was taken into account as a separate category, a dramatic decrease in the percentage of Preoccupied (from 30% to 7%) and Autonomous (from 38% to 16%)
mothers emerged (cf. van IJzendoorn and Bakermans-Kranenburg, 1996). The over-
representation of the Unresolved category in mothers of the current sample was not
reflected in their children’s attachment status, with only a single mother (3%) having
a child judged Disorganised on the CAI. The above result stands in contrast to the
findings reported by Goldwyn et al. (1999) where 77 percent correspondence was
demonstrated for the AAI/U and MCAST Disorganised category. Within the CAI,
indices of Disorganisation are still under development and therefore there may have
been some under-identification of Disorganisation. In addition, the current study did
not address the possible contribution or mediating effect of fathers’ state of mind with
respect to the attachment status of the child. Whilst the assessment of fathers’ state of
mind with respect to attachment was beyond the scope of this study, it would be
important to explore this issue.

10.11.2 The Concurrent Validity of the Child Attachment Interview

The SAT has been widely used to access mental representations of attachment figures
in the preschool middle childhood years. Whilst issues of reliability and validity
concerning the measure highlight the lack of a “benchmark test” of attachment in
early and middle childhood, it was the most suitable measure for the purposes of the
current study. The use of the SAT was in addition considered productive in
determining whether a semi-projective or a direct interviewing technique was
developmentally more appropriate in the eight to twelve age range. Using the Resnick
(1993) SAT coding system, developed in accordance with the AAI coding and
classification system, overall percentage of agreement for the Secure/Insecure split
with respect to mother and father was relatively high (69% for both), with high
percentage of concordance shown in particular for security (72% for both). Similar
high agreement was achieved for three-way attachment classifications (69% and 66%
respectively). This finding is comparable to those reported by Goldwyn et al. (1999)
and is consonant with findings drawing a link between separation-reunion behaviour
and the SAT in early childhood (e.g. Shouldice & Stevenson-Hinde, 1992; Slough &
Greenberg, 1990). Whilst the above findings lend some support for the notion that the
CAI and SAT are both measuring the same construct, namely, the quality of
attachment as manifested in IWMs, the fact that the SAT was administered in the same session, following the CAI suggests that interview responses on the CAI may have influenced responses on the SAT, accounting in part for the relatively high correspondence. It is however important to note that the SAT yields attachment classifications that are thought to capture the child's singular state of mind with respect to attachment akin to the AAI and in that respect differs from the CAI whereby independent classification with respect to each parent are derived. Nevertheless, the findings indicated high agreement with respect to both mother and father.

10.11.3 Continuity of Attachment Patterns from Five to Eight Years

The MCAST is a semi-projective, doll-play measure developed to assess internal representations of attachment relationships in young school-aged children. Akin to the CAI, the coding system relies upon discourse and behavioural analysis of story completion in deriving attachment classifications analogous to those identified in the Strange Situation procedure. Similar to the CAI, the MCAST is a new measure and thus issues of validity and reliability have not been fully addressed. Nevertheless, in examining continuity of attachment over a three-year period, overall percentage of agreement for the Secure/Insecure split was very high (84%, kappa = .63). As noted in Chapter 6, the two-way distribution revealed that a relatively small proportion of children were considered Insecure on the MCAST and CAI reflecting a possible selection bias. Secure children and their parent were more forthcoming in agreeing to take part in the follow-up study. Three-way percentage of agreement was somewhat lower (69%). Interestingly, whilst four children were judged Resistant on the MCAST at five to seven years of age (taking into consideration the best fitting alternative classification), none of the same children were classified thus on the CAI three years later. Further, in considering the Disorganised classification, all of the children who were judged Resistant/Preoccupied on the MCAST and the CAI were judged Disorganised. The above finding raises questions concerning the manifestations of Resistant/Preoccupied behaviour and its relation to Disorganisation. Whilst four-way percentage of agreement was high (72%), it appeared that a higher
proportion of children were judged Disorganised on the MCAST at five to seven years of age than on the CAI three years later. It is possible that at five to seven years of age children displayed mild episodic disorganisation that with time has been resolved and was thus not present at eight to ten years of age. Alternatively, as Disorganisation in early and middle childhood represents perhaps the most challenging and difficult phenomenon to identify, it is possible that the MCAST coding was over-inclusive in identifying behaviours, both verbal and non-verbal, that would constitute Disorganisation. For example, momentary lapses into silence (akin to the AAI Unresolved scale) in an attempt to complete the doll-play story that would constitute age appropriate behaviour could erroneously be interpreted as indicative of Disorganisation with respect to attachment. Goldwyn et al. (1999) did however report statistically significant correspondence between mothers’ Unresolved status and their children’s Disorganised status on the MCAST (77%) suggesting that a more likely interpretation of the current findings relates to an absence of clear specification of what constitutes Disorganisation within the CAI. A detailed case-by-case study of the MCAST and CAI narratives of children considered Disorganised might shed further light on this issue. Based on the current findings it is as yet premature to draw unequivocal conclusions as to whether the MCAST and CAI are measuring the same construct. Nevertheless, the findings lend further support to the notion of the continuity of attachment patterns, in keeping with continuity reported in recent studies (e.g. Waters et al. 2000; Hamilton, 2000). The current study however highlights the need to extend the study to include a larger sample, not least because of the small proportion of Insecure children in the current study.

10.12 CONCLUSIONS

To summarise, whilst the current study went some way in demonstrating the predictive validity of the CAI, finding moderate two-way concordance between mothers’ AAI status and their children’s attachment status, agreement for type of insecurity was relatively low. With respect to concurrent validity, high agreement was shown between the SAT and CAI for the Secure/Insecure dichotomous scheme as well as for three-way attachment classifications. Further, examining continuity of
attachment patterns over a three-year period, high agreement was demonstrated between MCAST classifications at age five to seven and CAI classifications derived three years later.

The final chapter presents an overview and general discussion of the findings reported in Chapters 4 to 10 pertaining to the development and validation of the CAI along with a discussion of the limitations and theoretical and methodological considerations of the study. The thesis will be brought to a close by a discussion of considerations for future developments.
CHAPTER 11. GENERAL DISCUSSION, CONCLUSIONS AND FUTURE DIRECTIONS

In addressing the "measurement gap" in the study of attachment in middle childhood, this thesis presented the development of the Child Attachment Interview (CAI) and its validation. The present chapter provides an integration of the findings and opens with a brief overview of the development of the CAI protocol and corresponding coding and classification system. This is followed by a summary of the main results pertaining to psychometric properties of the CAI and a discussion considering the limitations of the study. The discussion subsequently turns to the theoretical and empirical implications of the study and concludes with a consideration of future directions in the development of the CAI.

11.1 THE DEVELOPMENT OF THE CAI PROTOCOL

The CAI protocol evolved from one that included a relatively large number of questions, as described in Chapter 4, to a much more focused and refined interview protocol as presented in Chapter 7. The pilot stage of the CAI protocol highlighted the need to reduce the number of questions and paraphrase those that proved ambiguous and thus elicited few responses. The importance of including further prompts, considered to provide "scaffolding" in facilitating children's description of relationship episodes was further highlighted and resulted in a more developmentally appropriate and focused interview.

The CAI protocol underwent considerable further refinements as described in Chapter 5. More specifically, questions that remained ambiguous and therefore yielded ambiguous responses were paraphrased in order to ensure that the intended meaning of the questions was clear. Although relatively minor modifications were undertaken, the results were often marked with children demonstrating little difficulty in understanding the questions and responding by recalling an appropriate and relevant episodic event. The inclusion of further questions designed to elicit children's understanding of their own thoughts and feelings, as well as those of
others, ("demand questions" in terms of reflective function coding) proved particularly fruitful and resulted in rich and meaningful descriptions. Additionally, guided by the notion that the CAI needs to access the degree to which children perceived their caregivers as available and supportive, a new question concerning experiences of rejection was included. Furthermore, considerations of the significant demands placed upon children in completing the interview led to the inclusion of a final question that ended the interview on a lighter note.

The final version of the CAI was subsequently presented in Chapter 6, which described the inclusion of additional questions addressing experiences of abuse. The questions were carefully and sensitively phrased in order to avoid eliciting accounts of conflicts with siblings or children at school. Notwithstanding the careful wording, most children still described episodes of bullying or fights with siblings and whilst a handful of children recounted episodes of physical punishment by caregivers, these were not considered to qualify as abuse.

Throughout the development of the CAI protocol, the narratives elicited suggested that asking children directly about their attachment relationships and experiences was not only possible but also generated rich and diverse data that meaningfully reflected qualitative differences in attachment organisation. Moreover, in examining the quality of attachment relationships in middle childhood, asking children about current relationships constituted a developmentally appropriate and useful approach.

11.2 THE DEVELOPMENT OF THE CAI CODING AND CLASSIFICATION SYSTEM

The development of the CAI coding and classification system was guided by several important criteria: Firstly, in order for the system to be developmentally appropriate, it was to be initially based on a careful examination of the narratives elicited by the interview. Whilst it was not assumed that existing systems for the classification of attachment would be applicable, the identification of central dimensions was informed by the relevant literature. Secondly, the coding and classification of responses elicited
by the CAI would be based upon a linguistic analysis but also be informed by differing non-verbal behaviour patterns within the interview. Thirdly, rather than assuming that children in middle childhood have integrated the independent Internal Working Models (IWMs) of the preschool years into a single "mental state with respect to attachment", attachment classifications were to be derived separately for mother and father.

The first stage of the coding involved the identification of children's descriptions of interactions with parents termed Relationship Episodes. These were considered most informative in assessing children's attachment status. The identification of Relationship Episodes provided the basis upon which central dimensions of the narratives could be established. Guided by the above criteria, Version I of the coding and classification system was to include key dimensions that were considered to reflect the quality of the narrative as a whole as well as additional dimensions that were to be evaluated independently for each attachment figure. Furthermore, several preliminary behavioural markers were included. These dimensions formed the basis for deriving an attachment classification along a continuum of security.

The coding and classification was subject to further development, as reported in Chapter 5, with the inclusion of illustrations of anchor points for each of the aforementioned dimensions, the elaboration of definitions of scales, and the exclusion of the Self-Organisation scale. In addition to the dimensional approach taken in Chapter 4, specific criteria for the categorisation of children with respect to their attachment organisation to mother and father respectively were derived which led to the identification of three main attachment classifications, namely Secure, Dismissing and Preoccupied.

The final major development of the CAI coding and classification system, as described in Chapter 6, included the establishment of criteria for the identification of Disorganisation with respect to attachment.
11.3 SUMMARY OF FINDINGS

The first three result chapters (Chapters 4, 5 & 6) concerned the development of the CAI protocol and coding and classification system and sought primarily to determine the reliability of the CAI. Chapter 7 formed a departure from the remainder of the result chapters in that it involved exploring the applicability of the CAI to children under the age of eight. The final three result chapters (Chapters 8, 9 & 10) focused upon aspects of the validity of the CAI. In the following section, a summary of the results is presented following the abovementioned order.

Forming part of the reliability of the CAI, inter-correlations between the CAI scales provided the starting point from which potential differential patterns of attachment could be identified. Overall, inter-correlations were found to be in the expected directions and thus supported theoretically expected associations. Not surprisingly, highly significant correlations (positive and negative) were demonstrated, in particular, between the Coherence scale and the remainder of the CAI scales. Furthermore, across Chapters 4, 5 and 6, the independent ratings assigned with respect to mother and father emerged as highly significantly correlated.

Internal consistency was considered to form a prerequisite of strong validity and for this reason was determined across several studies in the current thesis. Without exception, the findings converged in demonstrating high internal consistency supporting the notion that all CAI scales were measuring the same construct, that is, attachment security/insecurity.

Further, the findings indicated that highly significant agreement for CAI dimensions and category placement was achieved across several samples and judges. High intra-class correlations for all CAI scales and high percent of agreement within one-scale point were shown. Additionally, inter-judge agreement for two-way classifications (Secure versus Insecure), three-way classifications, and sub-classifications, conceptualised along a continuum of security (Very Secure to Very Insecure) was found to be highly significant. These findings held not only when using a judge who
was involved in the development of the instrument and possessed considerable knowledge of attachment theory but also when new and naïve judges were used.

Promising findings were also obtained in determining the test-retest reliability of the CAI as reported in Chapter 5. Whilst correlations and percent of agreement within one-scale point revealed considerable variability across the one-month period, highly significant short-term stability was demonstrated for main attachment classifications and slightly lower for sub-classifications.

In line with expectations, the findings additionally indicated that Secure children differed significantly from their Insecure counterparts on all dimensions with the exception of Preoccupied Anger. Where differences did not reach statistical significance, small sample size and the presence of “borderline” cases were implicated. Moreover, tentative differences, albeit restricted to the descriptive level, emerged between children judged Dismissing, Preoccupied, Secure and Disorganised, as reported in Chapters 5 and 6.

Whilst the results revealed distributions of attachment patterns that were comparable to those reported in the literature, a relatively high proportion of Insecure-Dismissing classifications emerged for both normal and clinical samples. Moreover, although fewer children than empirically expected were judged Preoccupied and Disorganised with respect to attachment, a preponderance of children classified as Disorganised was shown when the interview was applied to a younger sample of six to seven year olds. The abovementioned finding highlighted the difficulties in the application of the CAI to children under the age of eight.

The findings pertaining to the relationship between attachment security and demographic variables presented a more complex picture. Whilst in Chapter 5 and 6, attachment security was not related to demographic variables, the findings of Chapter 4 highlighted that Secure children were more likely to come from middle class families than Insecure children. When several samples were combined, as
reported in Chapter 9, the findings indicated that girls were more likely to be classified as Secure as were children from two parent households.

More satisfactorily, the findings suggested that attachment status as assessed by the CAI constituted a significant predictor of clinical status over and above the predictive contribution of demographic variables. Comparisons between normal and clinic-referred children undertaken in Chapter 8 revealed that normal children were more likely to come from middle-class, intact families. In addition, the findings indicated that children from intact families were more likely to describe the resolution of conflicts, and less likely to display preoccupied anger within the interview. The results further highlighted that normal children were significantly more likely to discuss their attachment relationships in an emotionally open and coherent manner whilst providing illustrative episodic examples and clear descriptions of the resolution of conflicts. Consonant with expectations, clinic-referred children were more likely to idealise their relationship with their mother and dismiss the importance of attachment figures and experiences. Clinical and normal children were in addition shown to differ significantly with respect to the distribution of attachment patterns, showing an over-representation of Insecure patterns within the clinical sample.

Additionally, the findings revealed that Secure children did not differ significantly from their Insecure counterparts as a function of intelligence and expressive language competence. Complex relations between concurrent behavioural problems as reported by mothers, demographic variables, and security of attachment did however emerge. Secure children were reported to be less depressed and withdrawn than Insecure children. Additionally, Secure children tended to be rated as less inattentive and aggressive than children who were Insecure with respect to father. Further, Secure children were more likely to be rated as showing fewer overall behavioural problems than their Insecure counterparts. The findings also highlighted associations between Internalising problems and socio-economic status (SES) as a function of security of attachment with respect to father, and Externalising and Total problems and single-parent households. However, subsequent findings indicated that
in predicting security of attachment, Internalising and Total behaviour problems made a relatively minor, though significant, contribution to the prediction of security of attachment after the contribution of age, gender and family status had been considered.

Whilst significant associations between mothers’ Adult Attachment Interview (AAI) status and their children’s attachment status were demonstrated for the Secure/Insecure split, a match with respect to specific types of insecurity was not achieved. Concurrently however, significant correspondence between the Separation Anxiety Test (SAT) and the CAI emerged for both the Secure/Insecure dichotomy and for three-way attachment classifications. Lastly, highly significant continuity was demonstrated across a three-year period using the Manchester Child Attachment Story Task (MCAST) and the CAI not only for the Secure/Insecure match but also for three-way and four-way attachment categories.

11.4 LIMITATIONS OF THE STUDY AND IMPORTANT CONSIDERATIONS IN THE INTERPRETATION OF THE FINDINGS

The current thesis was undertaken with the primary aim of developing a new measure of attachment representations in middle childhood and whilst the findings hold considerable promise, they also highlight several important limitations and related considerations.

Under the heading of limitations of sampling several issues are subsumed. Firstly, as noted throughout the thesis, sample sizes were often relatively small and therefore differences between categories – which might have been found in a larger group – were not established or emerged as only marginally significant. This made the interpretation of findings somewhat tentative, and unequivocal conclusions should not yet be drawn. Secondly, the relative heterogeneity of the population samples was considered a virtue in capturing the diversity of attachment representations in disparate populations such as normal, clinic-referred, and physically ill children. However, due to limited resources the above samples
constituted convenience samples and the recruitment of cases across samples could not be thoroughly matched. This meant that the interpretation of findings, in particular when comparisons between populations were sought, was made more difficult by the presence of confounding demographic variables such as for instance, SES and single parent status. Thirdly, despite the relative heterogeneity of the samples reported, none of the samples was drawn from a truly high-risk population. This of course raises questions concerning the generalisability of the findings to populations who may have experienced considerable hardship and adversities. Fourthly, the samples recruited in the current thesis comprised very few children from ethnic minorities. This limitation once again has significant implications in terms of the extent to which the findings can be extended to describe attachment phenomena in ethnic minorities such as African-Caribbean, Indian, and Pakistani populations. In addressing this issue, a study is underway in Detroit, USA exploring the quality of attachment relationship in a high-risk sample comprising a high proportion of ethnic minorities. Although only preliminary, the findings suggest that the CAI is a developmentally and culturally sensitive interview and that attachment strategies identified within the CAI adequately capture the diversity of attachment patterns in the abovementioned populations.

A further limitation concerns the definition and specification of the Preoccupied Anger scale. The Preoccupied Anger scale was developed in the pilot stages of the study based upon the responses of a minority of children and it was anticipated that additional cases would be identified in subsequent samples. However, the findings of the current thesis consistently highlighted the very narrow use of the Preoccupied Anger scale with children, even those drawn from a clinical population, rarely assigned a score exceeding two out of a possible nine. As a consequence, the Preoccupied Anger scale failed to significantly correlate with the remaining CAI dimensions and proved a relatively weak scale in distinguishing Secure children from their Insecure counterparts. The scarcity of manifest Preoccupied Anger within the CAI suggests that it may not constitute a useful dimension as currently operationalised. The relative scarcity of elevated Preoccupied Anger scores has also contributed to the paucity of Preoccupied classifications. However, the rarity of
Preoccupied classifications in the current thesis is consistent with the relative paucity of Ambivalent patterns in infancy and the Preoccupied adult equivalent (approximately 10% of samples; van IJzendoorn & Kroonenberg, 1988). Although studies utilising the AAI have never reported the range of scores assigned on any of the AAI scales, the Angrily Preoccupied classification remains a relative rarity, which indicates that significantly elevated scores on the Involving Anger scale are unusual. Nevertheless, the current findings highlight the need to provide clearer and broader operational criteria for the identification of Preoccupied Anger and related phenomena, and calls for the development of comprehensive guidelines for the identification of the Preoccupied strategy.

Similar issues are also raised with respect to the identification of disorganised attachment phenomena. The current thesis reported on the development of preliminary indices for the identification of the disorganisation and whilst several children were considered disorganised with respect to attachment, they constituted a very small proportion of the sample (see Chapter 6). However, when disorganisation criteria were applied to a younger sample of six to seven year olds, a relatively high proportion of disorganised children were identified. On the basis of the current findings, the full range of what constitutes Disorganisation and how disorganised phenomena may be manifested within the CAI, as distinct from patterns of behaviour associated with emotional or cognitive immaturity, remains unclear and warrants further development. The examination of additional cases and the identification of comprehensive criteria for disorganisation therefore constitute an important challenge.

A further limitation concerns the extent to which test-retest reliability conducted in the current thesis provided an adequate estimate. As reported in Chapter 5, test-retest reliability was conducted across a two-month period primarily due to time constraints. This however constituted a relatively short interval highlighting the possibility that children’s performance in the second assessment may have been unduly influenced by their responses in the first assessment. Kline (1993) argued that at least a period of three months is required in order for a reliable estimate of
test-retest reliability and hence the examination of test-retest reliability over a more extended period may form an important additional step in confirming the reliability of the CAI.

An important consideration that was not fully settled by the thesis concerns the influence of age in determining security of attachment. A review of the literature as presented in Chapter 3 highlighted that younger children demonstrate difficulties in reconciling opposing emotions (e.g., Harter, 1983), conceive of the self in terms of physical and ability-specific attributes (e.g., Shantz, 1981) have a relatively poor conception of temporal order and temporal duration (e.g., Wessman & Gorman, 1977), and that they are considerably less skilled at producing elaborate and well organised both general and specific event memories (Nelson & Fivush, 2000). The above difficulties were clearly reflected in the findings of Chapter 7 with some children failing to comprehend the CAI questions and thus unable to respond in a meaningful and coherent manner. Age was also implicated in the difficulties shown in distinguishing developmentally appropriate behaviour from disorganised behaviour. The difficulties documented in the literature above therefore give rise to difficulties in disentangling age related phenomena from disorganised attachment related phenomena. This therefore led to the conclusion that by and large children under the age of eight cannot be assumed to be sufficiently mature or developmentally competent to be assessed validly within the demands of the CAI. Although the focus of discussion concerns children younger than eight, age may still constitute an important factor and might significantly influence relevant qualitative features of narratives elicited at older ages. Age must therefore continue to be carefully considered in future developments.

A further consideration that was not extensively addressed in the current thesis concerns the influence of gender upon the assignment of attachment classifications. The findings of the present thesis (see Chapter 8) concur with the findings of recent studies highlighting that boys, in particular clinic-referred boys, are more likely to be classified as Insecure than girls (e.g., Aber & Baker, 1990; Greenberg et al. 1991; Ziv et al. 2000). Further evidence for the presence of differences between
boys and girls comes from studies of narrative co-constructions and reminiscing about past events, suggesting that girls tend to produce narratives that are significantly more detailed, more coherent, and more emotionally laden (e.g. Fivush, 1998). In light of the above evidence, the concern is that gendered narratives may lead in some cases to the misclassification of boys as Insecure (or of girls as Secure) due to differences that are not attachment related but rather gender-specific. The above evidence therefore underscores the importance of considering gender more closely, in the future analysis of CAI narratives.

An additional qualification concerns the difficulties in deriving classifications for borderline cases. The findings of Chapters 5 and 6 highlighted the difficulties in judging borderline cases and raises the possibility that forced choice methodology may have obscured real differences. It may therefore prove fruitful to develop further criteria for the classification of borderline cases although naturally forced choices will not be completely eliminated unless the coding dimensions were adopted as the primary description, rather than categories.

11.5 THEORETICAL CONSIDERATIONS

In exploring the quality of attachment in middle childhood, much of the research to date has been guided by the supposition that utilising projective techniques such as the SAT (Klagsburn & Bowlby, 1976) constitutes the most appropriate method. The current thesis was undertaken, in part, to challenge this view and described the development of a direct interviewing method that capitalises on children's increasing verbal and cognitive capacities. The findings reported throughout the thesis suggest that children of eight years and above demonstrate sufficient maturity and competence to understand the interview questions and meet the demands of the interview process. Moreover, children's responses were qualitatively different in structure and content, reflecting differential internal representations of attachment relationships.
The emphasis within the CAI upon current relationships proved particularly fruitful in accessing children's current representations of attachment relationships. The CAI differs from the AAI in that assessment of security of attachment is based upon appraisals of the attachment figures' availability currently rather than in the past. This arose from evidence as reviewed in Chapters 2 and 3 highlighting that young children and adolescents show a tendency to describe themselves in terms of the immediate present, and with respect to current relationships (Damon & Hart, 1982; Black et al. 2000). Additionally, attachment security was considered to be the product of a dynamic transaction between internal working models and the quality of current attachment relationships (Kobak, 1999), as discussed in Chapter 3.

Furthermore, the focus within the interview upon children’s perception of the attachment figure’s availability was considered as developmentally appropriate. Guided by the notion that children’s relationships with attachment figures are characterised as goal-corrected partnerships, it was considered as no longer developmentally appropriate to merely focus upon children’s attempts to regain and maintain proximity to attachment figures. Instead, the CAI interview contains many questions that are designed to elicit children’s perceptions and experiences of the degree to which they feel primary caregivers are responsive and available. These questions included those addressing times of hurt, illness, conflict and separation. Children who were not only able to describe their parents as available and responsive at the general level, but were also able to support their general description with specific illustrations, were characterised as securely attached.

A further theoretical consideration concerns the distinction between working models of self in attachment relationships with specific individuals versus a more general “state of mind” (Main & Goldwyn, 1998) or a “steady representational state” (Bowlby, 1973, p149) with respect to attachment. The majority of studies of attachment patterns in infancy are consistent with the view of the independence of mother-infant, father-infant attachment relationships and have found no significant concordance between the two classifications (Lamb, 1977; Grossmann et al. 1981; Main & Weston, 1981; Sagi et al. 1985) or relatively weak associations (e.g. Fox et
al. 1991; Verschueren & Marcoen, 1999). Forms of assessment of attachment beyond infancy, most notably the AAI, have been guided by the latter in postulating that more abstract, general working models derived from several relationship experiences are constructed during development. Whilst the AAI comprises many questions that focus upon the speaker's individuated attachment relationships, AAI classifications are considered to capture an individual's general strategy for attending to and processing attachment-related thoughts and feelings (Bretherton, 1999). The issue of whether a general, over-arching model of several divergent relationships develops and if so at what stage remains a contentious one. Whilst Allen and Land (1999) postulated that the emergence of an integrated attachment strategy is likely to occur during adolescence because of the adolescent's increasing capacity for logical and abstract reasoning, and the developing capacity to differentiate the self from others, other forms of assessment (e.g. the SAT) have been based upon the view that in childhood, a general model is already in existence. However, one of the main criteria in developing the CAI was that internal representations of attachment relationships with each of the primary attachment figures would be assessed independently, guided by the principle that individuated working models of attachment relationships would capture the history and quality of interaction of the self with each of the main primary caregivers, and might or might not still be independent in middle childhood (Main et al. 1985).

Although the thesis did not focus upon an examination of the relationship between attachment classifications with respect to mother and father, the preliminary findings did indicate very substantial overlap. This was reflected in both the high correlations between specific dimensions assessing the quality of attachment to mother and father (see for example, Chapter 5), and in the high concordance of attachment patterns to each parent. The findings therefore call into question the usefulness of capturing individuated IWMs and raise the suggestion that a re-conceptualisation in terms of an over-arching attachment strategy or "state of mind" in line with the AAI may be more appropriate. Taking this line further, how should those children who have discordant attachment representations be considered? One potential way of resolving this issue would be to derive a Cannot Classify category, analogous to the CC
category of the AAI. This would mean that those children who display a strategy with respect to the one parent and a contrasting and theoretically incompatible stance with respect to the other parent or who shift in mid-interview from one insecure strategy to another insecure stance (e.g. from a Dismissing to a Preoccupied stance) would be assigned to this group. Although this provides a possible solution, it fails to address the question of whether a unitary, abstract model of relationships does normally exist or whether several internal models that capture specific relationships are constructed and reconstructed based upon current experiences.

The above raises the question: is the CAI simply yet another adaptation of the AAI? The emphasis however on representations of current relationships, the availability of attachment figures in the present, representations of the self, and the importance of non-verbal communication suggest that the CAI forms an important interview in its own right despite the obvious similarities with the AAI.

The current thesis further highlighted the preponderance of the Dismissing classification as the most prevalent form of insecurity of attachment in middle childhood. It suggest that middle childhood constitutes a period of considerable change and maturation and that during this period children may begin the process of negotiation of dependency upon, and autonomy from, attachment figures (Grossmann et al. 1999). Taking a developmental perspective, the adoption of a dismissing stance in middle childhood and adolescence may reflect a developmentally appropriate phase characterised by greater detachment from parents and increasing investment in peers. Crittenden’s (2000) dynamic maturational model offers a theoretical formulation that is consistent with the findings. She argued that periods of rapid maturational change would be associated with individual change in patterns of attachment and changes in the distribution of attachment patterns in the population. She viewed the transition from infancy to the preschool years and puberty as periods of relative discontinuity. It is therefore possible to suggest that the relatively high proportion of Dismissing children is underpinned by these maturational changes.
At the outset of the study, the development of the CAI was guided by the idea of developing criteria based on the narratives elicited and not assuming that similar patterns of attachment to those identified in infancy or adulthood would emerge. Perhaps not surprisingly however, similar patterns did emerge that lent further support to the notion of the continuity of attachment phenomena, across the life cycle. However, the need to adopt a developmental perspective and examine developmental change remains important, in an attempt to uncover potentially new patterns that might only become manifest in middle childhood.

Lastly, it has often been suggested that security of attachment as assessed by the CAI may simply reflect children’s more or less sophisticated narrative skills and their increased ability to remember events and formulate ideas. The findings suggested that children’s expressive language competence and verbal and performance intelligence were not significantly associated with attachment security, although there were non-significant trends in the expected directions. Adopting an organisational perspective however, early attachment security could be viewed as functioning to promote cognitive and linguistic development, in which case greater cognitive competence (e.g. narrative coherence) could be a result of early security of attachment, and not a third variable which masquerades as secure attachment. It remains unclear in what direction the association is strongest, but this remains an interesting and important theoretical consideration.

11.6 FUTURE DIRECTIONS

The development of the CAI is by no means complete and many areas of further development need to be pursued. In the following section, further developments to the CAI coding and classification system and ideas for future studies are proposed.

The Role of Age and Gender

As previously noted, age and gender constitute central factors that need be considered in the establishment of a developmentally appropriate measure of
attachment. The CAI was developed as a way of assessing quality of attachment in eight to twelve year olds and currently does not make allowances for age differences. From the observations made however it is clear that children vary considerably as a function of age. An eight-year-old child is likely to possess less sophisticated language and reasoning skills as a function of increasing cognitive abilities than a twelve-year-old child. Moreover, references to psychological motives, references to mentalistic aspects of the self and others, and the integration of opposing emotions develop only in the latter part of middle childhood. Further, an emphasis upon activities and objects that would be considered as a marker of a dismissing stance in an eleven-year-old may simply reflect immaturity in an eight-year-old. The above considerations therefore highlight the need to include age-stratified criteria for coding the interviews as a way of controlling for the possibility that the younger children are more likely to be judged as insecurely attached.

Similarly, recent evidence suggests that girls tend to describe experiences and events in a more elaborate and emotionally laden manner (e.g. Fivush, 1997). During the rating process, the gender of the children was noted and informally taken into consideration although no formal qualitative comparison was made between the narratives produced by boys and girls. However, such differences call for the development of formal criteria that may assist future users of the CAI in making reliable decisions that are not likely to be gender-bound.

The Analysis of Non-Verbal Communication

At the outset of the current study non-verbal communication was considered an additional important source of information that could potentially illuminate differential attachment strategies. Whilst a tentative attempt at capturing aspects of non-verbal communication was made, noting such behaviours as the maintenance of eye contact, the degree of anxiety within the interview, and the degree of congruence between the verbal description and accompanying behaviour, due to time constraints, no formal coding system was developed. The need to develop a coding system that incorporates detailed behavioural information is central not only
because such information will potentially illuminate differences in attachment organisation that may otherwise not be detected but also because such an approach would go some way to bridge the gap between the study of attachment in infancy and adulthood. The CAI is a unique tool in that the child’s behaviour during the interview forms the background against which the child’s representation of attachment figures and relationships can be inferred. Thus, a detailed micro-analytic study of non-verbal communications would constitute an invaluable addition to the assessment of attachment in middle childhood.

**Qualitative Analysis and the Development of New Classificatory Sub-Groups**

Although beyond the scope of the present study, an extensive qualitative analysis of the material elicited by the CAI is considered to form an integral part of the further development of the coding and classification system, and would further enhance our understanding of how particular patterns of attachment are manifested in middle childhood. A full qualitative analysis would allow a fine-grained description of the characteristics that may reflect particular attachment classification and would therefore build upon the work reported in the current study. Within each of the hitherto identified categories there is considerable variability and thus a detailed analysis would also provide the basis for drawing further distinctions within a given category, allowing the development of operational criteria for the identification of discrete classificatory sub-groups.

**Criteria for the Identification of Preoccupation and Disorganisation**

The findings of this study highlighted the difficulties in identifying Preoccupation and Disorganisation as currently specified in the CAI. This was particularly striking in the fact that fewer children were judged disorganised in CAI than in the MCAST three years earlier (see Chapter 6). Endeavouring to uncover parallels between disorganised phenomena at five and eight years of age, a case-by-case examination of those children who were classified disorganised in the MCAST at age five years may constitute the starting point from which to expand criteria for the identification
of Disorganisation within the CAI. Similarly, Preoccupied Anger has proved rare, and the recruitment of future clinical and high-risk samples may offer greater opportunity to describe this and other types of Preoccupation, and thus to develop firmer criteria.

The Role of Probable/Actual Experience

Another important potential development of the CAI concerns the role of probable experience in deriving attachment classifications. In a minority of cases, children described painful and potentially traumatic experiences with attachment figures in a relatively coherent and emotionally open manner. This raises the question of whether probable experience and the content of children’s narratives should be taken into consideration in the classification process or whether rating should simply reflect children’s discourse. Akin to the AAI, including scales that capture certain aspects of children’s probable/actual experience may provide additional and useful information in attempting to determine what exactly were children’s experiences. Although the classification of the interviews would ultimately rest upon children’s state/s of mind, ratings of probable experience would allow the identification of those children who despite adverse attachment experiences remained Secure.

The Inclusion of Questions Addressing Abuse

In developing the CAI protocol a set of questions concerning abuse were included on the grounds that they may elicit important information that would inform the coding of interviews, and in particular, the identification of Disorganisation. In reality however, very few children responded to the question by disclosing experiences of abuse. This suggests that the inclusion of these questions needs to be reconsidered.
Self-Concept

In a study of attachment patterns and self-esteem, Cassidy (1988) demonstrated that patterns of responses to a narrative assessment of self-esteem were significantly related to concurrent as well as subsequent attachment patterns. Whilst descriptions of the self were elicited within the CAI, no formal criteria were developed and the information used did not form part of the coding and classification process. However, a simple qualitative analysis of self-descriptions undertaken in Chapter 4 revealed the richness and diversity of such descriptions, highlighting the need to develop further criteria for the analysis of self-description and using this information to inform the assignment of attachment classifications.

Reflective Function

Based upon the findings that the parents’ capacity to reflect their own and other’s mental states is predictive of their infants’ security of attachment (Fonagy, Steele, Steele et al. 1991; Fonagy & Target, 1997), it is hypothesised that like adults, children’s recognition and understanding of the self and others in terms of feelings, beliefs, intentions and desires may have far reaching consequences and is likely to constitute an important aspect of security of attachment. Whilst the CAI coding system did attempt to assess children’s reflective capacity, this formed part of the assessment of emotional openness and was not assessed in its own right. It is therefore proposed that the development of a separate reflective functioning scale will form an additional dimension in the classification of CAIs.

Specificity of CAI Narratives

In order to establish that narrative coherence as assessed by the CAI is attachment specific it is important to assess performance on the CAI with performance on an interview task that is unrelated to attachment in a similar way to the demonstration of the specificity of the AAI as compared with interview about work (Crowell et al. 1996).
Cross-Cultural Validation

Although cross-cultural differences have emerged across Western societies, there is overwhelming evidence for the universality of attachment patterns (van Ijzendoorn & Sagi, 1999). Following suggestions by Crittenden (1992) that it is important to develop classificatory systems that are sensitive to the range of behaviours shown by children who differ in culture, it is of vital importance to determine whether the patterns derived in the CAI have application to other diverse cultures. To this end, several studies are underway examining patterns of attachment in Israeli, German, and American children, from both middle-class and high-risk samples. The findings of these studies will go some way to shed light on the cross-cultural validity of the CAI.

Stability Versus Change and the Role of Life Events

Whilst an attempt was made in the current thesis to examine stability from five to eight years of age, a study of the stability of attachment patterns from infancy to middle childhood forms an important future direction. As previously discussed, periods of developmental discontinuity may occur as a result of maturational change (Crittenden, 2000) and may further be precipitated by major life events. It therefore suggests that a study of attachment patterns from infancy to middle childhood and possibly beyond, along with an assessment of intervening life events, would increase our understanding of processes underpinning stability and change of attachment patterns.

Attachment Patterns, Clinical Problems and Clinical Outcome

An examination of attachment patterns, clinical status, and behavioural problems was undertaken in Chapters 8 and 9. Nevertheless, the study of attachment patterns in middle childhood and specific clinical problems/disorders may further shed light on the relationship between psychopathology and quality of attachment. The CAI may also provide a useful tool in the evaluation of clinical treatment outcome. A
study of the outcome of cognitive behaviour therapy, non-intensive and intensive psychoanalytic psychotherapy is planned, and may provide some useful insight into the impact of psychotherapy upon attachment relationships. It is not envisaged that children will as a consequence of psychotherapy generally shift from insecurity to security but rather in adopting a dimensional approach, shifts may occur along various dimensions so that for example, idealisation, dismissal or preoccupied anger may be less marked post treatment.

**Correlates of Attachment Security in Middle Childhood**

Considerable research has highlighted the association between early security of attachment and later psycho-social functioning. For instance, studies assessing whether Secure attachment foreshadows more successful peer relationships and friendships present a somewhat mixed picture with some demonstrating clear associations between early security and socialisation and peer competence in the preschool years, middle childhood and through to adolescence (e.g. Grossmann & Grossmann, 1991; Sroufe, 1983; Weinfield, Sroufe, Egeland, & Carlson, 1999) whilst others find weak or unexpected associations between attachment security and peer interactions at age four, five and nine (e.g. Lewis & Feiring, 1989; Youngblade & Belsky, 1992). It would therefore be useful to examine the relationship between attachment status and peer relationships in middle childhood, using socio-metric ratings or peer interviews alongside the CAI.

**11.7 CONCLUSIONS**

The current thesis reported on the development of an interview-based technique for the assessment of attachment representations in eight to twelve year olds and a corresponding coding and classification system.

The CAI emerged as a highly promising instrument in eliciting diverse attachment-related narratives that meaningfully reflected children's attachment organisation. Moreover, the CAI was shown to constitute a generally reliable and valid measure.
The present thesis thus represents the successful first stage of development of the CAI. Undoubtedly, the measure remains under development and a number of limitations concerning its current standing were noted. Finally, the promise shown in this first stage has highlighted possible future developments, some of which are already under way.
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APPENDIX A. PARTICIPATION LETTER

Dear [Name],

For the past two years psychologists at University College London have been working with families and children of primary school age. We have been interviewing children and their families about their development, for example, friendships, milestones and relationships. Surprisingly little is known about how children of this age usually develop socially and emotionally, what sort of problems they commonly have and how long these last. Increasing our understanding in these areas should help us to help children better, in the future, when they have problems.

This year the University, with the cooperation of the staff at Camden and Islington Child Guidance Centres, hopes to increase the number of families involved in the project. Although the University and Clinic are working together, only information about the initial referral is being shared. Any other information or future relationships with either the project or with Clinic will not be shared in any way. This means, for instance, that your contact with the Clinic will not be affected at all by whether you decide to join the research project. They will not even know unless you want to tell them.

We would like to check that it would be all right for one of the research team to phone you or call round, to explain more about the project, and to see whether you would like to join us. If you return the attached slip we will be able to contact you either by post or telephone, or if you indicate that you would not like to learn more about the project we will know not to contact you again. In the meantime, if you have any questions or would like to contact us by phone, please feel free to call Duncan Barron of the Research Team on [phone number].

Please find enclosed a FREEPOST envelope for your use in order to return the reply slip below. Thank you for thinking about this.

Yours sincerely,

Mary Target Ph.D.
Senior Lecturer in Psychology
University College London

Date: ........................................ (PLEASE CHANGE INFORMATION IF NOT ACCURATE)

I, [Title] [Mothers_First_name] [Mothers_Surname] and my child [Childs_First_name] [Childs_Surname] would LIKE / NOT LIKE to be contacted by one of the research team to explain more about the project, and to see whether we would like to join. Our telephone number is [phone number].

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APPENDIX A. INFORMATION SHEET FOR PARENTS

CAMDEN & ISLINGTON / UNIVERSITY COLLEGE LONDON RESEARCH STUDY

RESEARCH INFORMATION: PARENT

The Study’s Purpose:
The purpose of this study is to understand child development and change. The tasks you and your child are invited to participate in will increase our knowledge of problems children are referred for and how they change following therapy. We will be able to share with you the overall results of the project as they become clear to us, if you would like us to.

What the Study Involves:
For you: You will be asked to complete questionnaires and to participate in interviews about your child’s behaviour and general milestones, as well as be interviewed about aspects of your own childhood and development. This will take approximately five hours in total, completed over two or three sessions. We would be able to meet you and your child at the same time or separately, at our research facilities in Hampstead, or in your own home.

For your child: These tasks are fun and administered in the manner of play. There is an interview about friends, a story that will need to be completed using toys, a story with pictures needing matching faces, and self-administered questionnaires. These tasks should take approximately five to six hours in total, completed over three sessions.

Participation:
Although we hope that you and your child will help us in carrying out the project, you are under no obligation to do so and are of course free to withdraw from the study at any time for any unstated reason. Your decision on whether or not to take part, or not to continue, will not affect your child’s care in any way. However, we are hoping to follow a group of children over three years, to look at change over time, and would greatly appreciate those families who feel able to stay involved for follow-up appointments.

Confidentiality:
Written records of all research appointments will be kept securely and anonymously, identified by serial numbers. Three of the tasks with your child will need to be video-taped, and two interviews with your self will need to be tape-recorded and in these cases, the material will be stored very securely without names. Apart from being the basis of some ratings for the project, they may also be used for research training purposes within the project. Publication of results will be based on statistical descriptions of groups, and not involve disclosure of individual or identifiable information.

The Research Team can answer any problems or queries, please contact Duncan Barron on [Contact Information]

** All proposals for research using human subjects are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Camden & Islington Community Health Services NHS Trust on the Ethics of Human Research as well as the Joint UCL / UCLH Committees on the Ethics of Human Research: Committee Alpha **

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APPENDIX A. INFORMATION SHEET FOR CHILDREN

CAMDEN & ISLINGTON / UNIVERSITY COLLEGE LONDON RESEARCH STUDY

RESEARCH INFORMATION: CHILD

Why Are You Doing This Study?

We would like to know more about people like you, and the only way to find out is to ask.

What Will I Be Asked About? What Will I Have To Do?

You will be asked to do a number of different things, including:

   a) Be asked about your friendships and your family;
   b) Listen to stories and use toys to make up the endings;
   c) Listen to stories with pictures and put matching faces on the people in the stories;
   d) Fill in questionnaires about how you feel and what you think.

We will also be seeing the person who looks after you, to ask them a few questions. But primarily, we are interested in what you have to say.

How Long Will It Take To Do This? Where Will I Do It?

It will take about five to six hours to complete all of the above games. You and your parents will decide where you want to do this.

What If I Don't Want to Join or Change My Mind?

Whatever you decide to do will not affect your care at the Clinic, even if you decide later you don't want to be part of the project any more. If you find anything distressing or you change your mind in the middle, just tell us and you can stop. It is no problem, and you wouldn't need to tell us why.

Will Anyone Else Know What I Say?

Everything you do and say will be kept anonymously and confidentially - that means no one will know it is you - we use numbers and not your real names. Also, everything is kept locked away so no one can get to them.

**All proposals for research using human subjects are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Camden & Islington Community Health Services NHS Trust on the Ethics of Human Research as well as the Joint UCL / UCLH Committees on the Ethics of Human Research: Committee Alpha**
CONSENT TO PARTICIPATE IN RESEARCH STUDY

I (name of Parent/primary carer*) of (name of child) agree that my child/ward* may take part in the research project undertaken by the University of London.

I give my consent for members of the research team to contact my child's/ward's school and for teachers at the school to complete questionnaires on my child's/ward's abilities and behaviour at school.

School Address: 

School Contact Name: Position: 

I confirm that the nature and demands of the research have been explained to me and that I understand and accept them.

I also understand that I may withdraw and may withdraw my child/ward from the research project if I find that I am/they are unable to continue for any reason or at any time.

Signed 
Witnessed by 

INVESTIGATOR'S STATEMENT

I have explained the nature, demands and foreseeable risks of the above research to the subject.

Name 

Signed 

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APPENDIX A. CHILD CONSENT FORM

CONFIDENTIAL

University College London

CHILD CONSENT FORM

CONSENT TO PARTICIPATE IN RESEARCH STUDY

I (name of Child) .............................................................................................................
of (address) .............................................................................................................
.............................................................................................................
agree to take part in the research project by the University of London.

I have been told what the Study is about and/or I have read the information sheet about this study which explains what I have to do. I have asked any questions I might have.

I understand that taking part in this project is not related to my treatment in any way.

I know that at any time I may decide not to continue if I do not want to.

Signed .............................................................. Date ............................
Witnessed by .............................................................. Date .............................

INVESTIGATOR'S STATEMENT

I have explained the nature, demands and foreseeable risks of the above research to the subject.

Name ............................................................................................................. Position .................
Signed by ............................................................................................................. Date ..........................
Wednesday, 14th July 1999

Dear ____________________

For the past five years psychologists at Manchester University and University College London have been working with families and children of primary and secondary school age. We have been interviewing children and their families about their development, for example, friendships, milestones and relationships. Surprisingly little is known about how children of this age usually develop socially and emotionally. Increasing our understanding in these areas should help us to help children better, in the future, when they have problems.

You may remember that we undertook a similar interview with your child three years ago when they were in the first few years of school. The purpose of this current study is to follow up the children that we saw then, to see how they are developing now and how their thinking has changed over time. This will be a very valuable opportunity for us to learn more about how children develop over their school years. You were very helpful with the initial project and much of value came out of it. We would be very glad if you were able to help us again.

We would like to check that it would be all right for one of the research team to phone you to explain more about the project both to you and your child, and to see whether you would like to join us. If you return the attached slip we will be able to contact you by telephone, or if you indicate that you would not like to learn more about the project we will know not to contact you again. In the meantime, if you have any questions or would like to contact us by phone, please feel free to call Jonathan Green on [redacted] or Yael Shmueli-Goetz on [redacted]

Please find below a reply slip for your child to return to the schoolteacher in the next 3 days. Thank you for thinking about this.

Yours sincerely,

Jonathan Green and Yael Shmueli-Goetz

__________________________________________________________________________________________

Date: ..........................................

I ......................................... and my child ...................................... would LIKE / NOT LIKE
to take part in the Booth Hall and UCL Child Development study. I can be contacted by phone and our
telephone number is ..........................................................................................
Dear _______________________

You may remember when you were in infant school you helped with a project we were doing on how children develop. At that time, Charlie Stanley spent some time with you in school when you told stories using a dolls house and played other games. You were really helpful to us before and we would like it if you could help us again. We are interested now to see how you’ve grown and changed over the last 3 years and so would like to talk to you now that you are older.

What you would be asked to do?

We will be asking you to come along to see us with your mum or dad during the summer holiday for about an hour and a half. Because you’re older we won’t be asking you to tell us stories with dolls but will instead talk to you about your family. Our interview asks you to talk about what you think and feel about you and your family. It usually takes about 40 minutes. We will also ask you to draw a picture of your family and to make and complete sentences using pictures.

We’ve written a separate letter to your parents explaining what we’re going to do and asking them to agree to you taking part in our project again. We would be happy for you to talk with your parents about this.

Please return the reply slip to your teacher at school in the next 3 days.

We look forward to seeing you again.

Jonathan Green and Yael Shmueli-Goetz
APPENDIX A. MANCHESTER STUDY INFORMATION FOR PARENTS.

THE BOOTH HALL AND UNIVERSITY COLLEGE LONDON
CHILD DEVELOPMENT STUDY
RESEARCH INFORMATION FOR PARENTS

The Study’s Purpose:

The purpose of this study is to understand children’s social and emotional development, and more specifically, to examine the way children form relationships with their parents and how these change over time. The tasks your child is invited to participate in will increase our knowledge of how children perceive early family relationships and how these perceptions develop and change with age. The study forms a follow up to the study that we did three years ago in which you kindly then took part in. This time we will be able to see how your child’s thinking and attitudes have developed during these years. As before, we are not looking specifically for 'problems' in this study but rather how normal children’s understanding of family relationships develops as they grow.

What the Study Involves for your child:

In the first 10 minutes of the session we will ask your child to draw a picture of his/her family. This would be followed by an interview about your child’s relationship with you and your partner, with his/her siblings, and other family members and friends. The interview is administered in a conversational style and gives the child an opportunity to talk about their current familial and social relationships, what sort of things they enjoy doing more or less, and what would they wish for the future. The interview will take approximately 45 minutes to complete. In the final 30 minutes of the session your child will be involved in a task that assesses expressive language using pictures. The duration of the whole session will take approximately an hour and a half.

What the study involves for you:

While your child is being seen we will ask you to fill in several questionnaires. These cover any important life events that may have occurred in the last 2-3 years, your child’s behaviour at home and at school, your child’s temperament, and your general mood state. Completing these questionnaires would be very helpful in providing further information about your child’s development in the last three years since we last saw him/her. In addition, information about your general mood would help us in evaluating your child’s response. The completion of the questionnaires would take approximately 45 minutes.

Participation:

Although we hope that you and your child will help us in carrying out the project, you are under no obligation to do so and are of course free to withdraw from the study at any time for any unstated reason.

Confidentiality:

Written records of all research appointments will be kept securely and anonymously, identified by serial numbers. Two of the tasks with your child will need to be videotaped and in these cases, the material will be stored very securely without names. Publication of results will be based on statistical descriptions of groups, and not involve disclosure of individual or identifiable information. At the conclusion of the study the videotapes will be destroyed.

If you would like we would be happy to share with you the overall results of the project as they become clear to us.

The Research Team can answer any problems or queries, please contact Jonathan Green on [phone number] or Yael Shmueli-Goetz on [phone number].
APPENDIX B. CAI PROTOCOL - VERSION I

CHILD ATTACHMENT INTERVIEW
(8 TO 12 YEAR OLDS) (Edition I, 26/3/97)

1) Tell me the story of the people in your family.
   Prompt for biographical details, What are they like? etc.

2) Tell me the first three things you can remember?
   a) Try to picture in your head the things you just told me about - just try to look at that time you told me about, and tell me what you can see.
   b) Did you see yourself, or, where were you in what you saw?
   c) Was it like looking at yourself or looking through your own eyes?

3) Tell me about the best thing that has ever happened to you.
   How did you feel?

4) Tell me about the worst thing that you can ever remember happening to you.
   How did you feel?

5) Tell me three words that describe yourself
   Now why did you choose each of those words?

6) Can you tell me 3 words that describe your relationship with your Mum?
   Please give me an example for each word

7) Now tell me three words that describe how you feel when you’re with your Mum.
   Can you tell me about a time when you felt 1........ 2........ 3........ with her?

8) What happens when Mum gets upset with you?
   a) Prompt: If you’ve done something to upset her. What does she usually say or do?
   b) If child does NOT take this to mean getting angry: - Further prompt: What happens when your Mum tells you off?
   c) Follow up: Do you know why she tells you off or what you have done wrong? Do you feel it is fair?)

9) How do you feel when that happens?
10) Why do you think she does that?

11) What happens when your Mum is ill?
   
   Prompt: What does she do?
   
   How are things different for you? For the family?

12) Can you tell me 3 words that describe your relationship with your Dad?

   Please give me an example for each word

13) Now tell me three words that describe how you feel when you're with your Dad.
   
   Can you tell me about a time when you felt 1........ 2........ 3........ with him?

14) What happens when Dad gets upset with you?
   
   a) Prompt: If you've done something to upset him. What does he usually say or do?
   
   b) If child does NOT take this to mean getting angry: - Further prompt: What happens when your Dad tells you off?
   
   c) Follow up: Do you know why he tells you off or what you have done wrong? Do you feel it is fair?)

15) How do you feel when that happens?

16) Why do you think she does that?

17) What happens when your Dad is ill?

   
   Prompt: What does he do?
   
   How are things different for you? For the family?

18) Can you tell me about a time when you might have wanted help from someone and no one understood you?

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

19) Can you tell me about a time when you might have found your parents confusing?

   
   Prompt: When you didn't understand why they were doing something?

20) What happens when you're ill?

   
   Prompt for a specific example. What do you do? Does anyone stay at home with you?

21) What happens when you hurt yourself?
Prompt for a specific example. What do you do? Does anyone stay at home with you?

22) Has anyone close to you ever died? Has an animal ever died?
   Prompt: What happened? Was the death sudden? Did you go to the funeral? How did you feel about it?
   How do you think it made other people feel? (e.g. Mum, Dad, sibling?)

23) Can you tell me about a time when you might have found your parents frightening?
   Follow up: Are there any other adults or older kids who you’ve been frightened by?

24) Has anything or anyone that you cared about ever been taken away from you?
   Follow up: Have things happened that have changed your life much?
   Tell me about a time when things changed. (e.g. change of environment, new school, parents separating).
   How did you feel?

25) Have you ever been away from your parents for the night or for longer than a day?
   Prompt: How did you/they react? How did you feel?

26) Do your parents sometimes argue?
   Follow up: How do you feel? Why do you think they do that?

27) Do you worry about your parents? Do they worry about you?
   Follow up: What kinds of things do you/they worry about?

28) Problem solving question, (find out how the child usually gets home from school first and ask appropriate version of question below)
   What would you do if you came home from school (or a friend’s house) and the doors were locked and your Mum wasn’t there?
   (If child says that wouldn’t happen ask them to try to imagine what they would do if it did happen)

29) Would you like to have children when you grow up? Why? What kind of children?

30) What kind of Dad/Mum would you like to be?
   In what ways would you want to be like your Mum/Dad? In what ways would you not want to be like your Mum/Dad?

31) Do you have any idea what you want to be when you grow up?
APPENDIX B. CAI PROTOCOL – VERSION II

**CHILD ATTACHMENT INTERVIEW**

*(8 TO 12 YEAR OLDS) (Edition II, 05/01/98)*

The CAI aims to access children’s mental representations of attachment figures and significant others (if appropriate). One way of potentially accessing these representations is asking children about their experiences with, and perceptions of, their parents.

The CAI is not predominantly designed to elicit biographical or episodic information, rather it attempts to capture the affective nature of the relationship described.

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

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

Some children are able to recount coherently and sequentially the events within which the REs are contained. However, others may require additional help in the form of scaffolding from the interviewer in order for them to tell the story in a way that can easily be understood and subsequently coded.

The questions ask the child about his or her relationship with attachment figures and about specific situations in that relationship, such as when Mum gets upset or when Mum and Dad argue. During the interview it is extremely important to get specific examples from the child in response to EACH AND EVERY question. This is VERY important on questions 2 which asks the child for three words to describe themselves and questions 3 and 5 which ask what it’s like to be with Mum and Dad respectively. You MUST ask the child for an example for each of the words they give, as the coding system for this interview relies on the child giving specific examples to illustrate each of the words he/she uses. For instance, in question 3 the child might say that it feels safe, happy and relaxing to be with Mum, so you must ask the child for an example of when it felt safe, an example of when it felt happy and an example of when it felt relaxing to be with Mum. If the child finds this difficult, then you can ask him or her to “describe a time when it felt …”, or “tell me about the last time it felt …” to be with Mum. Always follow up brief answers to questions by asking for examples. The coherence of the interview can only be assessed if the child provides examples for his answers – if the child says that when Mum gets upset, she shouts and he gets sent to his room where he plays computer games, then ask for a specific example of when Mum became upset. Remember, if all the interview produces are answers like “it feels happy to be with Mum because she is nice and does things for me” this is useless. Some questions have alternative phrasings if the child doesn’t understand what you mean. It is not necessary to strictly adhere to the format of the questions, and you can rephrase the question if you need to, in order for the child to understand. Use some of the suggestions in the text (e.g. question 10) if the child fails to respond or says “no”. For example, if the child says no one they cared about has died, just check by asking about grandparents, uncles, aunts etc. Children who have said “no” quickly realise that their grandfather did actually die last year when asked specifically about grandparents! Be careful about putting words into the children’s mouths though. The interview is sometimes a little stressful for the children; you should ask for specific examples and use the prompts if the child says “no” or doesn’t reply, but be aware that if a particular question is difficult for a child, go gently and move on to another question if necessary.
IMPORTANT GENERAL PROMPTS

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

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

If potential REs are identified anywhere throughout the interview then:

1. Initially ask the child to tell the story from the beginning.
2. If the child has problems with sequencing their narrative orientated them by asking for specific details surrounding the events (e.g., Who was there? What happened? What was there? What did you do?)
3. Ask how the child and other (if relevant) felt in the situation.

1) Tell me the story of the people in your family. (This is a warm-up question)
Prompt for biographical details, What are they like? etc. You could try “If I was coming to your house and had never seen your Mum and Dad before, and I said to you, “hey, what are your Mum and Dad like” what would you say?”

If this answer is very short ask them to tell you a little more.

2) Tell me three words that describe yourself  1.........  2...........  3............
   a) Now why did you choose each of those words?
   b) Ask for specific examples to support each adjective e.g. Tell me about a time when you were......

3) Can you tell me three words to describe what it’s like to be with your Mum?
   1.........  2...........  3............
   a) Now why did you choose each of those words?
   b) Tell me about a time when you felt 1.....  2...........  3............ with her or Tell me about the last time you felt 1.....  2.....  3.... with her.

4) What happens when Mum gets upset with you?
   a) Prompt: If you’ve done something wrong or done something to upset him, what does she usually say or do?
   b) How do you feel when that happens?
   c) Why do you think she does that?
   d) If child does NOT take this to mean getting angry: - Further prompt: What happens when your Mum tells you off/is angry with you?
   e) Do you know why she tells you off or what you have done wrong?
   f) Do you think it’s fair?

5) Can you tell me three words to describe what it’s like to be with your Dad?
   1.........  2...........  3............
   a) Now why did you choose each of those words?
   b) Tell me about a time when you felt 1.....  2...........  3............ with him or Tell me about the last time you felt 1.....  2.....  3.... with him.

6) What happens when Dad gets upset with you?
   a) Prompt: If you’ve done something wrong or something to upset him, what does he usually say or do?
b) How do you feel when that happens?
c) Why do you think he does that?
d) If child does NOT take this to mean getting angry: Further prompt: What happens when your Dad tells you off?
e) Do you know why he tells you off or what you have done wrong?
f) Do you think it's fair?

7) Can you tell me about a time when you were upset and wanted help
   Prompt: You were trying to tell someone something and no one understood what you meant? Or, there was something you wanted someone to do and no one understood you?

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

8) What happens when you're ill?
   Prompt for a specific example. What do you do? Does anyone stay at home with you? Do you like staying at home?

9) What happens when you hurt yourself?
   Prompt for a specific example. What do you do? Who helps you? What do they do for you?

10) Has anyone close to you ever died? Has an animal ever died?
   a) What happened? Was the death sudden? Did you go to the funeral?
   b) How did you feel about it?
   c) How do you think it made other people feel? (e.g. Mum, Dad, sibling?)

11) Is there anyone that you cared about who isn't around anymore? (This should be asked as an extension of question 10 only if this issue has not been covered previously).
   a) How did it feel when they went away? Did things change much?
   b) Is it better now? What happened to make it better?

   If child says no: Tell me about a time when things changed. (e.g. moved house, went to new school, parents separating, friend left).
   a) How did you feel?
   b) Is it better now? What happened to make it better?

12) Have you ever been away from your parents for the night or for longer than a day? (very important question concerning separation from parents, try therefore to get as much information as possible).
   a) How did you/they react? How did you feel?
   b) How did you feel the first time you stayed somewhere else?

13) Do your parents sometimes argue?
   a) How do you feel? Why do you feel like that?
   b) Why do you think they do that? Do they know how you feel?

14) What kind of Dad/Mum would you like to be? (Finish up question)
   a) In what ways would you want to be like your Mum/Dad?
   b) In what ways would you not want to be like your Mum/Dad?
APPENDIX B. CAI PROTOCOL – VERSION III

THE CHILD ATTACHMENT INTERVIEW (CAI) PROTOCOL

Devised By

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

The Sub Department of Clinical Health Psychology,
University College London, Gower Street,
London WC1E 6BT.
The CAI aims to access children's mental representations of attachment figures and significant others (if appropriate). One way of potentially accessing these representations is asking children about their experiences with, and perceptions of, their parents.

The CAI is not predominantly designed to elicit biographical or episodic information, rather it attempts to capture the affective nature of the relationship described.

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

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

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

During the interview it is extremely important to get specific examples from the child in response to EACH AND EVERY question. This is VERY important on questions 2 which asks the child for three words to describe themselves and questions 3 and 5 which ask what it's like to be with Mum and Dad respectively. You MUST ask the child for an example for each of the words they give, as the coding system for this interview relies on the child giving specific examples to illustrate each of the words he/she uses. For instance, in question 3 the child might say that it feels safe, happy and relaxing to be with Mum, so you must ask the child for an example of when it felt safe, an example of when it felt happy and an example of when it felt relaxing to be with Mum. If the child finds this difficult, then you can ask him or her to "describe a time when it felt ...", or "tell me about the last time it felt ......" to be with Mum. Always follow up brief answers to questions by asking for examples. The coherence of the interview can only be assessed if the child provides examples for his answers — if the child says that when Mum gets upset, she shouts and he gets sent to his room where he plays computer games, then ask for a specific example of when Mum became upset. Remember, if all the interview produces are answers like "it feels happy to be with Mum because she is nice and does things for me" this is useless.

Some questions have alternative phrasings if the child doesn't understand what you mean. It is not necessary to strictly adhere to the format of the questions, and you can re-phrase the question if you need to, in order for the child to understand. Use some of the suggestions in the text (e.g. question 10) if the child fails to respond or says "no". For example, if the child says no one they cared about has died, just check by asking about grandparents, uncles, aunts etc. Children who have said "no" quickly realise that their grandfather did actually die last year when asked specifically about grandparents! Be careful about putting words into the children's mouths though. The interview is sometimes a little stressful for the children; you should ask for specific examples and use the prompts if the child says "no" or doesn't reply, but be aware that if a particular question is difficult for a child, go gently and move on to another question if necessary.

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

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

If potential REs are identified anywhere throughout the interview then:

1. Initially ask the child to tell the story from the beginning.
2. If the child has problems with sequencing their narrative orientate them by asking for specific details surrounding the events (e.g., Who was there? What happened? What was there? What did you do?)
3. Ask how the child and other (if relevant) felt in the situation.

**Presenting the interview**

Present the interview by saying:

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

1) **Can you tell me about the people in your family?** (May need to qualify by saying "That is the people living together in your house" if child starts describing extended family members).

   This is a warm-up question and its aim is not to try and obtain biographical information but rather to engage the child in the interview and reduce any unnecessary anxiety.

2) **Tell me three words that describe yourself, that is not what you look like, but what sort of person you are?** (It may be useful to say "that is your personality or character". Some children may find it helpful to imagine writing a letter to a pen pal). 1 ........ 2 ........ 3 ........

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

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

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

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

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

   **Prompts**: Immediately after each example prompt the child for more detailed description of the relationship episode as necessary (See introduction).
4) What happens when Mum gets cross with you?
   a) **Prompt:** If you've done something wrong or done something to upset her, what does she usually say or do?
      Ask for a specific example, can say "Tell me the last time mum got upset with you".
   b) How did you feel when that happens?
   c) How did you think your mum feels when that happens?
   d) Why do you think she does ______ (whatever the child says mother does, e.g., shouts at you)?
   e) If child does NOT take this to mean getting angry: - Further prompt: What happens when your Mum tells you off/is angry with you?
   f) Do you know why she tells you off or what you have done wrong?
   g) Do you think it's fair?

5) Can you tell me three words to describe your relationship with you Dad? (can add "that is, what it's like to be with your Dad?").
   1 .......... 2 ........... 3 ............
   a) Ask for specific examples to support each adjective, i.e., "Tell me about a time when you felt 1...... 2....... 3....... with him"

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

6) What happens when Dad gets cross with you?
   a) **Prompt:** If you've done something wrong or done something to upset him, what does he usually say or do?
      Ask for a specific example, can say "Tell me the last time mum got upset with you".
   b) How did you feel when that happens?
   c) How do you think your dad feels when that happens?
   d) Why do you think he does ______ (whatever the child said father does e.g., shouts at you)?
   e) If child does NOT take this to mean getting angry: - Further prompt: What happens when your dad tells you off/is angry with you?
   f) Do you know why he tells you off or what you have done wrong?
   g) Do you think it's fair?

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

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

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If the child says that this hasn’t happened, offer suggestions:

E.g.; how would you feel if; your teacher told you off in front of the whole class, or you asked your friend to play after school and they said no because they didn't like you anymore, or you were bullied at school.

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

8) What happens when you’re ill?

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

9) What happens when you hurt yourself?

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

10) Has anyone close to you ever died? Has an animal ever died?

   a) What happened? Was the death sudden? Did you go to the funeral?
   b) How did you feel about it?
   c) How do you think it made other people feel? (e.g. Mum, Dad, sibling?)

11) Is there anyone that you cared about who isn’t around anymore? (This should be asked as an extension of question 10 only if this issue has not been covered previously).

   a) How did it feel when they went away? Did things change much?
   b) Do you keep in touch? If yes, how, if no why do you think that is?

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

   a) How did you feel?
   b) Do you keep in touch? If yes, how, if no why do you think that is?

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

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

   a) What was it like to be away from you parent/s?
   b) What do you think it was like for your mum and dad?
   c) What was it like seeing mum and dad again?

13) Do your parents sometimes argue?

Prompt for a specific example, can say “Can you tell me about the last time your parents were arguing”
a) How do you feel? Why do you feel like that?
b) Why do you think they do that?
c) How do you think they feel?
d) Do they know how you feel?

14) a. In what ways would you like to be like you mum?
b. In what ways would you not like to be like you mum?
c. In what ways would you like to be like your dad?
d. In what ways would you not like to be like your dad?

15) Ending Question: If you could make three wishes when you are older what would they be? (finish up question, should be asked in playful manner and affirm the child’s answers, e.g., “ah, that sounds really good”.)
THE CHILD ATTACHMENT INTERVIEW (CAI) PROTOCOL

Devised By

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

The Sub Department of Clinical Health Psychology,
University College London, Gower Street,
London WC1E 6BT.
The CAI aims to access children's mental representations of attachment figures and significant others (if appropriate). One way of potentially accessing these representations is asking children about their experiences with, and perceptions of, their parents.

The CAI is not predominantly designed to elicit biographical or episodic information, rather it attempts to capture the affective nature of the relationship described.

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

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

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

During the interview it is extremely important to get specific examples from the child in response to EACH AND EVERY question. This is VERY important on questions 2 which asks the child for three words to describe themselves and questions 3 and 5 which ask what it's like to be with Mum and Dad respectively. You MUST ask the child for an example for each of the words they use, as the coding system for this interview relies on the child giving specific examples to illustrate each of the words he/she uses. For instance, in question 3 the child might say that it feels safe, happy and relaxing to be with Mum, so you must ask the child for an example of when it felt safe, an example of when it felt happy and an example of when it felt relaxing to be with Mum. If the child finds this difficult, then you can ask him or her to "describe a time when it felt ...", or "tell me about the last time it felt....." to be with Mum. Always follow up brief answers to questions by asking for examples. The coherence of the interview can only be assessed if the child provides examples for his answers - if the child says that when Mum gets upset, she shouts and he gets sent to his room where he plays computer games, then ask for a specific example of when Mum became upset. Remember, if all the interview produces are answers like "it feels happy to be with Mum because she is nice and does things for me" this is useless.

Some questions have alternative phrasings if the child doesn't understand what you mean. It is not necessary to strictly adhere to the format of the questions, and you can re-phrase the question if you need to, in order for the child to understand. Use some of the suggestions in the text (e.g. question 10) if the child fails to respond or says "no". For example, if the child says no one they cared about has died, just check by asking about grandparents, uncles, aunts etc. Children who have said "no" quickly realise that their grandfather did actually die last year when asked specifically about grandparents! Be careful about putting words into the children's mouths though. The interview is sometimes a little stressful for the children; you should ask for specific examples and use the prompts if the child says "no" or doesn't reply, but be aware that if a particular question is difficult for a child, go gently and move on to another question if necessary.
IMPORTANT GENERAL PROMPTS

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

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

If potential REs are identified anywhere throughout the interview then:

1) Initially ask the child to tell the story from the beginning.
2) If the child has problems with sequencing their narrative orientate them by asking for specific details surrounding the events (e.g., who was there? What happened? What was there? What did you do?)
3) Ask how the child and other (if relevant) felt in the situation.

Presenting the interview

Present the interview by saying:

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

1) **Can you tell me about the people in your family.** (May need to qualify by saying "That is the people living together in your house" if child starts describing extended family members).

This is a warm-up question and its aim is not to try and obtain biographical information but rather to engage the child in the interview and reduce any unnecessary anxiety.

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

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

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

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

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

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

Ask for specific examples to support each adjective, i.e., "Tell me about a time when you felt 1. ..... 2. ..... 3. ..... with her"
4) What happens when Mum gets cross with you?

Prompt: If you’ve done something wrong or done something to upset her, what does she usually say or do?

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

I. How did you feel when that happens?
II. How did you think your mum feels when that happens?
III. Why do you think she does _______ (whatever the child says mother does, e.g., shouts at you)?
IV. If child does NOT take this to mean getting angry: - Further prompt: What happens when your Mum tells you off/is angry with you?
V. Do you know why she tells you off or what you have done wrong?
VI. Do you think it’s fair?

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

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

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

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

6) What happens when Dad gets cross with you?

Prompt: If you’ve done something wrong or done something to upset him, what does he usually say or do?

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

I. How did you feel when that happens?
II. How do you think your dad feels when that happens?
III. Why do you think he does _______ (whatever the child said father does e.g., shouts at you)?
IV. If child does NOT take this to mean getting angry: - Further prompt: What happens when your dad tells you off/is angry with you?
V. Do you know why he tells you off or what you have done wrong?
VI. Do you think it’s fair?
7) Can you tell me about a time when you were upset and wanted help

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

If the child says that this hasn’t happened, offer suggestions:

- e.g.; how would you feel if, your teacher told you off in front of the whole class, or you asked your friend to play after school and they said no because they didn’t like you anymore, or you were bullied at school.

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

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

I. **Prompt:** Can you tell me when you felt like that?
II. Do you often feel like that?

9) What happens when you’re ill?

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

10) What happens when you hurt yourself?

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

11) Has anyone close to you ever died? Has an animal ever died?

I. What happened? Was the death sudden? Did you go to the funeral?
II. How did you feel about it?
III. How do you think it made other people feel? (e.g. Mum, Dad, sibling?)

12) Is there anyone that you cared about who isn’t around anymore? (This should be asked as an extension of question 11 only if this issue has not been covered previously).

I. How did it feel when they went away? Did things change much?
II. Do you keep in touch? If yes, how, if no why do you think that is?

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

I. How did you feel?
II. Do you keep in touch? If yes, how, if no why do you think that is?
13) Have you ever been away from your parents for longer than a day? (very important question concerning separation from parents, try therefore to get as much information as possible).

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

I. What was it like to be away from you parent/s?
II. What do you think it was like for your mum and dad?
III. What was it like seeing mum and dad again?

14) Do your parents sometimes argue?

_Prompt_ for a specific example, can say “Can you tell me about the last time your parents were arguing”

I. How do you feel? Why do you feel like that?
II. Why do you think they do that?
III. How do you think they feel?
IV. Do they know how you feel?

15) I. In what ways would you like to be like you mum?
II. In what ways would you not like to be like you mum?
III. In what ways would you like to be like your dad?
IV. In what ways would you not like to be like your dad?

16) Ending Question: If you could make three wishes when you are older what would they be? (finish up question, should be asked in playful manner and affirm the child’s answers, e.g., "ah, that sounds really good").
APPENDIX B. CAI PROTOCOL – VERSION V

THE CHILD ATTACHMENT INTERVIEW (CAI) PROTOCOL

Devised By

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

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

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

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

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

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

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

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

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

Finally, it is often the case that interviewers ask closed or leading questions when confronted with a child who clearly finds it difficult to engage in the task and often reports lack of memory. You MUST AVOID at all cost asking LEADING QUESTIONS or re-phrasing adjectives or descriptions the child may provide. Asking the child "did you feel upset?" not only implies that the child would be expected to be upset at the time, but also encourages a yes/no response. Asking the child "How did you feel when that happened?" enables the child to express his/her feelings in more detail.

IMPORTANT GENERAL PROMPTS

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

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

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

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

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

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

Presenting the interview

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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I. How did you feel when that happened?

II. How do you think your dad felt when that happened?

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

IV. Do you know why he tells you off or what you have done wrong?

V. Do you think it’s fair?

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

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

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

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

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

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

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

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

I. How did you feel when that happened?

II. How do you think your dad felt when that happened?

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

IV. Do you know why he tells you off or what you have done wrong?

V. Do you think it’s fair?

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

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

Prompt: You were trying to tell someone something and no one understood what you meant? Or, there was something you wanted someone to do and no one understood you?
If the child says that this hasn't happened, offer suggestions: e.g., how would you feel if, your teacher told you off in front of the whole class, or you asked your friend to play after school and they said no because they didn't like you anymore, or you were bullied at school.

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

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

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

9) What happens when you're ill?

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

10) What happens when you hurt yourself?

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

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

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

I. Did it happen once or twice or more often?
II. Can you tell me what happened?
III. How did you feel?

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

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

I. Did it happen once or twice or more often?
II. Can you tell me what happened?
III. How did you feel?

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

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

I. Did it happen once or twice or more often?
II. Can you tell me what happened?
III. How did you feel?
IV. Do you think ______ (perpetrator) knew that you felt like that?
V. What do you think _______ (perpetrator) felt?

14) Has anyone close to you ever died? Has an animal ever died?
1. What happened? Was the death sudden? Did you go to the funeral?
2. How did you feel about it?
3. How do you think it made other people feel? (e.g. Mum, Dad, sibling?).

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

1. How did it feel when they went away? Did things change much?
2. Do you keep in touch? If yes, how, if no why do you think that is?

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

1. How did you feel?
2. Do you keep in touch? If yes, how, if no why do you think that is?

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

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

1. What was it like to be away from you parent/s?
2. What do you think it was like for your mum and dad?
3. What was it like seeing mum and dad again?

17) Do your parents sometimes argue?

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

1. How do you feel?
2. Why do you feel like that?
3. Why do you think they do that?
4. How do you think they feel?
5. Do they know how you feel?

18) 1. In what ways would you like to be like you mum?
2. In what ways would you not like to be like you mum?
3. In what ways would you like to be like your dad?
4. In what ways would you not like to be like your dad?
19) Ending Question: If you could make three wishes when you are older what would they be?

(finish up question, should be asked in playful manner and affirm the child's answers, e.g., "ah, that sounds really good").
CHILD ATTACHMENT INTERVIEW (CAI)
SCORING MANUAL

WORKING DRAFT – June 1998

Written by
Yael Shmueli-Goetz and Adrian Datta
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1.0 Background

The CAI scoring system incorporates elements from both the Strange Situation Procedure (SSP) scoring and the Adult Attachment Interview (AAI) scoring and classification systems.

The CAI is conceptualised as in some respects analogous to the SSP in that it calls upon the activation of the attachment system and is characterised as a meeting between a child and a stranger/experimenter in an unfamiliar setting. It is thus postulated that the child would draw upon mental representations or internal working models of his/her attachment figure/s in the interview as enabling or inhibiting engagement in the task. Children who hold internal working models of parents as a secure base, as accessible and responsive are likely to be less resistant and anxious. These children would also exhibit a higher degree of emotional openness and greater coherence in the interview thus drawing “Parallels between the secure base phenomenon in infancy and the security implicit in emotional openness” in later childhood (Kaplan, 1984). Hence, the nature and quality of the experimenter - child interaction and the degree to which material raised within the interview is explored may in some ways reflect the child’s internal working models of his/her attachment figures. Whilst the CAI is designed to access the child’s mental representations of parents, the coding also relies upon a detailed behavioural analysis as an important source of information in arriving at an attachment classification.

The scoring system is based initially on identifying Relationship Episodes (REs) within the entire interview. REs are subsequently coded individually and form the basis for an overall attachment classification with respect to Mother and Father independently.

2.0 Working Definition of REs

Any part of the narrative where the child describes an interaction between themselves and an attachment figure would constitute an RE. Most REs would involve interaction with the child’s mother and/or father. Some REs may include other family members, teachers and friends and these episodes may be used to inform the child’s overall attachment classification. However, on occasions it is necessary to apply a more flexible definition when the narrative produced by the child concerning attachment-related experiences is impoverished. In those circumstances, ‘non-interactions’ should be recorded especially in children who adopt an avoidant style, as often these are the best these children will provide.

Clear examples of relationship episodes:

“My relationship with my mum is good because we just like to be together. Often we will just have cuddles together because we like each other”.

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"My relationship with my mum is dodgy at times. She gets angry with me when I have an argument with my brother and will send me to my room. A few minutes later she would call me and I would say sorry."

Example of a ‘non-interaction’:

"The last time I was with my mother was yesterday. I was playing football with my friends outside". This example would constitute a ‘non-interaction’ in that although AF is alluded to, there is no direct contact between the child and the AF.

3.0 Coding Sequence

Step 1: Identify Relationship Episodes (REs) throughout the interview and record on coding sheet.

Step 2: Assign rating on scales identified in coding manual.

Step 3: Based upon rating assigned in step 2, assign Secure/Insecure attachment classification with respect to Mother and Father independently.

Step 4: Assign a sub-classification of Secure/Very Secure or Insecure/Very Insecure.

4.0 Operational Criteria for scoring REs

The following scales could be grouped in different categories – could be linked to a particular attachment classification, could be a form vs. content distinction; experience scales vs. state of mind scales.)

4.1 Linguistic Analysis

4.1.1 Emotional Openness and range of emotional terms used. This scale is concerned with the affective description rather than the behavioural expression of the child. Emotional openness takes into account the range of feelings that the child describes, the degree to which the child is able to place those feelings within a relational context and has an appreciation and is able to express the interplay of affect, mental states and behaviour. Emotional openness is rated on a nine-point scale with 1 for low emotional openness and 9 for high emotional openness.

1 – No mention of affect and no illustrations. A child who makes little or no reference to emotional states of self and others throughout the narrative. A narrative that is dominated by concrete and physical characteristics of self and others. Descriptions of AFs are set within a utilitarian frame and they are only valued for what they can do or provide in material terms.
3 – Affects are labelled but not illustrated. A restricted range of affects are mentioned and are rarely accompanied by descriptions, which if present are impoverished. In addition, emotional states are not recognised as being temporary and there is no appreciation of their impact upon others.

5 – Limited range of affects only substantiated to a small degree. The child is able to identify and express a limited affective range and provides limited episodic illustrations. There is the sense that the child provides the basic structure of the emotional narrative such that the gaps can predominantly be completed by the rater. Hence, illustrations are present but are not fully elaborated. Additionally, the child may show limited understanding of the impact of emotional states on others.

7 – A full range of emotional states with some elaborated examples. The child identifies multiple affects grounded in relevant examples. However, richly detailed illustrations are not consistent throughout the narrative and the rater is required to ‘fill-in’ the gaps. The child may demonstrate an understanding of the impact of emotions on others and recognise that emotional states change across time and context.

9 – Affectively laden narrative with consistently detailed illustrations. High emotional openness. The child is able to describe a variety of emotional states and recognises that emotions are temporary and context specific. The child is able to provide a detailed depiction of their feelings, which are grounded in the REs and/or in the social context described, and also demonstrate an understanding of their likely impact on others.

4.1.2. Balance of Positive and Negative References to Attachment Figures (AFs). The child is able to describe both good and bad qualities of, and interactions with, their AFs and does not solely refer to the AFs in negative or positive terms. (NB. It is expected that the majority of children will tend to use more positive terms to describe their parents. This bias towards the positive should be considered when rating). This scale is independent of the Use of Examples scale and should be rated accordingly.

1 – Extreme polarisation. A child who refers to AFs solely in positive or negative terms. The child’s narrative does not contain references to the alternative viewpoint.

3 – Unbalanced. Little mention of both positive and negative attributes of at least one parental figure but this only occurs in one part of the interview. If child does mention the alternative viewpoint, he/she adopts a strategy in order to block out the thought by not talking, replying “I don’t know” or digressing.
5 - **Moderately balanced.** In approximately half of the narrative there is evidence of the child being able to consider both positive and negative aspects of AFs. This contemplation may be tentative and unelaborated.

7 - **Balanced.** Mixed emotions are expressed throughout the majority of the interview. The child is able not only to contemplate but also express both positive and negative references to AFs.

"*My relationship with Dad is fun and dodgy. It is fun because we make up jokes together and dodgy because he teases me.*"

9 - **Highly balanced.** A child who is able to label both positive and negative aspects of the relationship with AFs throughout the narrative. The child shows evidence of being able to contemplate, express, and fully elaborate upon both aspects of AFs.

4.1.3 **Use of Examples.** For example, in extreme avoidance the child consistently cannot remember, or replies with "I don’t know" or "nothing". In such cases it is important to crudely establish that the child is using an avoidance strategy rather than genuinely not being able to recall. It is therefore essential to prompt for other more concrete memories such as what the child did the previous day or what the child ate for dinner the previous evening. This would allow to possibly distinguish forgetting from ‘defensive exclusion’ (Bowlby, 1980). The idealising child would be able to provide a generalised description of their overall relationship with their AFs but will not be able to substantiate it with specific examples. Another pattern can be observed where the child is unable to provide generalised descriptions or specific examples pertaining to AFs.

1 - **No examples despite frequent prompting.**

3 - **Very occasional use of examples.** Interviewer elicits them but the examples provided are not relevant or illustrative. The examples are either rare or not detailed and do not provide a complete account of the RE despite prompts. There is not one single illustrated answer.

5 - **Limited.** Around half of the prompts elicit examples, they are on the whole understandable but not very detailed. The interviewer needs to use their imagination to fill in the gaps. All the examples are very recent or only dominant themes are presented. Only one good example is provided. Children who offer examples that are tangential and consistently provide superfluous detail, which is irrelevant to the question being addressed, should be assigned this rating.

7 - **Predominantly illustrative examples.** Relatively little difficulty in offering detailed examples, although some of the examples will be irrelevant or narrow. At least three richly detailed, appropriate and relevant examples should be offered.
9 – Fully illustrated examples. At least four richly detailed and complete examples are provided with minimal prompts. The examples provided need to be relevant and appropriate.

4.1.4 Preoccupied Anger. The degree to which the child expresses anger that is uncontained and overwhelming when describing REs. A distinction is drawn between the expression of anger, which in an attachment context could serve to call forth care taking behaviour and aggression, or violence that seeks to attack attachment figures and threaten attachment relationships. Only expressions of anger should be rated on this scale and not aggression, violence. Code separately for each parent.

1 – Anger is described but not re-experienced and has been clearly resolved. Thus, no current anger is expressed.
*Insert 107 transcript here*

3 – Anger is expressed and re-experienced to a slight degree. There is suggestion that traces of anger are still present. However, anger is contained and is not pervasive throughout the narrative.

5 – Anger is clearly stated and is not resolved. However, it is not markedly present throughout the narrative and tends to be limited to one or two episodes. Anger is a persistent but not dominant theme, although it is re-experienced to some degree it does not escalate and therefore is not pervasive throughout the narrative.

7 – Anger is expressed in description of REs and is unresolved. There is an indication of escalation of anger that brings forth other related memories. Anger is clearly a pervasive theme and the child’s references to anger seem to fuel their angry preoccupation.

9 – Anger is clearly expressed and escalation is evident to the rater. Repeated references to anger are made which leak into other parts of the narrative. Anger is an all-pervasive theme and dominates the majority of the narrative and there is therefore no question that the child is angrily preoccupied.

4.1.5 Idealisation of Attachment Figure/s. This scale measures the extent to which the child’s representations of AFs are distorted in a positive direction. Idealisation on this scale is rated on a continuum from ‘no idealisation’ to ‘highly idealising’ and does not measure derogation, which is accounted for within the dismissal scale below.

The child only provides generalised positive descriptions of attachment figures and relationships that are not substantiated by concrete examples. Evidence for distortion is identified in the relationship between generalised descriptions and probable experience. This is a separate scale from the scale of balance of
positive and negative references to AFs in that idealising children may not use
more positive descriptions than other children but the discrepancy between the
general and specific is the basis for this rating. The central question the rater is
asking is “How credible are general descriptors of AFs in the light of specific
elements?” Code separately for each parent.

Preliminary analysis of existing interview responses suggest that children may adopt
the following strategies of idealisation. These however, are not mutually exclusive and
can all be manifest within the narrative:

I. The child may provide a generalised description but does not substantiate it
with an example (e.g., responses such as ‘I don’t know’ or ‘I can’t remember’
in response to requests for specific examples to generalised descriptions).

II. The child may provide a positive generalised description that is subsequently
contradicted by an unfavourable example (e.g., a child may describe his/her
mother as ‘very loving’ and yet provide an example where the mother was
rejecting in some form).

The following is an extract from a girl (C819) explaining why she sees her
relationship with her mother as “friendly”:

“Well, we don’t have many fights so ahm, we rarely fall out.” Can you give
me an example of when it felt friendly with your mum? Well, my sister and
my mum and dad were having a fight about who fed the guinea pig. Me and
my sister kept fighting about it and then my sister was threatening like my
mum and my mum was threatening my sister and everything and then ahm, I
kind of felt a bit scared and then I came downstairs and my mum was
being friendly to me. Well, my mum was threatening to kill the guinea pigs
and my sister said ‘If you kill the guinea pigs I am going to run away and
everything.’”

III. The child provides a generalised description that is only partly substantiated
by near-miss examples. Near-miss examples are those where the child
initially offers a seemingly contradictory or irrelevant example which
subsequently is turned around and shown to be relevant (e.g., child describes
mother as ‘caring’ and subsequently offers an incident where the mother was
unable to take care of the child’s needs but who eventually is described as
being available to meet the child’s needs).

1 – Positive generalised statements concerning AFs and experiences
are consistently supported by relevant REs. The child provides
episodic examples that are relevant, do not contrast with the general
description given, and does not employ any of the strategies of
idealisation presented above. Examples can be brief but must not be
contradictory.

3 – Positive generalised descriptions are on the whole substantiated
by specific REs. However, there may be one or two instances where
the child does not provide convincing examples and may employ any one of the strategies of idealisation outlined above.

5 - **Generalised positive descriptions of attachment figures and relationships are only partly supported often by unclear, or near miss, episodic examples.** Alternatively, the child may provide episodic examples, which are mildly contradictory, partial or unclear. Furthermore, the child may provide a neutral statement that is not supported.

7 - **Generalised positive descriptions are rarely substantiated by specific examples.** Very positive generalised descriptions of AFs are sparsely supported. A neutral description is associated with a markedly negative and thus contradictory example, or there are several instances where the valence of the story shifts from positive to negative. Alternatively, neutral or balanced descriptions may be contradicted by episodes, which contain rejecting or abusive behaviour.

9 - **Positive generalised descriptions are prevalent throughout the narrative and are not substantiated by specific examples.** If episodic examples are provided, these are invariably contradictory to the generalised descriptions put forward. The child may throw in gratuitous praise and spontaneously insert unsolicited positive descriptions. Alternatively, there may be a shift in valence, which is pervasive throughout the narrative.

4.1.6 **Dismissal of Attachment.** This scale measures the extent to which the child adopts a strategy that serves to minimise the importance of AFs and relationships by active dismissal. Any expression of vulnerability, dependency or the need of comfort from AFs is deliberately rejected and excluded. The degree to which information concerning attachment-related stress such as child’s illness, physical hurt, conflicts, separations and death is central in rating on this scale. This scale should be rated in relation to the probable specific experience but independent of the child’s history. For example, a separation of two weeks would be considered a major event even if the child has had repeated separation events in their earlier life. The degree of dismissal as operationalised on this scale is dependent upon the severity of the event and the age of the child.

Accordingly, three classes of events have identified from minor through to major. Thus, it is assumed that such events have varying degrees of impact upon the child and the attachment relationship. The child’s failure to acknowledge the effect of a major event as a potential threat to the attachment relationship will be rated highly on this scale, whereas a child who fails to acknowledge the likely impact of a minor event will only receive a low to moderate rating.

As a guide the following can be used but the age of the child also needs to be taken into account:
Minor event: The child experiences a physical or emotional pain that would normally require the parent to comfort the child. Examples would include situations such as when the child is ill with a cold/flu/or other minor childhood ailment, child has an accident that can be immediately attended to and does not require medical intervention.

Moderate event: Circumstances that would constitute a moderate event include a planned separation of 1-2 days duration, more significant accidents or illnesses which require medical intervention.

Major event: These events, by definition, are not likely to occur very often. Separations of longer than one week, unplanned separations, loss through death of close family member or friends (often pets will fall into this category but not necessarily), serious physical injuries or illnesses which require prolonged medical intervention which may include hospitalisation rations from AFs, death of a close family member or friend.

1 – Valuing. The child affectively acknowledges both minor and major events and appears comfortable with expressing vulnerability in response to separation and loss.

3 – The child expresses some feeling of vulnerability in relation to some major events but denies vulnerability with respect to some minor events.

5 – Emotional vulnerability in response to minor events is largely denied. Some acknowledgement of the impact of major events is present but this may be limited.

7 – The feelings of vulnerability evoked by separation and loss are denied for all minor events and the majority of major events, although these may be partially acknowledged.

9 – Affect is deliberately and systematically excluded. Vulnerability to rejection and disappointment is denied and the self is presented as invulnerable. Major events, e.g. separation from parents for longer than 3 days, are totally denied or dismissed as inconsequential.

4.1.7 Resolution of Conflicts. The child is able to recount an episode containing conflict, which is subsequently resolved. Solutions may be positive, negative or passive. Positive solutions include examples of reconciliation initiated by the child or parent. Negative solutions include destructive and potentially catastrophic scenarios that may be incomplete. Passive solutions are those where the child describes a situation where the conflict has not been directly addressed, e.g.; the child watches television or plays a computer game following a conflict or disagreement. Conflicts range in severity from a minor disagreement to conflicts arising from separation and loss.
1 – Clearly unresolved conflict. These are often characterised by destructive/negative responses. For example, a child may minimise the sense of separation by talking about absent people in the present tense.

3 – Unresolved.

5 – Limited resolution. Although resolutions to conflicts are not systematically addressed there is the sense conveyed to the rater that the issues have been resolved. The process of resolution is not described.

7 – Resolved

9 – Very clearly resolved. Conflict is accurately reported and then is systematically addressed, ultimately arriving at a solution that seems satisfactory for the rater.

4.1.8 Self-Organization Scale. This scale attempts to assess the child’s representation of self-agency and self-efficacy. It is assumed that secure children will represent themselves as being active agents who are able to plan, organise and execute a sequence of actions, which lead to a satisfactory resolution. Two main strategies have been identified that may lead to a low score on this scale; a strategy whereby the child adopts a passive stance or alternatively an impulsive one. Passivity is defined as the experience of having performed no action to address the problem akin to notion learned helplessness, e.g.; child would go to watch television, which is not regarded as a actively initiated solution. Impulsively is defined as the experience of having performed an action that seemingly cannot be rationally linked to the conflict situation, e.g., the child just finds himself/herself responding to a conflict situation in an ill-thought out manner which lacks any forward planning.

1 – Very low self-organisation. Resolutions to conflicts are dominated by extreme passivity or impulsively and there are no clearly planned self-initiated resolutions.

3 – Low self-organisation. Resolutions to conflicts are on the whole passive or impulsive. Self-initiated solutions may be alluded to but these are not clearly stated or elaborated.

5 – Moderate self-organisation. Self-initiated resolutions to conflicts are limited in frequency and are interspersed with more passive and/or impulsive responses. The child does not necessarily demonstrate an awareness that his/her behaviour leads to a satisfactory/desired
outcome. Thus, the sense conveyed is that the child employs a 'hit and miss' strategy.

7 – **High self-organisation.** Self initiated and well-planned solutions to conflicts predominate. However, there may be no more than one passive and/or impulsive solution. The child is aware that his/her behaviour directly leads to a positive/desired outcome.

9 – **Very high self-organisation.** Resolutions to conflict are predominantly self-initiated, clearly planned and executed leading to satisfactory outcomes.

4.1.9 **Overall coherence.** This scale to some degree integrates information from the Idealisation, Preoccupied Anger, Dismissing and Use of Examples Scales. These scales thus constitute feeder scales that are used to gauge the initial level of overall coherence which is subsequently fine tuned by consideration of violations and/or evidence of high coherence as outlined below.

This scale comprises both positive and negative indices of coherence. Coherence indices are not weighted equally, some are considered to be more fundamental to coherence than others. Violations of coherence as manifested in various forms throughout the narrative may be compensated by evidence of reflectiveness and spontaneity in discourse, both considered as positive indices of coherence.

**A. Positive indices of coherence. Scores can be inflated by 2 points by the positive indices of fresh speech and reflectiveness.**

**Fresh speech**

Fresh speech is defined as speech that reflects a new understanding, when the child is making sense of something for the first time, as distinct from a scripted or well-rehearsed account. Such speech gives the impression of thinking aloud.

**Reflectiveness**

Reflectiveness refers to the ability to appreciate and consider intentionality in oneself and others (In time this may be used as a separate scale, especially when reflective self probes are inserted into the protocol).

**B. Negative Indices of Coherence – Violations to Coherence**

When considering violations of coherence the rater should be mindful of the way in which the feeder scales have a bearing upon coherence. The components of coherence contained within these scales need to be
extrapolated to provide a comprehensive evaluation of overall coherence. Thus, the feeder scales link with coherence in the following ways:

The “idealisation” scale highlights contradictions and inconsistencies contained within the narrative and demonstrates the extent to which the child is able to provide convincing evidence for what they say.

The “dismissing” scale reveals the quantity of the narrative, i.e. those children with high scores on this scale are likely to provide very brief and incomplete descriptions.

The “use of examples” establishes the extent to which the child is able to provide relevant evidence for what they say. This scale is central in determining the comprehensibility of the narrative as a whole. Narratives that are impoverished in elaborated REs are considered low on the coherence scale.

The “preoccupied anger” scale similar to the “dismissing” scale provides a measure of the quantity contained within the narrative. However, the “preoccupied” scale frequently records overly detailed and potentially irrelevant accounts.

**Major violations.**

**Spontaneous Vs inhibited narrative production/Comprehensibility.** This scale measures the extent to which the child is able to produce a narrative that is constructed by themselves with limited number of interviewer prompts. Does the narrative hang together? How much mental effort does it take to understand the narrative? Stories are conflated and relevance is not obvious. Does the narrative contain too much or too little detail?

**Contradiction and inconsistencies within narrative.** For example, a child who uses the adjective ‘kind’ to describe his father but later reports that he would not want to be like his father as he wants to be kind (see 3.1.4.)

**Minor violations.**

**Dysfluency of discourse.** Any excessive pauses, hesitations, digressions should be noted. The dialogue is principally initiated from the child and the interviewer prompts are kept to a minimum.

**Perseveration.** The extent to which the child may become stuck in talking about a person, event or feeling and cannot seem to respond to the new demands of the interview. The narrative therefore may contain repetitious descriptions. Excessive Perseveration would link to unresolved classification.

When scoring attention must be paid to the frequency and intensity of violations to coherence and/or positive indices of coherence.
1 – **Highly Incoherent.** The narrative contains consistent major and minor violations and there is no evidence of positive indices of coherence. Violations may include:

General comments are either consistently unsupported by specific examples or actively contradicted.

3 – **Incoherent.** Major violations predominate and the narrative is full of minor violations. There is no more than one positive index of coherence.

5 – **Moderately coherent.** The narrative contains a few coherent passages but there are quite a number of minor violations and no more than 2 major violations. However, a narrative that contains more than 4 positive indices of coherence, despite several major violations, can be assigned this rating.

7 – **Coherent.** There is no more than one major violation and only 2-3 minor violations. However, the presence of positive indices is not necessary to be assigned this rating.

9 – **Highly coherent.** There are no examples of major violations and only 1-2 minor violations. However, to be assigned this rating at least one positive index of coherence must be present.
4.2 Behavioural Analysis.

4.2.1 Marked behaviour change in response to a particular question, e.g.; turning away, drawing legs up to body, slouching in chair.

4.2.2 Marked anxiety during interview (e.g., fidgeting, rocking, wanting to go back to parent).

4.2.3 Maintenance of eye contact.

4.2.4 Tone of voice both overall (e.g., flatness, excitement) and in relation to particular questions.

4.2.5 Discrepancy between behaviour in the interview and the content of the narrative. Pay particular attention to emotional openness and coherence scales. For example, a child may smile or laugh when recounting an incident of being frightened and chased by his angry mother and subsequently crying under the bed covers. In this example, there is a clear incongruence between the child's behaviour, i.e., smiling, and the content of story, which was clearly distressing for the child. (This can be seen as a dual communication where the content reveals that the child is in touch with vulnerable feelings/ shows a degree of emotional openness but his/her manner is in opposition to the content.

4.2.6 Ability to maintain engagement with the task throughout interview. Negotiation of appropriate boundaries within the interview setting. The child should ideally maintain a healthy degree of guardedness and reserve in relation to the interviewer whilst not compromising emotional openness.

5.0 Guidelines for Assigning Attachment Classifications with Respect to Mother and Father

1) Assign an overall rating for mother and father independently.

To obtain a Secure classification, the child must receive a rating of 5 or above on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or less on the Idealisation, Dismissal and Preoccupied Anger Scales.

To obtain an Insecure classification, the child must be assigned a rating of 5 or less on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.

2) Assign a sub-classification of Secure/Very Secure or Insecure/Very Insecure.
To obtain a Very Secure sub-classification, the child must receive a score of 7 or above on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or less on the Idealisation, Dismissal and Preoccupied Anger Scales.

To obtain a Very Insecure sub-classification, the child must receive a score of 4 or below on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 5 or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.
APPENDIX C. CAI CODING TABLE

Date of Rating:________ Name of Rater:________ Child ID:________ Age of Child________ Date of testing:______  

Background Information (Who child lives with?, contact with grandparents?)

<table>
<thead>
<tr>
<th>Self - Description</th>
<th>Transcript of episodic examples / General notes</th>
<th>Notes/Relevant Scales</th>
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CAI OVERALL RATING SHEET

<table>
<thead>
<tr>
<th>ID No.</th>
<th>Age</th>
<th>Interviewer</th>
<th>Rater</th>
<th>Date</th>
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**EMOTIONAL OPENNESS:**
1-9 high

**BALANCE OF POSITIVE/NEGATIVE REFERENCE TO AFS:**
1-9 high & record of frequency

**USE OF EXAMPLES:**
1-9 high & record of frequency

**PREOCCUPIED ANGER:**
Mother 1-9 high
Father

**IDEALISATION:**
Mother 1-9 high
Father

**DISMISSAL:**
Mother 1-9 high
Father

**RESOLUTION OF CONFLICTS WITHIN RES:**
1-9 high & record of frequency

**OVERALL COHERENCE:**
1-9 high
BEHAVIOURAL ANALYSIS

Marked behaviour change (If marked behaviour change occurs, in response to what Question):

Marked anxiety during interview (As above):

Maintenance of eye contact:

Tone of voice and Marked change (As above):

Discrepancy between behaviour and content of narrative (As above):

Overall Attachment Classification with respect to Mother and Father

<table>
<thead>
<tr>
<th>Attachment Figure</th>
<th>Main Classification</th>
<th>Sub-Classification</th>
</tr>
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<tbody>
<tr>
<td>Mother</td>
<td></td>
<td></td>
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<tr>
<td>Father</td>
<td></td>
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</tbody>
</table>
State the questions to which responses relate for each of the appropriate scales, i.e., Question No., and why the example/s are relevant to the rating of the respective scales.

**Emotional Openness**

**Balance of Positive/Negative**

**Use of Examples**

<table>
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<th>Father</th>
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<td>Father</td>
</tr>
<tr>
<td>Dismissal</td>
<td>Mother</td>
<td>Father</td>
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</table>

**Resolution of Conflicts**

**Overall Coherence**
CHILD ATTACHMENT INTERVIEW (CAI) CODING AND CLASSIFICATION MANUAL

WORKING DRAFT VERSION II– JUNE 1999

Developed by
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**Childhood Attachment Interview Scoring Manual**

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1.0 Background

The CAI scoring system incorporates elements from both the Strange Situation Procedure (SSP) scoring and the Adult Attachment Interview (AAI) scoring and classification systems.

The CAI is conceptualised as in some respects analogous to the SSP in that it calls upon the activation of the attachment system and is characterised as a meeting between a child and a stranger/experimenter in an unfamiliar setting. It is thus postulated that the child would draw upon mental representations or Internal Working Models (IWMs) of his/her attachment figure/s in the interview as enabling or inhibiting engagement in the task. Children who hold IWMs of parents as a secure base, as accessible and responsive are likely to be less resistant and anxious. These children would also exhibit a higher degree of emotional openness and greater coherence in the interview thus drawing "Parallels between the secure base phenomenon in infancy and the security implicit in emotional openness" in later childhood (Kaplan, 1984). Hence, the nature and quality of the experimenter - child interaction and the degree to which material raised within the interview is explored may in some ways reflect the child's IWMs of his/her attachment figures. Whilst the CAI is designed to access the child's mental representations of parents, the coding also relies upon behavioural analysis from videotape as an important source of information in arriving at an attachment classification.

The scoring system is based initially on identifying Relationship Episodes (REs) within the entire interview. REs are subsequently coded individually and form the basis for an overall attachment classification with respect to Mother and Father independently.

2.0 Working Definition of REs

Any part of the narrative where the child describes an interaction between themselves and an attachment figure would constitute an RE. Most REs would involve interaction with the child's mother and/or father. Some REs may include other family members, teachers and friends and these episodes may be used to inform the child's overall attachment classification. However, on occasions it is necessary to apply a more flexible definition when the narrative produced by the child concerning attachment-related experiences is impoverished. In those circumstances, 'non-interactions' should be recorded especially in children who adopt an avoidant style, as often these are the best these children will provide.
Clear examples of relationship episodes:

"My relationship with my mum is good because we just like to be together. Often we will just have cuddles together because we like each other".

"My relationship with my mum is dodgy at times. She gets angry with me when I have an argument with my brother and will send me to my room. A few minutes later she would call me and I would say sorry."

Example of a ‘non-interaction’:

"The last time I was with my mother was yesterday. I was playing football with my friends outside".

This example would constitute a ‘non-interaction’ in that although AF is alluded to, there is no direct contact between the child and the AF.

3.0 Coding Sequence

Step 1: Identify Relationship Episodes (REs) throughout the interview and record on coding sheet.

Step 2: Assign rating on scales identified in coding manual.

Step 3: Based upon rating assigned in step 2, assign Secure/Insecure attachment classification with respect to Mother and Father independently.

Step 4: Assign a sub-classification of Secure/Very Secure or Insecure/Very Insecure.
4.0 Operational Criteria for scoring REs

The following scales could be grouped in different categories – could be linked to a particular attachment classification, could be a form vs. content distinction; experience scales vs. state of mind scales.)

4.1 Linguistic Analysis

4.1.1 Emotional Openness and range of emotional terms used. This scale is concerned with the affective description rather than the behavioural expression of the child. Emotional openness takes into account the range of feelings that the child describes, the degree to which the child is able to place those feelings within a relational context and has an appreciation and is able to express the interplay of affect, mental states and behaviour. Emotional openness is rated on a nine-point scale with 1 for low emotional openness and 9 for high emotional openness.

1 – No mention of affect and no illustrations. A child who makes little or no reference to emotional states of self and others throughout the narrative. A narrative that is dominated by concrete and physical characteristics of self and others. Descriptions of AFs are set within a utilitarian frame and they are only valued for what they can do or provide in material terms.

3 – Affects are labelled but not illustrated. A restricted range of affects are mentioned and are rarely accompanied by descriptions, which if present are impoverished. In addition, emotional states are not recognised as being temporary and there is no appreciation of their impact upon others.

5 – Limited range of affects only substantiated to a small degree. The child is able to identify and express a limited affective range and provides limited episodic illustrations. There is the sense that the child provides the basic structure of the emotional narrative such that the gaps can predominantly be completed by the rater. Hence, illustrations are present but are not fully elaborated. Additionally, the child may show limited understanding of the impact of emotional states on others.

7 – A full range of emotional states with some elaborated examples. The child identifies multiple affects grounded in relevant examples. However, richly detailed illustrations are not consistent throughout
the narrative and the rater is required to 'fill-in' the gaps. The child may demonstrate an understanding of the impact of emotions on others and recognise that emotional states change across time and context.

9 – Affectively laden narrative with consistently detailed illustrations. High emotional openness. The child is able to describe a variety of emotional states and recognises that emotions are temporary and context specific. The child is able to provide a detailed depiction of his or her feelings, which are grounded in the REs and/or in the social context described, and also demonstrate an understanding of their likely impact on others.

4.1.2. Balance of Positive and Negative References to Attachment Figures (AFs). The child is able to describe both good and bad qualities of, and interactions with, their AFs and does not solely refer to the AFs in negative or positive terms. (NB. It is expected that the majority of children will tend to use more positive terms to describe their parents. This bias towards the positive should be considered when rating). This scale is independent of the Use of Examples scale and should be rated accordingly.

1 – Extreme polarisation. A child who refers to AFs solely in positive or negative terms. The child’s narrative does not contain references to the alternative viewpoint.

3 – Unbalanced. Some mention of both positive and negative attributes of at least one parental figure but this only occurs in one part of the interview. If child does mention the alternative viewpoint, he/she adopts a strategy in order to block out the thought by not talking, replying, “I don’t know” or digressing.

5 – Moderately balanced. In approximately half of the narrative there is evidence of the child being able to consider both positive and negative aspects of AFs. This contemplation may be tentative and unelaborated.

7 – Balanced. Mixed emotions are expressed throughout the majority of the interview. The child is able not only to contemplate but also express both positive and negative references to AFs.

9 – Highly balanced. A child who is able to label both positive and negative aspects of the relationship with AFs throughout the
narrative. The child shows evidence of being able to contemplate, express, and fully elaborate upon both aspects of AFs.

* Brief example of a highly balanced response.

“My relationship with Dad is fun and dodgy. It is fun because we make up jokes together and dodgy because he teases me”. (Rate 9)

4.1.3 Use of Examples. In extreme avoidance the child consistently cannot remember, or replies with “I don’t know” or “nothing”. In such cases it is important to crudely establish that the child is using an avoidance strategy rather than genuinely not being able to recall. It is therefore essential to prompt for other more concrete memories such as what the child did the previous day or what the child ate for dinner the previous evening. This would allow to possibly distinguish forgetting from ‘defensive exclusion’ (Bowlby, 1980). The idealising child would be able to provide a generalised description of their overall relationship with their AFs but will not be able to substantiate it with specific examples. Another (impoverished) pattern can be observed where the child is unable to provide either generalised descriptions or specific examples pertaining to AFs.

1 – No examples despite frequent prompting.

3 – Very occasional use of examples. Interviewer elicits them but the examples provided are not relevant or illustrative. The examples are either rare or not detailed and do not provide a complete account of the RE despite prompts. There is not one single illustrated answer.

5- Limited. Around half of the prompts elicit examples, they are on the whole understandable but not very detailed. The interviewer needs to use his or her imagination to fill in the gaps. All the examples are very recent or only dominant themes are presented. Only one good example is provided. Children who offer examples that are tangential, or consistently provide superfluous detail, which is irrelevant to the question being addressed, should be assigned this rating.

7 – Predominantly illustrative examples. Relatively little difficulty in offering detailed examples, although some of the examples will be irrelevant or narrow. At least three richly detailed, appropriate and relevant examples should be offered.
9 – Fully illustrated examples. At least four richly detailed and complete examples are provided with minimal prompts. The examples provided need to be relevant and appropriate.

4.1.4 Preoccupied Anger. The degree to which the child expresses anger or complaint that is uncontained or even overwhelming when describing REs. A distinction is drawn between the expression of anger which in an attachment context could serve to call forth caretaking behaviour (involving, appealing for support or sympathy), and aggression or violence that seeks to attack attachment figures and threaten attachment relationships (distancing or destructive). Only expressions of angry, ‘involving’ complaint or criticism should be rated on this scale, and not aggression against the relationship. Note that some descriptions which are predominantly scornful or derogatory in tone will score on this scale if they are laboured with the apparent (though probably unconscious) intention of enlisting the interviewer’s response – such as sympathy, indignation or interest - rather than briefly mentioned in a way that suggests the child is not interested in eliciting others’ agreement or reaction. Code separately for each parent. Code based on strongest example for each parent, not on overall level (one clearly angry, involving description is enough for a high score overall).

1 – Anger may be described, but is not re-experienced and if described has clearly been resolved. Thus, no current anger is expressed.

3 – Anger is expressed and re-experienced to a slight degree. Traces of anger or resentment are present. However, anger is contained and is not pervasive.

5 – Anger is clearly shown and is not resolved. However, it is not markedly preoccupying or intrusive at irrelevant times. Anger or complaint is not a dominant theme, and there is no sense of the interviewer being invited to join in blaming the ‘offending’ parent. Expression of resentment does not escalate (e.g. one complaint leading to another, or anger intensifying as events are remembered and described), or lead to extensive or unasked for descriptions of bad things the parent did. Still, it seems that the child’s picture of the parent is infused with disappointment or grievance to some degree.

7 – Anger is expressed in description of REs and is unresolved. There is an indication of escalation of anger (see under 5), that brings forth other related memories or uncontained expressions of affect. The child’s references to anger, or to situations which they see as
unfair, cruel, etc, seem to fuel a preoccupation with grievance in that relationship. There is at least one overt or subtle effort to enlist the interview to agree, or to evoke sympathy for the child as victim (e.g. “you wouldn’t believe what she’s like”, “he always picks on me”, “do you know what I mean?”, “how would you like it if your mum left you waiting to be collected every time?”, “nobody else’s Dad in my class behaves like that”).

9 – Anger is clearly expressed, and escalation or pressure on the other person is evident to the rater. References to anger are made which are clearly uncontained in one or more of several ways. Resentment may leak into other parts of the narrative; it may lead to long, detailed ‘charges’ against the parent; there may be tirades against the parent enacted within the interview; the child may react to the interviewer with anger if his or her complaints are apparently not sufficiently supported; the child may make an explicit bid for agreement. Anger or grievance may be a pervasive theme, or there may be evidence of strong feeling which has the unconscious function of drawing the listener into identification with the child (whether or not this actually is the effect on the listener).

* Example of resentment that is re-experienced to a moderate degree. A child describing an episode when she was injured:

“Last time I’ve been to hospital was when I cracked my eyebrow. I’ve got a scar there (shows interviewer). What happened? I fell out of bed. It was this big sideboard like that and it was really sharp and I fell out of bed, whack, on the corner of it, O.K.? And I woke up and started to cry and then my mum came in and it was pitch black she didn’t even bother to turn the light on and you know when you bleed you can taste the blood in your mouth I said “mw-n its bleeding” and she said “no its probably just tears” she said “hold on a minute” and she turned the light on and blood everywhere dripping on the side of my face and all over the pillow and she didn’t even take me to hospital till the morning, 8 hrs after it happened. And then one night I was in bed and she got an ear ache and she took me to hospital, 11.30 at night, and she wouldn’t take me to hospital when I cracked my eyebrow because she couldn’t be bothered. I mean it’s a bit unfair because she takes herself to hospital at 11.30 and she doesn’t take me at 2 in the morning.” (Rate 7)

4.1.5 Idealization of Attachment Figure/s. This scale measures the extent to which the child’s representations of AFs are distorted in a positive direction. Idealisation on this scale is rated on a continuum from ‘no idealisation’ to ‘highly idealising’ and does not measure detached derogation, which is included for within the dismissal scale below.
The child who only provides generalised positive descriptions of attachment figures and relationships that are not substantiated by concrete examples will rate at least moderately highly on this scale. Evidence for distortion is identified in the relationship between generalised descriptions and probable experience, (Note, in contrast to the AAI coding scheme, if there is little or no evidence for positive adjectives but there is also little or no evidence to contradict them, the ratings should be no higher than moderate. We distinguish between poverty of representation and clear distortion.) Ratings on this scale are assigned independently of ratings on the balance of positive and negative references to AFs, in that idealising children may not use more positive descriptions than other children but the discrepancy between the general and specific is the basis for this rating. The central question the rater is asking is “How credible are general descriptors of AFs in the light of specific examples?” Thus, a child who gives neutral adjectives and evaluations, but describes episodes in which the parents are very rejecting or abusive, would be rated as moderately idealising, as would a child who gives emphatically positive adjectives (“brilliant, really great, really loving”) but offers only limited support for these.

**Code separately for each parent.**

Preliminary analysis of existing interview responses suggests that children may adopt the following strategies of idealisation. These however, are not mutually exclusive and can all be manifest within the same narrative:

I. The child may provide a generalised description but does not substantiate it with an example (e.g. responses such as ‘I don’t know’ or ‘I can’t remember’ in response to requests for specific examples for generalised descriptions).

II. The child may provide a positive generalised description that is subsequently contradicted by an unfavourable example (e.g., a child may describe his/her mother as ‘very loving’ and then provide an example where the mother was rejecting in some way).

*The following is an extract from a girl explaining why she sees her relationship with her mother as “friendly”:*

“Well, we don’t have many fights so ahm, we rarely fall out.” *Can you give me an example of when it felt friendly with your mum?* Well, my sister and my mum and dad were having a fight about who fed the guinea pig. Me and my sister kept fighting about it and then my sister was threatening like my mum and my mum was threatening my sister and everything and then ahm, I kind of like felt a bit scared and then I came downstairs and my mum was being friendly to me. Well, my mum was threatening to kill the guinea...
pigs and my sister said 'If you kill the guinea pigs I am going to run away and everything' (Rate 7)

III. The child provides a generalised description that is only partly substantiated by near-miss examples. Near-miss examples are those where the child initially offers a seemingly contradictory or irrelevant example which subsequently is turned around and shown to be relevant (e.g., child describes mother as ‘caring’ and offers an incident where the mother was unable to take care of the child’s needs, but later episodes described in the interview suggest that the mother is sometimes available to meet the child’s needs).

In addition, in an attempt to present AF/s as ‘ideal’, some children may offer gratuitous praise of parent out of context and use positive wrap-up when discussing untoward experiences with AFs.

An additional indication of idealisation is reflected in idealisation of the self. {See Case 257}

Preliminary data suggests that some children (particularly those of divorced/separated parents) tend to split the parents, one is the all-good parent (and thus idealised) and the other is the all-bad parent and thus derogatingly dismissed and/or angrily accused.

*Example of the good/bad parent split

In response to the first question of the interview regarding the child’s family background, the child responded by reporting that “I like my dad better than my mum because my mum never plays with me cause her knees and her arms hurt cause she had to carry me when I was a baby”. In response to the question of what happens when mum gets upset with you, the same child responded “sometimes she slaps me on the cheek but she doesn’t like always tell me when she’s ready for it like my dad does. Right. Do you remember the last time that happened? When I was 5 but a bit more long ago. What had you done? She slapped me on the cheek like that (shows interviewer) and it really hurt. What had you done? Well like this person wanted this little room and I was like trying to show her where everything was and my mum got really like ahm jealous about that or something because ah she thinks like that she is the boss in the house but actually it’s not her house, it’s my dad’s cause he bought it first”. (Rate 7)

1 - Positive generalised statements concerning AFs and experiences are consistently supported by relevant REs. The child provides episodic examples that are relevant, do not contrast with the general description given, and does not employ any of the strategies
of idealisation presented above. Examples can be brief but must not be contradictory.

3 - Positive generalised descriptions are on the whole substantiated by specific REs. However, there may be one or two instances where the child does not provide convincing examples and may employ any one of the strategies of idealisation outlined above.

5 - Generalised positive descriptions of attachment figures and relationships are only partly supported often by unclear, or near miss, episodic examples. Alternatively, the child may provide episodic examples, which are mildly contradictory or partial. The child may provide a neutral statement that is not supported, i.e. the probable experience emerges as distinctly negative, but adjectives and generalisations are neutral. For example, the mother may be described as ok, an ordinary mum, but the stories related suggest mild rejection or neglect.

7 - Generalised positive descriptions are rarely substantiated by specific examples. Very positive generalised descriptions of AFs may be sparsely supported. A neutral description may be associated with a markedly negative and thus contradictory example, or there are several instances where the valence of the story clearly shifts from positive to negative. Neutral or balanced descriptions may be contradicted by episodes, which contain moderately or severely rejecting or abusive behaviour.

9 - Very positive generalised descriptions are prevalent throughout the narrative and are not substantiated by specific examples. If episodic examples are provided, these are invariably contradictory to the generalised descriptions put forward. The child may throw in gratuitous praise, alternatively, shifts from positive to negative valence may be pervasive throughout the narrative. It is unlikely that neutral or balanced adjectives could lead to an extreme rating on idealisation.

4.1.6 Dismissal and/or Derogation of Attachment. This scale measures the extent to which the child adopts a strategy that serves to minimise the importance of AFs and relationships by active dismissal and/or derogation. Any expression of vulnerability, dependency or the need for comfort from AFs is deliberately rejected and excluded. The degree to which information concerning attachment-related stress such as child’s illness, physical hurt, conflicts, separations and death is excluded from consideration is central in
rating on this scale. Whilst some children may actively derogate AFs or attachment experiences, the expression of derogation is not necessary for high ratings to be assigned. In assigning a rating on this scale, the probable specific experience of the child is considered but the rating should be independent of the child’s history. For example, a separation of two weeks would be considered a major event even if the child has experienced repeated separation events in their earlier life. In addition, the degree of dismissal as operationalised on this scale is dependent upon the severity of the event and the age of the child at testing.

Accordingly, three classes of events have identified from minor through to major. Thus, it is assumed that such events have varying degrees of impact upon the child and the attachment relationship. The child’s failure to acknowledge the effect of a major event as a potential threat to the attachment relationship will be rated highly on this scale, whereas a child who fails to acknowledge the likely impact of a minor event will only receive a low to moderate rating.

However, ratings assigned on this scale are based upon responses to separations described in the interview as a whole. Some children may describe potentially major separations as of little consequence but consider at greater length the impact of other moderate or minor separations. Such responses need not be considered as indicative of a dismissing/devaluing strategy and will not necessarily receive a high rating on this scale.

As a guide the following can be used but the age of the child also needs to be taken into account:

Minor event: The child experiences a physical or emotional pain that would normally require the parent to comfort the child. Examples would include situations such as when the child is ill with a cold/flu/or other minor childhood ailment, child has an accident that can be immediately attended to and does not require medical intervention,

Moderate event: Circumstances that would constitute a moderate event include a planned separation of 1-2 days duration, more significant accidents or illnesses which require medical intervention.

Major event: These events, by definition, are not likely to occur very often. Separations of longer than one week, unplanned separations, loss through death of close family member or friends (often pets will fall into this category but not necessarily), serious physical injuries or illnesses which require prolonged medical intervention which may include hospitalisation.
1 – **Valuing.** The child affectively acknowledges both minor and major events and appears comfortable with expressing vulnerability in response to separation and loss.

3 – The child **expresses some feeling of vulnerability** in relation to some major events but denies vulnerability with respect to some minor events.

5 – **Emotional vulnerability in response to minor events is largely denied.** Some acknowledgement of the impact of major events is present but this may be limited.

7 – The feelings of vulnerability evoked by separation and loss are denied for all minor events and the majority of major events, although these may be partially acknowledged. Active derogation of AFs of relationship may also be expressed.

9 – **Affect is deliberately and systematically excluded.** Vulnerability to rejection and disappointment is denied and the self is presented as invulnerable. Major events, e.g. separation from parents for longer than 3 days, are completely denied or dismissed as inconsequential. Derogation may be present but is not necessary for a rating of 9.

*Example of a child clearly valuing his attachment relationships.*

Have you ever been away from your parents for more than one day? *Twice.* *I went away for three weeks.* Wooww. *On a camp. I stayed away for 2 weeks and then they came to visit me and I, I did cry though.* What was it like to be away from your parents? *Oh, it was quite good.* Yah? *Good fun, camp, especially when um went to ’96, no not ’96, the ’97 camp, that was awful.* But you said that you cried a bit. *Yah I did, I did .. cause I missed them a lot then... the first camp I went to I was crying on the first night and one of the leaders came up and said what’s the matter and I said I want my mum and everyone burst out laughing and now the rumours going around and I don’t really, I just say it’s not true cause I don’t, I mean I know it’s a lie...* What was it like to see your parents again? *Hummmm..it was very,* I mean I was quite excited, I mean they came quite early cause every Sunday we have a mass at 10 o’clock, we have a mass, and I was coming out of the church and I thought they’re probably going to be late again cause they were late last year and straight away I saw my mum and thought oh good. *(Rate 1)*
*Example of a child who fails to acknowledge any vulnerability vis-à-vis separation from parents.

*Example of a child who fails to acknowledge the impact of the loss of great grandmother and pet.

Has anyone, has anyone close to you ever died, anyone that's been close to you? Well someone, I know someone who ever died? Yah, do you know anyone? Yup, um well, my godfather's mum, and my great great grandmother. And how did you feel when they died? I felt normal. Did you know them very well? A bit. A bit has a cat or an animal ever died? Yah, three tortoises. Three tortoises. And how did you feel when they died? Normal. Normal. How do you think other people felt? Normal, they didn't care. (Rate 6.5 because wasn't very close to the deceased).

4.1.7 Resolution of Conflicts. The child is able to recount an episode containing conflict, which is subsequently resolved. Solutions may be positive, negative or passive. Positive solutions include examples of reconciliation initiated by the child or parent. Negative solutions include destructive and potentially catastrophic scenarios that may be incomplete. Passive solutions are those where the child describes a situation where the conflict has not been directly addressed, e.g.; the child watches television or plays a computer game following a conflict or disagreement. Conflicts range in severity from a minor disagreement to conflicts arising from separation and loss.

1 – Clearly unresolved conflict. These are often characterised by destructive/ negative responses. For example a child may minimise the sense of separation by talking about absent people in the present tense.

3 – Unresolved.

5 – Limited resolution. Although resolutions to conflicts are not systematically addressed there is the sense conveyed to the rater that the issues have been resolved. The process of resolution is not described.

7 – Resolved
9 – Clearly resolved. Conflict is accurately reported and then is systematically addressed, ultimately arriving at a solution that seems satisfactory for the rater.

*Example of a conflict clearly resolved.

So you, what was, you were having this row and you threw the mousse. And I say together: across the room. And what did your mum do when she saw this mousse? She, she told me to go to my room and I knew then I was in big trouble so I went (eyebrows raised). Right, right. I was meant to stay there all the rest of the day (grimacing). Right. But I didn’t, I stayed in there for an hour (smile). Mm, and what did you do in your room? I read my Beano’s. Right. How did you get out of your room? I went out and I said sorry. Um, and what did your mum say when you said sorry? She... said.. she said that she cleaned up and that she was sorry too. What was she sorry about? She was sorry, because my dad was the one who made me angry. Right. She said that she was sorry my dad had made me angry. Right and so how come your dad had made you angry? He is just like that, he teases me a lot. And what was he saying? Um.. he was saying..like.. you’re a big poo and stuff [this is a childish expression, insult between preschool children, meaning piece of shit] Right and you didn’t like that? No Right .. and so you threw the mousse and then you left- were you ever able to get back to your dad and say you didn’t like it to him. Yeah tell me about that. I told him I didn’t like him teasing me and he said it was second nature to him and I took that as just like an easy way out and I told him that. He said it’s not and I said it is. (Rate 8)

4.1.9 Overall coherence. This scale to some degree integrates information from the Idealisation, Preoccupied Anger, Dismissing and Use of Examples Scales. These scales thus constitute feeder scales that are used to gauge the initial level of overall coherence, which is subsequently fine-tuned by consideration of violations and/or evidence of high coherence, as outlined below.

This scale comprises both positive and negative indices of coherence. Coherence indices are not weighted equally, some are considered to be more fundamental than others. Violations of coherence as manifested in various forms throughout the narrative may be compensated by evidence of reflectiveness, spontaneity and flexibility in discourse, all considered as positive indices of coherence.

A. Positive indices of coherence. Scores can be inflated by up to 2 points by the Positive indices of fresh speech and reflectiveness.
Fresh speech

Fresh speech is defined as speech that reflects new thinking and perhaps a new understanding, when the child is making sense of something for the first time, as distinct from a scripted, borrowed or well-rehearsed account. Such speech gives the impression of thinking aloud.

Reflectiveness

Reflectiveness refers to the ability to appreciate and consider intentionality in oneself and others. (This is currently being worked up into a separate scale, parallel to the reflective function scale for the AAI).

*Example of reflectiveness – representational diversity.

What happens then when you have a romp? Mm. Who starts it? Well, My dad picks me up and he jumps around really (smiling, playing with the collar on his shirt)... We play about. I stand on his feet and things. yah? That’s it really.... (playing with his hands which are down by the table, looking at interviewer on and off) It’s quite good fun really, that sort of thing. My mum is always a bit frail, um... sometimes I think it’s more fun to be with my dad because... I mean, he, sometimes I don’t like being with my dad I prefer being with my mum cause um my dad sometimes when um I bang my toe or something, he laughs and I don’t really like that because um, I think his laugh is, I know why he’s laughing, he’s laughing is because he thinks it looks funny, what I did but um, I think, I may think I’m hurt and if he laughs at that then I feel that it’s a bit like he’s hurting my feelings. Mm (nods) And sometimes, well sometimes, well when I was learning to ride a bike, um, we had the video camera, because we were borrowing it and um he told me to drive into, to steer into a bush so he could film it. And I did, and he laughed and I understood why he laughed because it’s meant to look funny, but um I actually banged my knee on the wall and I, I started crying and um he, he kept on laughing cause he thought it was funny (looks down with hands on his cheeks, elbows on table) and then he realised (looks up at interviewer).

*Example of reflectiveness – defensive concealment of mental states

What was it like to be away from your parents? Oh, it was quite good. Yah? Good fun, camp, especially when um went to ’96, no not ’96, the ’97 camp, that was awful. But you said that you cried a bit. Yah I did, I did .. cause I missed them a lot then... the first camp I went to I was crying on the first night and one of the leaders
came up and said what’s the matter and I said I want my mum and everyone burst out laughing and now the rumours going around and I don’t really, I just say it’s not true cause I don’t, I mean I know it’s a lie, I just want to say that, so I don’t feel bad. So it was, so it was because of these horrible boys that you didn’t want to say that you missed your parents? Yah because they tease me about things. But it was my first camp so um I didn’t know what it was going to be like but um on second camp I was aware of what it was gonna be like so it was a lot better.

B. Negative Indices of Coherence – Violations to Coherence

When considering violations of coherence the rater should be mindful of the way in which the feeder scales have a bearing upon coherence. The components of coherence contained within these scales need to be extrapolated to provide a comprehensive evaluation of overall coherence. Thus, the feeder scales link with coherence in the following ways:

The “idealisation” scale highlights contradictions and inconsistencies contained within the narrative, and demonstrates the extent to which the child is able to provide convincing evidence for positive elements in what he or she says.

The “dismissing” scale reflects (amongst other things) the quantity of the narrative, i.e. those children with high scores on this scale are likely to provide very brief and incomplete descriptions.

The “use of examples” scale establishes the extent to which the child is able to provide relevant evidence for what they say. This scale is central in determining the comprehensibility of the narrative as a whole. Narratives that are impoverished in elaborated REs are considered low on the coherence scale.

The “preoccupied anger” scale, similarly to the “dismissing” scale, is affected by the quantity contained within the narrative. However, the “preoccupied anger” scale also requires passages which are overly detailed, potentially irrelevant and which have the function of drawing in the listener to take a position in relation to the child’s complaints against a parent. The underlying wish appears to be to enlist the interviewer into siding with the child as victim. The lowering of coherence is due to the element of distortion in thinking and relationship, which is involved, even if there is justice to the complaints and/or the interviewer is not led to be sympathetic.

Major violations.

Spontaneous Vs inhibited narrative production/Comprehensibility. This concerns the extent to which the child is able to produce a narrative that is constructed with a limited number of interviewer prompts. Does the narrative hang
together? How much mental effort does it take to understand the narrative? Are stories conflated, or the relevance not obvious? Does the narrative contain too much or too little detail?

**Contradiction and inconsistencies within narrative.** For example, a child who uses the adjective ‘kind’ to describe his father but later reports that he would not want to be like his father as he wants to be kind (see 3.1.4.)

**Minor violations.**

**Dysfluency of discourse.** Any excessive pauses, hesitations, speech impediments and inappropriate words should be noted.

**Perseveration.** The extent to which the child may become stuck in talking about a person, event or feeling and cannot seem to respond to the new demands of the interview. The narrative therefore may contain repetitious descriptions. Excessive perseveration could link to either a disorganised or a preoccupied classification.

When scoring, attention must be paid to the frequency and intensity of each type of violation to coherence, and/or positive indices of coherence.

1 – **Highly Incoherent.** The narrative contains consistent major and minor violations and there is no evidence of positive indices of coherence.

3 – **Incoherent.** Major violations predominate and the narrative is full of minor violations. There is no more than one positive index of coherence.

5 – **Moderately coherent.** The narrative contains a few coherent passages but there are quite a number of minor violations and no more than 2 major violations. However, a narrative that contains more than 4 positive indices of coherence, despite several major violations, can be assigned this rating.

7 – **Coherent.** There is no more than one major violation and only 2-3 minor violations. The presence of positive indices is not necessary to be assigned this rating.

9 – **Highly coherent.** There are no examples of major violations and only 1-2 minor violations. However, to be assigned this rating at least one positive index of coherence must be present.
4.2 Behavioural Analysis.

We have not yet developed a comprehensive behavioural analysis coding, or integrated it into the overall classification. However, this remains an important task for the near future. The indices below are among those we are aware of as likely to be telling.

4.2.1 Marked behaviour change in response to a particular question, e.g.; turning away, drawing legs up to body, slouching in chair.

4.2.2 Marked anxiety during interview (e.g., fidgeting, rocking, wanting to go back to parent).

4.2.3 Maintenance of eye contact.

4.2.4 Tone of voice both overall (e.g., flatness, excitement) and in relation to particular questions.

4.2.5 Discrepancy between behaviour in the interview and the content of the narrative. Pay particular attention to emotional openness and coherence scales. For example, a child may smile or laugh when recounting an incident of being frightened and chased by his angry mother and subsequently crying under the bed covers. In this example, there is a clear incongruence between the child's behaviour, i.e., smiling, and the content of story, which was clearly distressing for the child.

4.2.6 Ability to maintain engagement with the task throughout interview. Negotiation of appropriate boundaries within the interview setting. The child should ideally maintain a healthy degree of guardedness and reserve in relation to the interviewer (a stranger) whilst also showing the development of some trust, resulting in age-appropriate emotional openness.

5.0 Guidelines for Assigning Attachment Classifications with Respect to Mother and Father

Both top-down and bottom-up process. When assigning a classification the narrative must both be compatible with the specific ratings for the most important scales, and fit the main classification descriptors. In other words, the judgement of whether a child is secure is influenced not only by the relatively mechanical process of evaluating scale scores which contribute to coherence or incoherence of narrative and behaviour, and thus to classification as secure or insecure, but also by the overall interview quality. Thus, for instance a child might not score towards the
most insecure end of one of the 'feeder' scales, such as dismissal, preoccupied anger, use of examples, or emotional openness, yet the overall interview may give a clear impression that the child values attachment, and does have a close, warm and important relationship with the parent being considered. On the other hand, a child with few indicators of insecure attachment might nevertheless come across as being remote from potential attachment figures, or as superficially but unconvincingly producing the 'right' answers while perhaps being antagonistic to or unfamiliar with dependence or any close relationships. The balance of these factors would always need to be considered before deciding whether to settle for the classification which best fits the scale scores. Of course, cases such as these would prompt questions about whether the coding manual needs further elaboration for future cases. The procedure below describes our current practice in assigning a classification, while we work further on distinguishing subtypes and incorporating behavioural analysis, etc..

1) Assign an overall rating for mother and father independently.

To obtain a Secure classification, the child must receive a rating of 5 or above on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or less on the Idealisation, Dismissal and Preoccupied Anger Scales.

To obtain an Insecure classification, the child must be assigned a rating of 5 or less on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.

2) Assign a sub-classification of Secure/Very Secure or Insecure/Very Insecure.

To obtain a Very Secure sub-classification, the child must receive a score of 7 or above on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or less on the Idealisation, Dismissal and Preoccupied Anger Scales.

To obtain a Very Insecure sub-classification, the child must receive a score of 4 or below on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 5 or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.
APPENDIX C. CAI CODING CAN CLASSIFICATION SYSTEM – VERSION III

CHILD ATTACHMENT INTERVIEW (CAI)
CODING AND CLASSIFICATION MANUAL
VERSION III– JANUARY 2000

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Whilst this is the current version of the manual, work to update, modify and clarify the coding system is ongoing. The manual may not be circulated or quoted without prior permission from the authors.
MIDDLE CHILDHOOD ATTACHMENT INTERVIEW
SCORING MANUAL

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Background

The CAI scoring system incorporates elements from both the Strange Situation Procedure (SSP) scoring and the Adult Attachment Interview (AAI) scoring and classification systems.

The CAI is conceptualised as in some respects analogous to the SSP in that it calls upon the activation of the attachment system and is characterised as a meeting between a child and a stranger/experimenter in an unfamiliar setting. It is thus postulated that the child would draw upon mental representations or Internal Working Models (IWMs) of his/her attachment figure/s in the interview as enabling or inhibiting engagement in the task. Children who hold IWMs of parents as a secure base, as accessible and responsive are likely to be less resistant and anxious. These children would also exhibit a higher degree of emotional openness and greater coherence in the interview thus drawing "Parallels between the secure base phenomenon in infancy and the security implicit in emotional openness" in later childhood (Kaplan, 1984). Hence, the nature and quality of the experimenter - child interaction and the degree to which material raised within the interview is explored may in some ways reflect the child's IWMs of his/her attachment figures. Whilst the CAI is designed to access the child's mental representations of parents, the coding also relies upon behavioural analysis from videotape as an important source of information in arriving at an attachment classification.

The scoring system is based initially on identifying Relationship Episodes (REs) within the entire interview. REs are subsequently coded individually and form the basis for an overall attachment classification with respect to Mother and Father independently.

Working Definition of REs

Any part of the narrative where the child describes an interaction between themselves and an attachment figure would constitute an RE. Most REs would involve interaction with the child's mother and/or father. Some REs may include other family members, teachers and friends and these episodes may be used to inform the child's overall attachment classification. However, on occasions it is necessary to apply a more flexible definition when the narrative produced by the child concerning attachment-related experiences is impoverished. In those circumstances, 'non-interactions' should be recorded especially in children who adopt an avoidant style, as often these are the best these children will provide.

Clear examples of relationship episodes:

"My relationship with my mum is good because we just like to be together. Often we will just have cuddles together because we like each other".
"My relationship with my mum is dodgy at times. She gets angry with me when I have an argument with my brother and will send me to my room. A few minutes later she would call me and I would say sorry."

**Example of a ‘non-interaction’:**

"The last time I was with my mother was yesterday. I was playing football with my friends outside".

This example would constitute a ‘non-interaction’ in that although AF is alluded to, there is no direct contact between the child and the AF.

**Coding Sequence**

Step 1: Identify Relationship Episodes (REs) throughout the interview and record on coding sheet.

Step 2: Assign rating on scales identified in coding manual.

Step 3: Based upon rating assigned in step 2, assign a main attachment classification; Avoidant, Secure, Resistant, Disorganised, with respect to Mother and Father independently.

Step 4: Assign a sub-classification – Yet to be developed.
EMOTIONAL OPENNESS

This scale is concerned with the affective description rather than the behavioural expression of the child. Emotional openness takes into account the range of feelings that the child describes, the degree to which the child is able to place those feelings within a relational context and has an appreciation and is able to express the interplay of affect, mental states and behaviour. Emotional openness is rated on a nine-point scale with 1 for low emotional openness and 9 for high emotional openness. Ratings should be based upon a careful examination of the narrative as a whole.

1  No mention of affect and no illustrations

A child who makes little or no reference to emotional states of self and others throughout the narrative. The narrative may be dominated by concrete descriptions and physical characteristics of self and others. Descriptions of AFs are set within a utilitarian frame and they are only valued for what they can do or provide in material terms.

3  Affects are labelled but not illustrated

A restricted range of affects are mentioned but are rarely accompanied by descriptions. If affect states are elaborated upon, descriptions are considerably impoverished. In addition, emotional states are not recognised as being temporary and there is no appreciation of their impact upon others. Further, questions regarding emotional states may be responded to with a concrete, activity-based reply that is not grounded in the relationship and does actually avoid talking about emotions.

5  Limited range of affects only substantiated to a small degree

The child is able to identify and express a limited affective range and provides limited episodic illustrations. There is the sense that the child provides the basic structure of the emotional narrative such that the gaps can predominantly be completed by the rater. Hence, illustrations are present but are not fully elaborated. Additionally, the child may show limited understanding of the impact of emotional states on others.
The child identifies multiple affects grounded in relevant examples. However, richly detailed illustrations are not consistent throughout the narrative and the rater is required to 'fill-in' the gaps. The child may demonstrate an understanding of the impact of emotions on others and recognise that emotional states change across time and context.

9  Affectively laden narrative with consistently detailed illustrations

The child is able to describe a variety of emotional states and recognises that emotions are temporary and context specific. The child is able to provide a detailed depiction of his or her feelings, which are grounded in the REs and/or in the social context described, and also demonstrate an understanding of their likely impact on others.

- Example of labelling of affect with no illustration

*Has anyone close to you ever dies? Yea... How did you feel about it? Sad. It’s a loss. (Rate 4)*

- Example of action in place of affect.

*How did you feel when mum was upset? I feel like I shouldn’t have done it, when you get told off you know what you’ve done wrong” (Rate 3)*

- Example of a range of emotional states and their impact.

*Can you tell me what happened when your mum got cross with you? I can’t remember what happened but erm, what happened is my mum went up to her room and I went into my room and I was crying cause I don’t like it when she’s upset and then my sister went to see if she was alright. So how do you think she felt when that happened? Ahm well normally when she gets upset it’s probably cause I’ve done something, if I’ve done something really wrong or like if she’s, sometimes when she’s ill she just like, she gets not exactly moody but she’s not her normal self and she gets stressed out quickly. So how do you think she would have felt that time? Erm sad and if it was when I think yeah when she was ill so angry a little and upset. And how did you feel when that happened? Ahm I feel really upset cause I don’t like hurting anyone’s feelings especially not my mum’s. (Rate 8-9)*

- Example of a brief emotionally open response

What happens when you dad gets cross with you? He, he, I don’t really like it when he shouts at me, like, I like get a little scared. (Rate 6-7)
BALANCE OF POSITIVE/NEGATIVE REFERENCES TO ATTACHMENT FIGURES (AFs).

The child is able to describe both good and bad qualities of, and interactions with, their AFs and does not solely refer to the AFs in negative or positive terms. (NB. It is expected that the majority of children will tend to use more positive terms to describe their parents. This bias towards the positive should be considered when rating). Ratings should be based upon a careful examination of the narrative as a whole. This scale is independent of the Use of Examples scale and whilst it is in some respects associated with the ‘Idealisation’ scale, it is also independent of ‘Idealisation’. Children may present a solely positive view of attachment figures and therefore be judges as ‘Unbalanced’ on the above scale, but may consistently substantiate their general positive descriptions of attachment figures and thus receive a low score on the ‘Idealisation’ scale, denoting little or no ‘Idealisation’.

1 Extreme polarisation

A child who refers to AFs solely in positive or negative terms. The child’s narrative does not contain general references to the alternative viewpoint or elaborations.

3 Unbalanced

Some mention of both positive and negative attributes of at least one parental figure but this only occurs in one part of the interview. If child does mention the alternative viewpoint, he/she adopts a strategy in order to block out the thought by not talking, replying, “I don’t know” or digressing.

5 Moderately balanced

In approximately half of the narrative there is evidence of the child being able to consider both positive and negative aspects of AFs. This contemplation may be tentative and unelaborated.

7 Balanced

Mixed emotions are expressed throughout the majority of the interview. The child is able not only to contemplate but also express both positive and negative references to AFs.
Highly balanced

A child who is able to label both positive and negative aspects of the relationship with AFs throughout the narrative. The child shows evidence of being able to contemplate, express, and fully elaborate upon both aspects of AFs.

- Brief example of a highly balanced response.

"My relationship with Dad is fun and dodgy. It is fun because we make up jokes together and dodgy because he teases me". (Rate 9)

- Another example of a highly balance response.

*Can you tell me 3 words to describe your relationship with your dad, what it's like to be with your dad?* Yeah, he's quite grumpy, he's funny, and what's another word to describe him erm quite caring (Rate 8)
USE OF EXAMPLES

In extreme avoidance the child consistently cannot remember, or replies with “I don’t know” or “nothing”. In such cases it is important to crudely establish that the child is using an avoidance strategy rather than genuinely not being able to recall. It is therefore essential to prompt for other more concrete memories such as what the child did the previous day or what the child ate for dinner the previous evening. This would allow to possibly distinguish forgetting from ‘defensive exclusion’ (Bowlby, 1980). The idealising child would be able to provide a generalised description of their overall relationship with their AFs but will not be able to substantiate it with specific examples. Another (impoverished) pattern can be observed where the child is unable to provide either generalised descriptions or specific examples pertaining to AFs. Ratings should be based upon a careful consideration of the narrative as a whole.

1 No examples despite frequent prompting

In extreme cases, both the questions and the prompts elicit very few or no examples but merely generalities.

3 Very occasional use of examples

Interviewer elicits them but the examples provided are not relevant or illustrative. The examples are either rare or not detailed and do not provide a complete account of the RE despite prompts. There is not one single illustrated answer.

5 Limited

Around half of the prompts elicit examples, they are on the whole understandable but not very detailed. The interviewer needs to use his or her imagination to fill in the gaps. All the examples are very recent or only dominant themes are presented. Only one good example is provided. Children who offer examples that are tangential, or consistently provide superfluous detail, which is irrelevant to the question being addressed, should be assigned this rating.

7 Predominantly illustrative examples

Relatively little difficulty in offering detailed examples, although some of the examples may be irrelevant or narrow. At least three richly detailed, appropriate and relevant examples should be offered.
Fully illustrated examples

At least four richly detailed and complete examples are provided with minimal prompts. The examples provided need to be relevant and appropriate.
PREOCCUPIED/INVOLVING ANGER

The degree to which the child expresses anger or complaint that is uncontained or even overwhelming when describing REs. A distinction is drawn between the expression of anger which in an attachment context could serve to call forth caretaking behaviour (involving, appealing for support or sympathy), and aggression or violence that seeks to attack attachment figures and threaten attachment relationships (distancing or destructive). Only expressions of angry, ‘involving’ complaint or criticism should be rated on this scale, and not aggression against the relationship. Note that some descriptions which are predominantly scornful or derogatory in tone will score on this scale if they are laboured with the apparent (though probably unconscious) intention of enlisting the interviewer’s response – such as sympathy, indignation or interest - rather than briefly mentioned in a way that suggests the child is not interested in eliciting others’ agreement or reaction. Code separately for each parent. Ratings are based on the strongest example for each parent, not across the narrative as a whole. Thus one clearly angry, involving description would invariably lead to a high score overall.

1 Anger may be described, but is not re-experienced

If anger is described, it has clearly been resolved. Thus, no current anger is expressed.

3 Anger is expressed and re-experienced to a slight degree

Traces of anger or resentment are present. However, anger is contained and is not pervasive, and is not intended to draw the interviewer in.

5 Anger is clearly shown and is not resolved

However, it is not markedly preoccupying or intrusive at irrelevant times. Anger or complaint is not a dominant theme, and there is no sense of the interviewer being invited to join in blaming the ‘offending’ parent. Expression of resentment does not escalate (e.g. one complaint leading to another, or anger intensifying as events are remembered and described), or lead to extensive or unasked for descriptions of bad things the parent did. Still, it seems that the child’s picture of the parent is infused with disappointment or grievance to some degree.
Anger is expressed in description of REs and is unresolved

There is an indication of escalation of anger (see under 5), that brings forth other related memories or uncontained expressions of affect. The child’s references to anger, or to situations which they see as unfair, cruel, etc, seem to fuel a preoccupation with grievance in that relationship. There is at least one overt or subtle effort to enlist the interview to agree, or to evoke sympathy for the child as victim (e.g. “you wouldn’t believe what she’s like”, “he always picks on me”, “do you know what I mean?”, “how would you like it if your mum left you waiting to be collected every time?”, “nobody else’s Dad in my class behaves like that”).

References to anger are made which are clearly uncontained in one or more of several ways. Resentment may leak into other parts of the narrative; it may lead to long, detailed ‘charges’ against the parent; there may be tirades against the parent enacted within the interview; the child may react to the interviewer with anger if his or her complaints are apparently not sufficiently supported; the child may make an explicit bid for agreement. Anger or grievance may be a pervasive theme, or there may be evidence of strong feeling which has the unconscious function of drawing the listener into identification with the child (whether or not this actually is the effect on the listener).

Example of resentment that is re-experienced to a moderate degree. A child describing an episode when she was injured:

“Last time I’ve been to hospital was when I cracked my eyebrow. I’ve got a scar there (shows interviewer). What happened? I fell out of bed. It was this big sideboard like that and it was really sharp and I fell out of bed, whack, on the corner of it, O.K.? And I woke up and started to cry and then my mum came in and it was pitch black she didn’t even bother to turn the light on and you know when you bleed you can taste the blood in your mouth I said “mum its bleeding” and she said “no its probably just tears” she said “hold on a minute” and she turned the light on and blood everywhere dripping on the side of my face and all over the pillow and she didn’t even take me to hospital till the morning, 8 hrs after it happened. And then one night I was in bed and she got an ear ache and she took me to hospital, 11.30 at night, and she wouldn’t take me to hospital when I cracked my eyebrow because she couldn’t be bothered. I mean it’s a bit unfair because she takes herself to hospital at 11.30 and she doesn’t take me at 2 in the morning.” (Rate 7)
IDEALISATION OF ATTACHMENT FIGURE/S

This scale measures the extent to which the child’s representations of AFs are distorted in a positive direction. Idealisation on this scale is rated on a continuum from ‘no idealisation’ to ‘highly idealising’ and does not measure detached derogation, which is included for within the dismissal scale below.

The child who only provides generalised positive descriptions of attachment figures and relationships that are not substantiated by concrete examples will rate at least moderately highly on this scale. Evidence for distortion is identified in the relationship between generalised descriptions and probable experience, (Note, in contrast to the AAI coding scheme, if there is little or no evidence for positive adjectives but there is also little or no evidence to contradict them, the ratings should be no higher than moderate. We distinguish between poverty of representation and clear distortion.) Ratings on this scale are assigned independently of ratings on the balance of positive and negative references to AFs, in that idealising children may not use more positive descriptions than other children but the discrepancy between the general and specific is the basis for this rating. The central question the rater is asking is “How credible are general descriptors of AFs in the light of specific examples?” Thus, a child who gives neutral adjectives and evaluations, but describes episodes in which the parents are very rejecting or abusive, would be rated as moderately idealising, as would a child who gives emphatically positive adjectives (“brilliant, really great, really loving”) but offers only limited support for these. Ratings should be based upon a careful examination of the narrative as a whole.

An ‘Idealisation’ score is assigned independently to each parent.

Preliminary analysis of existing interview responses suggests that children may adopt the following strategies of idealisation. These however, are not mutually exclusive and can all be manifest within the same narrative:

I. The child may provide a generalised description but does not substantiate it with an example (e.g. responses such as ‘I don’t know’ or ‘I can’t remember’ in response to requests for specific examples for generalised descriptions).

II. The child may provide a positive generalised description that is subsequently contradicted by an unfavourable example (e.g., a child may describe his/her mother as ‘very loving’ and then provide an example where the mother was rejecting in some way).

• The following is an extract from a girl explaining why she sees her relationship with her mother as “friendly”:
"Well, we don't have many fights so ahm, we rarely fall out." Can you give me an example of when it felt friendly with your mum? Well, my sister and my mum and dad were having a fight about who fed the guinea pig. Me and my sister kept fighting about it and then my sister was threatening like my mum and my mum was threatening my sister and everything and then ahm, I kind of felt a bit scared and then I came downstairs and my mum was being friendly to me. Well, my mum was threatening to kill the guinea pigs and my sister said 'If you kill the guinea pigs I am going to run away and everything" (Rate 7)

III. The child provides a generalised description that is only partly substantiated by near-miss examples. Near-miss examples are those where the child initially offers a seemingly contradictory or irrelevant example which subsequently is turned around and shown to be relevant (e.g., child describes mother as 'caring' and offers an incident where the mother was unable to take care of the child's needs, but later episodes described in the interview suggest that the mother is sometimes available to meet the child's needs).

In addition, in an attempt to present AFs as 'ideal', some children may offer gratuitous praise of parent out of context and use positive wrap-up when discussing untoward experiences with AFs.

An additional indication of idealisation is reflected in idealisation of the self.

Preliminary data suggests that some children (particularly those of divorced/separated parents) tend to split the parents, one is the all-good parent (and thus idealised) and the other is the all-bad parent and thus derogatingly dismissed and/or angrily accused.

• Example of the good/bad parent split

In response to the first question of the interview regarding the child's family background, the child responded by reporting that "I like my dad better than my mum because my mum never plays with me cause her knees and her arms hurt cause she had to carry me when I was a baby". In response to the question of what happens when mum gets upset with you, the same child responded that "sometimes she slaps me on the cheek but she doesn't like always tell me when she's ready for it like my dad does. Right. Do you remember the last time that happened? When I was 5 but a bit more long ago. What had you done? She slapped me on the cheek like that (shows interviewer) and it really hurt. What had you done? Well like this person wanted this little room and I was like trying to show her where everything was and my mum got really like ahm jealous about that or something because ah she thinks like that she is the boss in the house but actually it's not her house, it's my dad's cause he bought it first". (Rate 7)
1 Positive generalised statements concerning AFs and experiences are consistently supported by relevant REs

The child provides episodic examples that are relevant, do not contrast with the general description given, and does not employ any of the strategies of idealisation presented above. Examples can be brief but must not be contradictory.

3 Positive generalised descriptions are on the whole substantiated by specific REs

However, there may be one or two instances where the child does not provide convincing examples and may employ any one of the strategies of idealisation outlined above.

5 Generalised positive descriptions of attachment figures and relationships are only partly supported.

Examples may be supported but often by unclear, or near miss, episodic examples. Alternatively, the child may provide episodic examples that are mildly contradictory or partial. The child may provide a neutral statement that is not supported, i.e. the probable experience emerges as distinctly negative, but adjectives and generalisations are neutral. For example, the mother may be described as ok, an ordinary mum, but the stories related suggest mild rejection or neglect.

7 Generalised positive descriptions are rarely substantiated by specific examples

Very positive generalised descriptions of AFs may be sparsely supported. A neutral description may be associated with a markedly negative and thus contradictory example, or there are several instances where the valence of the story clearly shifts from positive to negative. Neutral or balanced descriptions may be contradicted by episodes, which contain moderately or severely rejecting or abusive behaviour.

9 Very positive generalised descriptions are prevalent throughout the narrative and are not substantiated by specific examples

If episodic examples are provided, these are invariably contradictory to the generalised descriptions put forward. The child may throw in gratuitous praise, alternatively, shifts from positive to negative valence may be pervasive throughout the narrative. It is unlikely that neutral or balanced adjectives could lead to an extreme rating on idealisation.
DISMISSAL AND/OR DEROGATION OF ATTACHMENT

This scale measures the extent to which the child adopts a strategy that serves to minimise the importance of AFs and relationships by active dismissal and/or derogation. Any expression of vulnerability, dependency or the need for comfort from AFs is deliberately rejected and excluded. The degree to which information concerning attachment-related stress such as child’s illness, physical hurt, conflicts, separations and death is excluded from consideration is central in rating on this scale. Whilst some children may actively derogate AFs or attachment experiences, the expression of derogation is not necessary for high ratings to be assigned. In assigning a rating on this scale, the probable specific experience of the child is considered but the rating should be independent of the child’s history. For example, a separation of two weeks would be considered a major event even if the child has experienced repeated separation events in their earlier life. In addition, the degree of dismissal as operationalised on this scale is dependent upon the severity of the event and the age of the child at testing.

Accordingly, three classes of events have identified from minor through to major. Thus, it is assumed that such events have varying degrees of impact upon the child and the attachment relationship. The child’s failure to acknowledge the effect of a major event as a potential threat to the attachment relationship will be rated highly on this scale, whereas a child who fails to acknowledge the likely impact of a minor event will only receive a low to moderate rating.

However, ratings assigned on this scale are based upon responses to separations described in the interview as a whole. Some children may describe potentially major separations as of little consequence but consider at greater length the impact of other moderate or minor separations. Such responses need not be considered as indicative of a dismissing/devaluing strategy and will not necessarily receive a high rating on this scale.

As a guide the following can be used but the age of the child also needs to be taken into account:

**Minor event:** The child experiences a physical or emotional pain that would normally require the parent to comfort the child. Examples would include situations such as when the child is ill with a cold/flu/or other minor childhood ailment, child has an accident that can be immediately attended to and does not require medical intervention,

**Moderate event:** Circumstances that would constitute a moderate event include a planned separation of 1-2 days duration, more significant accidents or illnesses, which require medical intervention.
**Major event:** These events, by definition, are not likely to occur very often. Separations of longer than one week, unplanned separations, loss through death of close family member or friends (often pets will fall into this category but not necessarily), serious physical injuries or illnesses which require prolonged medical intervention which may include hospitalisation.

1  **Valuing**

The child affectively acknowledges both minor and major events and appears comfortable with expressing vulnerability in response to separation and loss.

3  **Some feelings of vulnerability are expressed**

Feelings of dependency and vulnerability in relation to some major events are clearly conveyed but vulnerability may be denied with respect to some minor events.

5  **Emotional vulnerability in response to minor events is largely denied**

Some acknowledgement of the impact of major events is present but this may be limited.

7  **The feelings of vulnerability evoked by separation and loss are denied**

Denial of emotional impact for all minor events and the majority of major events, although these may be partially acknowledged. Active derogation of AFs of relationship may also be expressed.

9  **Affect is deliberately and systematically excluded**

Vulnerability to rejection and disappointment is denied and the self is presented as invulnerable. Major events, e.g. separation from parents for longer than 3 days, are completely denied or dismissed as inconsequential. Derogation may be present but is not necessary for a rating of 9.

- Example of a child clearly valuing his attachment relationships.

Have you ever been away from your parents for more than one day? *Twice. I went away for three weeks. Wooww. On a camp. I stayed away for 2 weeks and then they came to visit me and I, I did cry though. What was it like to be away from your parents? Oh, it was quite good. Yah? Good fun, camp, especially when um went to '96, no not '96, the '97 camp, that was awful. But you said that you cried a bit. Yah*
I did, I did... cause I missed them a lot then... the first camp I went to I was crying on the first night and one of the leaders came up and said what's the matter and I said I want my mum and everyone burst out laughing and now the rumours going around and I don't really, I just say it's not true cause I don't, I mean I know it's a lie... What was it like to see your parents again? Hmmm...it was very, I mean I was quite excited, I mean they came quite early cause every Sunday we have a mass at 10 o'clock, we have a mass, and I was coming out of the church and I thought they're probably going to be late again cause they were late last year and straight away I saw my mum and thought oh good. (Rate 1)

- Example of a child who fails to acknowledge any vulnerability vis-à-vis separation from parents.

Can you think about a time when you were away from your parents or other reasons? I went on a ski trip (giggles). And what was it like?/ Twice. Being away from your parents? It was OK, I'm not that sort of person who, it was only when I was in hospital, I've never been homesick in my life. (Rate 9)

- Example of a child who fails to acknowledge the impact of the loss of great grandmother and pet.

Has anyone, has anyone close to you ever died, anyone that's been close to you? Well someone, I know someone who ever died? Yah, do you know anyone? Yup, um well, my godfather's mum, and my great great grandmother. And how did you feel when they died? I felt normal. Did you know them very well? A bit. A bit has a cat or an animal ever died? Yah, three tortoises. Three tortoises. And how did you feel when they died? Normal. Normal. How do you think other people felt? Normal, they didn't care. (Rate 6.5 because wasn't very close to the deceased).

- Example of a child clearly valuing hi attachment relationships

Has anyone close to you ever died? Yeah my granddad. Can you tell me what happened? He died because he was smoking too much and his lungs got blocked and he couldn't go out or nothing, he just had to stay in...And how did you feel about it? Very, very upset. And how do you think your mum and dad feel? Very, very upset, especially my mum. (Rate 1-2)

When asked “What was it like to be away from your mum and dad” the same child replied “I was getting a bit lonely, getting a bit lonely. (Rate 2-3)
RESOLUTION OF CONFLICT

The child is able to recount an episode containing conflict that is subsequently resolved. Solutions may be positive, negative or passive. Positive solutions include examples of reconciliation initiated by the child or parent. Negative solutions include destructive and potentially catastrophic scenarios that may be incomplete. Passive solutions are those where the child describes a situation where the conflict has not been directly addressed, e.g.; the child watches television or plays a computer game following a conflict or disagreement. Conflicts range in severity from a minor disagreement to conflicts arising from separation and loss. Ratings should be based upon a careful consideration of the narrative as a whole.

1 Clearly unresolved

Conflicts are often characterised by destructive/negative responses. For example a child may minimise the sense of separation by talking about absent people in the present tense.

3 Unresolved

Conflicts may be described. However, any reference to the resolution of conflicts is absent.

5 Limited resolution

Although resolutions to conflicts are not systematically addressed there is the sense conveyed to the rater that the issues have been resolved. The process of resolution is not described.

7 Resolved

The majority of conflicts described have been resolved and positive resolutions predominate.

9 Clearly resolved

Conflict is accurately reported and then is systematically addressed, ultimately arriving at a solution that seems satisfactory for the rater.

- Example of a conflict clearly resolved.
So you, what was, you were having this row and you threw the mousse. And I say
together: across the room. And what did your mum do when she saw this mousse?
She, she told me to go to my room and I knew then I was in big trouble so I went
(eyebrows raised). Right, right. I was meant to stay there all the rest of the day
(grimacing). Right. But I didn’t, I stayed in there for an hour (smile). Mm, and what
did you do in your room? I read my Beano’s. Right. How did you get out of your
room? I went out and I said sorry. Um, and what did your mum say when you said
sorry? She said.. she said that she cleaned up and that she was sorry too. What was
she sorry about? She was sorry, because my dad was the one who made me angry.
Right. She said that she was sorry my dad had made me angry. Right and so how
come your dad had made you angry? He is just like that, he teases me a lot. And
what was he saying? Um.. he was saying..like.. you’re a big poo and stuff [this is a
childish expression, insult between preschool children, meaning piece of shit] Right
and you didn’t like that? No Right .. and so you threw the mousse and then you left-
were you ever able to get back to your dad and say you didn’t like it to him? Yeah.
Tell me about that. I told him I didn’t like him teasing me and he said it was second
nature to him and I took that as just like an easy way out and I told him that. He
said it’s not and I said it is.  (Rate 9)

• Another example of a resolved conflict

What had you done? I didn’t hear what she said yeah and then I, I was upstairs yeah
and then I shouted out pardon and then she said um “don’t shout at me” and then I
said um I said, I forgotten yeah. And how did you feel when she said it? Erm (sighs)
upset. How do you think your mum felt? Really upset. Why do you think she did
that? Erm because I didn’t hear her and then I shouted out pardon...And how did
that sort itself out, what happened? Erm we hugged each other and we said sorry to
each other. (Rate 7-8)
OVERALL COHERENCE

This scale to some degree integrates information from the Idealisation, Preoccupied Anger, Dismissing and Use of Examples Scales. These scales thus constitute feeder scales that are used to gauge the initial level of overall coherence which is subsequently fine-tuned by consideration of violations and/or evidence of high coherence, as outlined below.

This scale comprises both positive and negative indices of coherence. Coherence indices are not weighted equally, some are considered to be more fundamental than others. Violations of coherence as manifested in various forms throughout the narrative may be compensated by evidence of reflectiveness, spontaneity and flexibility in discourse, all considered as positive indices of coherence.

Ratings should be based upon a careful examination of the narrative as a whole.

Positive indices of coherence. Scores can be inflated by up to 2 points by the positive indices of fresh speech and reflectiveness.

Fresh speech

Fresh speech is defined as speech that reflects new thinking and perhaps a new understanding, when the child is making sense of something for the first time, as distinct from a scripted, borrowed or well-rehearsed account. Such speech gives the impression of thinking aloud.

Reflectiveness

Reflectiveness refers to the ability to appreciate and consider intentionality in oneself and others. (This is currently being worked up into a separate scale, parallel to the reflective function scale for the AAI).

- Example of reflectiveness – representational diversity.

What happens then when you have a romp? Mm. Who starts it? Well, My dad picks me up and he jumps around really (smiling, playing with the collar on his shirt)… We play about. I stand on his feet and things. yah? That’s it really…. (playing with his hands which are down by the table, looking at interviewer on and off) It’s quite good fun really, that sort of thing. My mum is always a bit frail, um… sometimes I think it’s more fun to be with my dad because… I mean, he, sometimes I don’t like being with my dad I prefer being with my mum cause um my dad sometimes when um I bang my toe or something, he laughs and I don’t really like that because um, I think his laugh is, I know why he’s laughing, he’s laughing is
because he thinks it looks funny, what I did but um, I think, I may think I'm hurt and if he laughs at that then I feel that it's a bit like he's hurting my feelings. Mm (nods) And sometimes, well sometimes, well when I was learning to ride a bike, um, we had the video camera, because we were borrowing it and um he told me to drive into, to steer into a bush so he could film it. And I did, and he laughed and I understood why he laughed because it's meant to look funny, but um I actually banged my knee on the wall and I started crying and um he, he kept on laughing cause he thought it was funny (looks down with hands on his cheeks, elbows on table) and then he realised (looks up at interviewer).

- Example of reflectiveness – defensive concealment of mental states

What was it like to be away from your parents? Oh, it was quite good. Yah? Good fun, camp, especially when um went to '96, no not '96, the '97 camp, that was awful. But you said that you cried a bit. Yah I did, I did cause I missed them a lot then... the first camp I went to was crying on the first night and one of the leaders came up and said what's the matter and I said I want my mum and everyone burst out laughing and now the rumours going around and I don't really, I just say it's not true cause I don't, I mean I know it's a lie. I just want to say that, so I don't feel bad. So it was, so it was because of these horrible boys that you didn't want to say that you missed your parents? Yah because they tease me about things. But it was my first camp so um I didn't know what it was going to be like but um on second camp I was aware of what it was gonna be like so it was a lot better.

- Example of reflectiveness – ability to hold differing perspectives??

What happens when mum gets cross with you? Well say she sends us out of the room about ten minutes and then when she's clam down a bit she accepts us back in.... And how did you feel when that happened? Well I felt a bit annoyed cause I hadn't done it in purpose but then it was one of her favourite ornaments. I suppose I'll get angry if I had broken one, if someone broke one of my favourite ornaments.

Negative Indices of Coherence – Violations to Coherence

When considering violations of coherence the rater should be mindful of the way in which the feeder scales have a bearing upon coherence. The components of coherence contained within these scales need to be extrapolated to provide a comprehensive evaluation of overall coherence. Thus, the feeder scales link with coherence in the following ways:

The “idealisation” scale highlights contradictions and inconsistencies contained within the narrative, and demonstrates the extent to which the child is able to provide convincing evidence for positive elements in what he or she says.
The “dismissing” scale reflects (amongst other things) the quantity of the narrative, i.e. those children with high scores on this scale are likely to provide very brief and incomplete descriptions.

The “use of examples” scale establishes the extent to which the child is able to provide relevant evidence for what they say. This scale is central in determining the comprehensibility of the narrative as a whole. Narratives that are impoverished in elaborated REs are considered low on the coherence scale.

The “preoccupied anger” scale, similarly to the “dismissing” scale, is affected by the quantity contained within the narrative. However, the “preoccupied anger” scale also requires passages which are overly detailed, potentially irrelevant and which have the function of drawing in the listener to take a position in relation to the child’s complaints against a parent. The underlying wish appears to be to enlist the interviewer into siding with the child as victim. The lowering of coherence is due to the element of distortion in thinking and relationship, which is involved, even if there is justice to the complaints and/or the interviewer is not led to be sympathetic.

**Major violations**

**Spontaneous Vs inhibited narrative production/Comprehensibility.**
This concerns the extent to which the child is able to produce a narrative that is constructed with a limited number of interviewer prompts. Does the narrative hang together? How much mental effort does it take to understand the narrative? Are stories conflated, or the relevance not obvious? Does the narrative contain too much or too little detail?

**Contradiction and inconsistencies within narrative.**
For example, a child who uses the adjective ‘kind’ to describe his father but later reports that he would not want to be like his father as he wants to be kind (see 3.1.4.)

**Minor violations**

**Dysfluency of discourse.**
Any excessive pauses, hesitations, speech impediments and inappropriate words should be noted.

**Perseveration.**
The extent to which the child may become stuck in talking about a person, event or feeling and cannot seem to respond to the new demands of the interview. The narrative therefore may contain repetitious descriptions. Excessive perseveration could link to either a disorganised or a preoccupied classification.
When scoring, attention must be paid to the frequency and intensity of each type of violation to coherence, and/or positive indices of coherence.

1 Highly Incoherent

The narrative contains consistent major and minor violations and there is no evidence of positive indices of coherence.

3 Incoherent

Major violations predominate and the narrative is full of minor violations. There is no more than one positive index of coherence.

5 Moderately coherent

The narrative contains a few coherent passages but there are quite a number of minor violations and no more than 2 major violations. However, a narrative that contains more than 4 positive indices of coherence, despite several major violations, can be assigned this rating.

7 Coherent

There is no more than one major violation and only 2-3 minor violations. The presence of positive indices is not necessary to be assigned this rating.

9 Highly coherent

There are no examples of major violations and only 1-2 minor violations. However, to be assigned this rating at least one positive index of coherence must be present.
BEHAVIOURAL ANALYSIS

We have not yet developed a comprehensive behavioural analysis coding, or integrated it into the overall classification. However, this remains an important task for the near future. The indices below are among those we are aware of as likely to be telling.

- Marked behaviour change in response to a particular question, e.g.; turning away, drawing legs up to body, slouching in chair.
- Marked anxiety during interview (e.g., fidgeting, rocking, wanting to go back to parent).
- Maintenance of eye contact.
- Tone of voice both overall (e.g., flatness, excitement) and in relation to particular questions.
- Discrepancy between behaviour in the interview and the content of the narrative. Pay particular attention to emotional openness and coherence scales. For example, a child may smile or laugh when recounting an incident of being frightened and chased by his angry mother and subsequently crying under the bed covers. In this example, there is a clear incongruence between the child’s behaviour, i.e., smiling, and the content of story, which was clearly distressing for the child.
- Ability to maintain engagement with the task throughout interview. Negotiation of appropriate boundaries within the interview setting. The child should ideally maintain a healthy degree of guardedness and reserve in relation to the interviewer (a stranger) whilst also showing the development of some trust, resulting in age-appropriate emotional openness.
GUIDELINES FOR ASSIGNING ATTACHMENT CLASSIFICATIONS
WITH RESPECT TO MOTHER AND FATHER

When assigning a main attachment classification both top-down and bottom-up processing is required. Thus, the narrative must both be compatible with the specific ratings for the most important scales, and fit the main classification descriptors. In other words, the judgement of whether a child is secure is influenced not only by the relatively mechanical process of evaluating scale scores which contribute to coherence or incoherence of narrative and behaviour, and thus to classification as secure or insecure, but also by the overall interview quality. Thus, for instance a child might not score towards the most insecure end of one of the ‘feeder’ scales, such as dismissal, preoccupied anger, use of examples, or emotional openness, yet the overall interview may give a clear impression that the child values attachment, and does have a close, warm and important relationship with the parent being considered. On the other hand, a child with few indicators of insecure attachment might nevertheless come across as being remote from potential attachment figures, or as superficially but unconvincingly producing the ‘right’ answers while perhaps being antagonistic to or unfamiliar with dependence or any close relationships. The balance of these factors would always need to be considered before deciding whether to settle for the classification which best fits the scale scores. Of course, cases such as these would prompt questions about whether the coding manual needs further elaboration for future cases. The procedure below describes our current practice in assigning a classification, while we work further on distinguishing subtypes and incorporating behavioural analysis, etc.

I. Assign an overall rating for mother and father independently.

To obtain a Secure classification, the child must receive a rating of 5 or above on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or less on the Idealisation, Dismissal and Preoccupied Anger Scales.

To obtain an Insecure classification, the child must be assigned a rating of 5 or less on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 3 or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.

II. Assign a sub-classification of Secure/Very Secure or Insecure/Very Insecure.

To obtain a Very Secure sub-classification, the child must receive a score of 7 or above on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and
Overall Coherence. In addition, the child must be assigned a score of 3 or less on the Idealisation, Dismissal and Preoccupied Anger Scales.

To obtain a Very Insecure sub-classification, the child must receive a score of 4 or below on the scales of Emotional Openness, Balance of Positive/Negative References, Use of Examples, Resolution of Conflicts, self-Organisation and Overall Coherence. In addition, the child must be assigned a score of 5 or above on one of the following Idealisation, Dismissal and Preoccupied Anger Scales.
ATTACHMENT CLASSIFICATIONS

AVOIDANT/RESTRICTED

- Attachment is de-activated, down regulation of attachment

- Avoidant children frequently emphasise their independence and self-sufficiency. This is particularly pronounced in discussions of times of hurt or illness. Whilst secure children would turn to an attachment figures for help, support and comfort, avoidant children report relying upon themselves.

- Attempts to present attachment figures as ‘perfect’ or ‘ideal’ fail in the face of unsubstantiated adjectives or descriptive words to describe the relationship. Autobiographical memories are either relatively absent or actively contradictory to the description of the relationship at the abstract level.

- Some recounting of unfavourable experiences with attachment figures may be present and flaws in parents may be described but these are often unelaborated and/or are shortly after deflected or cancelled out with positive descriptions.

- Discussion of both positive and negative affect is largely absent, in particular feelings of vulnerability, need, and dependency. On those occasions where feelings are expressed, they are not elaborated upon but merely labelled. The sense is that avoidant children can label feeling states and know which are appropriate in different contexts, but responses are scripted, restricted and lack any connectedness and emotional quality. Further, labelling of feeling states often comes as a direct consequence of prompting from the interviewer and is rarely spontaneous expressions. Judges must therefore be very careful in distinguishing emotional openness from the simple and context appropriate labelling of affect.

- A characteristic marker of interviews of avoidant children is the strong emphasis on activities and material objects in the service of substantiating and supporting positive descriptions of attachment relationships and interactions. In these interviews, reports of fun activities with parents or shopping trips with parents where the child receives a new toy or game are put forward as substitutes for more ‘relational’ interactions. Thus, a representation of an attachment relationship that is functional in nature and predicated on the giving of material rather than emotional comfort emerges.

For example: “Can you tell me about a time you felt happy with your mum? That probably half an hour ago when I found out when I was going to Boston, which was fun, happy. And a fun time? Erm is was probably last August, maybe July erm cause they’d already gone on holiday, I though I was going to [place] and I
was given some dollars and found out I was going to [place] for two weeks half an hour before I was on the plane”.

- An episodic memory offered in support of a general positive descriptor is often repeated and offered as support for another positive descriptor resulting in an episodically impoverished narrative. Furthermore, like adult responses in the AAI, some word for word substitution occurs.

For example, a 10-year-old child described her relationship with her mother as fun, tiring, and enjoyable. When asked for an example for a ‘fun’ time with mum, she reported that she cooks and bakes with mum and that it is enjoyable. When asked to think of an example of a time that was enjoyable with mum, the same child said “I enjoy being with her because we can always make a lot of fun together. If I do anything with her I enjoy it”.

- Avoidant children will frequently respond with “I don’t know” or “I can’t remember” when asked to provide a specific episode, sometimes with little apparent effort to recall. Reports of lack of memory in these instances reflect an attempt to block further discussion of the topic rather than a genuine lack of memory. By extension, some children respond by saying “I can’t really explain” which also appears to have a similar function.

- Interviews with avoidant children often include substantial prompts from the interviewer and are marked by restricted and short responses. These interviews are by and large shorter than interviews with their secure or preoccupied counterparts.

- Expressions of feelings of anger or crossness often replace those of upset, sadness or hurt. This is particularly evident in discussions of conflicts with parents.

- Acknowledgement of the impact of loss, separations, and times of need is largely absent. If feelings are referred to, by and large they are qualified with word such as “a bit” or “quite”.

For example, when asked about a long separation from her mother, the child said “I didn’t really notice not being with her. Well I like being with her but I don’t actually like being with her in [place] because I like doing my own thing”. Another child was asked how he felt about his great grandmother dying to which he replied, “I didn’t care”. Whilst this child wasn’t particularly close to his great grandmother, a secure child would have replied “I was a bit upset but not that much because I wasn’t very close to her”.

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Little or no reference to attachment figures when describing in particular times of illness and physical injury, reflecting a sense of absence of representations of attachment figures and lack of relatedness.

For example, when a 9-year-old girl was asked what happens when she’s ill, she replied “If I’m really ill I stop school and um someone looks after me and I watch telly in bed. When asked what happens when she’s physically hurt herself, the same child replied “It gets cleaned and I get plaster on it”.

In response to the question “Can you tell me about a time when you felt upset and wanted help” a 9-year-old boy said “Let’s think, it’s probably when I erm you know school and erm bang my eye you know couple of weeks ago, actually ages ago now its still a bit of a bump and you know I go to hospital and you get help then. So what happened? I cracked heads with somebody ended up at home and. So the teacher rang your parents? Erm well I went home and put some ice on my eye. I went down to the hospital to make sure I haven’t cracked any bones, then I found out that I haven’t and then I went home and gradually got better. OK and who put the ice on your eye? Erm first of all one of the teachers at school did and then my mum did. Right, What happens when you’re ill? I don’t know..Well I’m usually taken to the doctor if its ill and looked after”.

- Flat quality to interviews, disassociated, disconnected, barren.

- Low maintenance of eye contact, and low engagement with the interviewer/task.
INDICES OF AVOIDANT/RESTRICTED AS RELATED TO CAI SCALES.

- A child judged as Avoidant will receive a score no higher than 5 on the Emotional Openness scale. Whilst references to a restricted range of affect states may be present, these are never fully elaborated and grounded in the particular relationship described. As noted earlier, the child is able to appropriately label emotional states but fails to place them within a relational context and shows little or no understanding of the impact of these feelings upon the self and others.

- Ratings on the Balance of Positive and Negative References to Attachment Figures will not exceed 5 when assigning an Avoidant classification. The degree of balance may range quite substantially from extreme polarisation whereby the child refers to one or both parents exclusively in positive or negative terms to a moderately balanced view of parents were seemingly contrasting views are put forward in the description of parents and interactions with them. Overall however, the Avoidant child is not likely to present a balanced picture and is much more likely to be restricted to one aspect of the relationship in his/her descriptions.

- The extent to which a child is able to consistently provide examples is an important index in determining an Avoidant classification. A child judged as Avoidant will be assigned a maximum score of 5 on the Use of Examples scale. An important characteristic of the Avoidant child is his/her failure or inability to offer episodic examples that illustrate their choice of words to describe the parent-child relationship. This is manifest in children's reports of lack of memory for specific episodes following substantial prompting from the interviewer. Some Avoidant children may offer a limited number of examples but these are by and large restricted and unelaborated.

- Ratings on the Preoccupied Anger scale MUST NOT exceed 3 for an Avoidant classification to be assigned. If resentment and angry preoccupation with attachment figures is present thus leading to a higher rating, an alternative classification should be considered.

- Idealisation of attachment figures constitutes another important marker for the Avoidant classification. A moderate to high score is typical in this group and a score of 5 and above will invariably lead to an Avoidant category placement. The extent to which idealisation is manifest would depend upon the degree of the discrepancy between the child's description of parents at the abstract level and his/her ability to provide relevant and richly detailed examples to support these generalised descriptions.
• Similar to Idealisation, moderate to high **Dismissal and/or Derogation of Attachment** (score of 5 and above) is characteristic of the Avoidant child. Whilst a minority of children may actively derogate one or both attachment figures, dismissal of the importance of attachment figures and relationships and an absence of expressions of vulnerability and dependence are more commonly observed.

• Ratings assigned to **resolution of conflict** are rather more variable and thus less clear vis-à-vis the Avoidant classification. Generally however, a judge assigning a score between 1-6 may fairly reliably assign an Avoidant classification provided that other important markers of Avoidance are present and that the child fits to the main classification descriptors.

• Coherence ratings MUST NOT exceed 5
SECURE/FREE

- Flowing quality to the narrative. Prompts by the interviewer are relatively infrequent and narrative production is generally spontaneous.

- 'Secure' children tend to be overall collaborative when recounting relationship episodes and present a coherent and consistent picture with little or no 'Idealisation'. If 'Idealisation' is present, the discrepancy between the semantic and episodic levels is minor and functions to present a slightly more favourable picture but not as a complete distortion of childhood experiences.

- 'Secure' children (and some adults) tend to display a slight positive bias, particularly in the 1st part of the interview. If this positive view is substantiated in the latter part of the interview with specific episodes, this does not lead to 'Idealisation' but is rather indicative of a slightly unbalanced view of attachment figures/relationships. As a general rule, 'Secure' children are able to discuss both positive and negative aspect of their attachment figures. Even if adjectives describing their relationship to both attachment figures are exclusively positive, discussion of times of conflict is fairly open and is not deflected or blocked. Some recounting of less favourable interactions with attachment figures would be fully described as well as those aspects of parents which are less positive or 'ideal'.

- Secure children most often express a clear valuing of attachment relationships across the interview as a whole. Acknowledgment of the impact of a separation from attachment figures, a need for comfort and attention at times of illness, physical injury, and conflict, and a clear sense of the bond between the child and the attachment figure is conveyed. This however, does not imply that secure children openly express a sense of valuing for each and every relationship episode containing the above themes. Some secure children may express a sense of vulnerability and dependency upon an attachment figure in one or two particular relationship episode but then not in a subsequent episode.

- Affective descriptions of relationship episodes are common and unlike those children judged 'Avoidant/Restricted', emotions are not merely labelled, but placed within a relational context and elaborated upon. Secure children are able to describe multiple and at times conflicting emotions in an open and coherent manner. The degree of spontaneity in the expression of emotions may vary quite considerably, but the judge's perception will be that the child conveys a sense of emotional understanding and openness as opposed to a sense of emotional restriction.

- Secure children provide on the whole detailed, elaborate, and relevant examples to corroborate their general relationship descriptors. This however does not mean that each and every relationship episode is elaborated upon. Instances of
inability to recall are at a minimum, and even when children report loss of memory, it is not intended to block any further discussion.

- Slight present anger may be expressed, but in a contained manner.

- Secure children discuss times of conflict in a coherent and truthful manner, and most often describe constructive resolutions to those conflicts. Some children may not directly address the resolution of the conflict under discussion, but the judge has the impression that the conflict is no longer active.

- Secure children are able to present a balanced view of relationships and parents and may discuss difficulties in the relationship or parents in an open and coherent manner, and discuss less than ‘ideal’ aspects of parents with acceptance whilst also describing imperfections in themselves.

For example, a 10-year-old boy described an aspect of his mother as “crazy”. When asked to elaborate he replied “Well she was sort of running about, saying things like “Oh go and then go do that, go do that” and she was being a nutter, she was just being really erm how should I say, well she is a crazy person and I suppose I take after her too”

What had you done to upset your dad? “I had just wound hi up cause first it started off as a joke and then he said to stop it but I didn’t stop and so he’d gotten upset with me”. And did you know why he was getting angry? “Yeah because I was just, I knew I was annoying him too much but for some reason I just couldn’t stop, I just had to keep on going”

- Some ‘Secure’ children, but not all, may show instances of reflectiveness indicated in their ability to express representational diversity, or a shift in representations.
INDICES OF SECURE/FREE AS RELATED TO CAI SCALES.

- A child judged as Secure will receive a score of 5 or above on the Emotional Openness scale. As noted earlier, the child is not only able to appropriately label emotional states but is able to place them within a relational context and shows more than a rudimentary understanding of the impact of these feelings upon the self and others.

- Ratings on the Balance of Positive and Negative References to Attachment Figures will normally not be lower than 4-5 when assigning a Secure classification. The degree of balance may range from moderately balanced to very balanced. Overall the Secure child is able to present both positive and negative aspects of attachment figures/relationships.

- A child judged as Secure will be assigned a minimum score of 5 on the Use of Examples scale.

- Ratings on the Preoccupied Anger scale MUST NOT exceed 3 for a Secure classification to be assigned. If resentment and angry preoccupation with attachment figures is present thus leading to a higher rating, an alternative classification should be considered.

- Idealisation of attachment figures will not exceed 4 in order for a Secure classification to be assigned. A low to moderate score is typical in this group and a score of 5 and above will invariably lead to an alternative Avoidant category placement. The degree of ‘Idealisation’ may vary considerably but the discrepancy between the child’s description of parents at the abstract level and his/her ability to provide relevant and richly detailed examples should not be pronounced.

- Similar to Idealisation, low to moderate Dismissal and/or Derogation of Attachment (score of 4 and below) is characteristic of the Secure child. Some minor dismissal in a particular relationship episode may be present, but the judge has the overall sense that the child clearly values attachment relationship and acknowledges a sense of dependency and vulnerability.

- Ratings assigned to resolution of conflict may range from 3-9. Provided that other important markers of Security are present and that the child fits to the main classification descriptors.

- Coherence ratings MUST NOT be lower than 5
AMBIVALENT/ENTANGLED

This category should include all cases where the predominant strategy seems to be one of remaining preoccupied with the parent, and/or involving the interviewer in repetitive themes. Our experience thus far has not included many examples of this pattern, and all have involved clear flashes of anger and/or contemptuous descriptions of the parent. However, any pattern of narrative which conveys an excessive focus on the parent and concern with the relationship should raise the question of an entangled attachment representation. For example, a child who repeatedly brings in descriptions of the parent being upset, needing help - or generally concern about the parents' needs or feelings - would be seen as describing a role-reversed or 'parentified' situation (whether in reality or fantasy). [Put in example of #266. Maybe also 910.] Similarly, if a child brings in a lot of irrelevant detail about the interactions with the parent, or gives many unsolicited examples of episodes with him or her, this could be an indicator of an entangled relationship representation. Some children may convey fearful preoccupation, so that they seem to be constantly on the lookout for mental or physical danger in the relationship with the parent. There may also be a preoccupation with danger when away from the parent, so that the child represents him or herself as needing to stay very close to the parent and fearful of separation. This relationship may or may not be felt by the child to be comforting when the parent is present.

We have not so far found many examples of 'passivity' as coded in AAI narratives, and where found these do not seem necessarily to serve the function of maintaining preoccupation...without clarity (through vague, rambling or trailing descriptions). The few cases seem to be more fruitfully thought about in terms of disorganisation of attachment representations, than in terms of preoccupation. The affective state appears more dissociated. We have therefore not included a scale of passive speech, and await further experience.
APPENDIX C. CRITERIA FOR THE IDENTIFICATION OF DISORGANISATION

DISORGANISATION/DISORIENTATION
(Controlling- Caregiving/Punitive)

In their formulation, Main and Solomon coined the term disorganised/disoriented (D) to describe various bizarre and contradictory infant behaviours in response to the Strange Situation separation-reunion procedure. Main and Hesse (1990) further postulated that these behaviours reflected a breakdown of organised strategy that may have resulted from a relationship where either the parent’s behaviour is frightening or the parent is frightened herself/himself. The “disorganisation in the infant may be reflective of the disorganisation in parental caregiving strategies, and that developmental changes occur over time such that the initially disoriented and disorganised infant comes to assume a somewhat parental role within the parent-child relationship”. They further suggested that the need for control stems “out of a need to care for or control a parent whose own caregiving strategy had been disorganised by loss or by other traumatic events”

Further, Lyons-Ruth (in press) drew a distinction between infants of frightening or hostile mothers and those of helpless/fearful mothers hypothesising that D/secure infants may become withdrawn, frightened, cognitively and behaviourally disorganised and dissociated in early and middle childhood as a consequence of mothers’ frightened behaviour. D/insecure infants may employ hostile, punitive aggressive and controlling strategies resulting from mothers’ frightening behaviour.

At present, Disorganisation is not rated on a 9-point scale. If any of the above indices of Disorganisation/Disorientation are present, this would in most cases lead to an Insecure - Disorganised classification.

Whilst preliminary data does not as yet enable us to clearly specify how behaviours identified as ‘D’ in infancy may translate into middle childhood, several proposed indicators are presented below.

Sudden switches of affect in response to loss, trauma, and/or frightening experiences (e.g., switch from animated descriptions to complete silence in response to a loss or trauma question), interrupted speech (e.g., freezing, or long pauses). Excited/frightened oscillation, turning one feeling to another feeling. Affects states that are irreconcilable or incompatible with the context and content of the description relayed, and any bizarre behaviour, bizarre descriptions of death including loss of pet when the description of loss clearly stands out in relation to the rest of the interview.
Example of a lengthy unlicensed pause and sudden mood swing.

To provide a context for the silence observed, the response given by one child to what happens when she gets hurt is briefly presented prior to the silence.

Mummy and daddy took me to the hospital where I was born. *How did you feel?* I still had to go to school (very excited, makes faces). *That must have been tough?* The child then starts singing “Do you ever dare to scare your mum and dad’s underwear, do you ever dare to scare your brother or you sisters’ or your mum’s or your dad’s underwear...” *Some children I’ve talked to have told me they’ve been touched in their private body parts, Has that happened to you?...*...28 seconds *pause* (becomes frozen, sombre, very serious expression on face). Can you say that again? *Some children I’ve spoken to have told me that they’ve been touched in their private body parts, has that ever happened to you? Uhm...no.* (rate ??)

Another example of long silence was observed in a child’s response to being asked to provide three adjectives to describe his relationship with his father.

*Can you tell me three words to describe how it’s like to be with your dad?* Good.....50 seconds *pause*. Can’t think of anything else. *Ok, why did you choose that word?* Because he takes me and my brother out somewhere far so that we can see where he goes everyday. *He takes you somewhere far, where does he take you?* I don’t know. *Does he take you to work?* No. *Out to the countryside?* No. *So its just far away from where you live?* Ya. *And where is it?* Shops. *Tell me about a time when it felt good to be with your dad?* When he took us very far to someone’s house and we felt very good and we ahm we walked a bit and...nothing else. *Can you tell me when that happened?* Before ahm don’t know when. (rate??)

Example of incompatible affect (incongruity between external expression and content of response).

*You said she then sends you to your room and then what happens?* She said, she always says I have to stay in my room for the rest of the day but she don’t really mean that. *How do you feel when that happens?* Oh I can’t remember. *So when she sends you to your room, what do you do then?* Don’t know, she hits me I just sit about for 10 seconds later and then come out. When she hits me I ran up to my room and hide under the cupboard and I start to cry (laughs with large grin) *Right, I see. I have to hide and once my mum was really angry with me and I blocked down the door and hid in my cupboard and she just, I don’t know how she could just push open the door because there was my big heavy desk and I hid in the cupboard and I don’t know why, I don’t know how she knew I was in the cupboard and she opened the cupboard and I was there (tells the story with excitement, inappropriate to the content of the story). Oh so she found you. *Do you get frightened sometimes when your mother gets upset?* Ya it scares me. *What would happen then, would it be resolved?* I would say sorry and give her a cuddle (laughs). (rate ??)
Example of bizarre, incoherent response to loss of pet

I also felt sad when my animal died nan got a friend and her mum's budgie died. I'm going to cry when I tell it, she didn't even tell me that she gave the budgie away, she kept on telling me that it flew out the window. How did you feel? Sad, I cried, in fact I'm just going to start crying now. Did you love the budgie? I loved it with all my heart, it sat on my finger. It was your friend? My only friend. Why did you grandmother give it away? Because the woman would be crying for the rest of her life, my aunts friend's mum. Why? When had a special dinner. Get cucumber and feed it to the budgie. I think she thought the woman was upset but what she didn't know was that when one of my pet dies so I soon go over it but nan didn't know that she could get over it. Who could get over it? My aunts friend's mum's budgie died but before then my dog died but I'm over it. Were you upset? I was a baby, it was a German Shepherd, I was zero when it died, no I was one year old. The cat died but we got another one. We took the cat to the vet and it died at the vets. (Playing with her ear) I'm just looking at my earrings, last night I looked at it and had stuff behind the ear, found some green stuff but its absolutely clear (changes subject). (rate??)

The above child showed a number of other unusual features, which we will be considering as indicators of disorganisation of attachment strategy. For the moment we will simply list them:

Bizarre associations or intrusion of catastrophic images (e.g. talking about getting lots of presents, everything she ever wanted, she describes an advertisement showing how not having a smoke alarm can lead to child being killed in fire, however many presents there are).

In sequence quoted above, affect appears somewhat simulated (does not cry earlier in interview when appears very sad, but crying over loss of budgie is announced beforehand and appears more staged).

The child repeatedly describes herself as taking care of the parents, particularly by cleaning up whenever either parent is upset. This child also seems to have a fantasy of having been a completely competent baby: she remembers exactly what her dog looked like although he died when she was a baby. Much more oddly, she believes she learned arithmetic from her grandfather who died around the same time – this is either evidence of disorientation with respect to time of the grandfather's death, or of a bizarre assumption that she was able to learn arithmetic at under a year of age.

Another conspicuous aspect of this child's interview is mixing up her relatives. Although she has a complicated family situation, the degree of disorientation with respect to person seems abnormal.
The child describes behaviour that is an ineffectual, infantile strategy in the context of separation (she says she locks her mother into the house to stop her going away). The verbal description was coherent but the behaviour described was not.

Another way in which this child describes herself is as like a machine – a cleaning machine for cheering up her parents, or a killing machine.

A further but more doubtful feature is escalation of the theme of loss: multiple experiences of loss are added without prompting.

This is by no mean an exhaustive list of possible Disorganisation marker and thus judges need to exercise some independent judgement if other markers are present that have not been included in the current manual.
# APPENDIX D. ADDITIONAL DATA

## CHAPTER 5: STUDY 1

Table D1. Descriptive data relating to the CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>5.7</td>
<td>1.7</td>
<td>3-9</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>4.8</td>
<td>1.8</td>
<td>1.5-8</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>5.5</td>
<td>1.6</td>
<td>2-8</td>
</tr>
<tr>
<td>Preoccupied Anger to Mother</td>
<td>1.2</td>
<td>1.1</td>
<td>1-7</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>2.5</td>
<td>1.8</td>
<td>1-7</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>2.6</td>
<td>1.7</td>
<td>1-7.5</td>
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<td>Dismissing of Mother</td>
<td>2.8</td>
<td>1.9</td>
<td>1-7</td>
</tr>
<tr>
<td>Dismissing of Father</td>
<td>2.8</td>
<td>1.8</td>
<td>1-7</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.4</td>
<td>1.4</td>
<td>3-8</td>
</tr>
<tr>
<td>Coherence</td>
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<td>1.8</td>
<td>2-8.5</td>
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Table D2. Inter-correlations of CAI scales

<table>
<thead>
<tr>
<th></th>
<th>EO</th>
<th>Bal</th>
<th>UoE</th>
<th>PA-M</th>
<th>ID-M</th>
<th>ID-F</th>
<th>DS-M</th>
<th>DS-F</th>
<th>RES'</th>
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<tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<td>UoE</td>
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<td>.62**</td>
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<td></td>
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<td>PA-M</td>
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<td>-.04</td>
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<td>-.58**</td>
<td>-.16</td>
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<td>-.50*</td>
<td>-.17</td>
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<td>DS-M</td>
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<td>.03</td>
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<td>COH</td>
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<td>.60**</td>
<td>.91**</td>
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<td>-.56*</td>
<td>-.52*</td>
<td>-.68**</td>
<td>-.69**</td>
<td>.81**</td>
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</table>

Key: *p < .01, **p < .001

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

Table D3. ICC3 correlation coefficients and percentage of exact agreement and agreement within 1 scale-point for all CAI scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>ICC3 Coefficients</th>
<th>% Exact Agreement</th>
<th>% Agreement within 1 scale-point</th>
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<td>86</td>
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<td>Use of Examples</td>
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<td>86</td>
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<td>96</td>
<td>96</td>
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<td>93</td>
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<td>.89</td>
<td>64</td>
<td>86</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>.81</td>
<td>64</td>
<td>89</td>
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<tr>
<td>Dismissing of Father</td>
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<td>86</td>
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<td>61</td>
<td>86</td>
</tr>
<tr>
<td>Overall Coherence</td>
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<td>64</td>
<td>89</td>
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Table D4. Attachment classifications with respect to mother across two judges

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<tr>
<td>Secure</td>
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Table D5. Attachment classifications with respect to father across two judges

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Table D6. Attachment sub-classifications with respect to mother across two judges

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<td>Very Secure</td>
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<td>15</td>
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<tr>
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</table>
Table D7. Attachment sub-classifications with respect to father across two judges

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</tr>
</thead>
<tbody>
<tr>
<td>Very Secure</td>
<td>Secure</td>
<td>Insecure</td>
</tr>
<tr>
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<td>13</td>
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<td>Very Insecure</td>
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Table D8. Comparisons between secure versus insecure classifications to mother on CAI scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (n = 17)</th>
<th>Insecure (n = 11)</th>
<th>t-tests</th>
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<tbody>
<tr>
<td>Emotional Openness</td>
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<td>4.3 (1.3)</td>
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</tr>
<tr>
<td>Coherence</td>
<td>6.4 (1.1)</td>
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Key: * p < .02, ** p < .01, ***p < .001
Table D9. Comparisons between secure versus insecure classifications to father on CAI scales

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<tr>
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<th>Insecure (n = 12)</th>
<th>t-tests</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>Mean (SD)</td>
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</tr>
<tr>
<td>Emotional Openness</td>
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<td>4.5 (1.5)</td>
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</tr>
<tr>
<td>Balance of +/-</td>
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<td>3.6 (1.0)</td>
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</tr>
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<tr>
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Key: *p < .05, **p < .01, ***p < .001
APPENDIX D. ADDITIONAL DATA

CHAPTER 5: STUDY 2

Table D10. Descriptive data relating to the CAI Scales

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<th>(SD)</th>
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<td>(1.2)</td>
<td>3-8.5</td>
</tr>
<tr>
<td>Balance of +/-</td>
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<td>(1.5)</td>
<td>3-7.5</td>
</tr>
<tr>
<td>Use of Examples</td>
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<td>(1.2)</td>
<td>3-9</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
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<td>(.55)</td>
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<tr>
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<td>(.18)</td>
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<td>(1.3)</td>
<td>1-5.5</td>
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<tr>
<td>Idealisation of Father</td>
<td>2.3</td>
<td>(1.3)</td>
<td>1-5</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>2.6</td>
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<td>Dismissing of Father</td>
<td>2.6</td>
<td>(1.4)</td>
<td>1-6</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.6</td>
<td>(1.2)</td>
<td>4-8</td>
</tr>
<tr>
<td>Coherence</td>
<td>5.6</td>
<td>(1.3)</td>
<td>3-8.5</td>
</tr>
</tbody>
</table>

Table D11. Two-way attachment classifications with respect to mother and father

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>22</td>
<td>69</td>
</tr>
<tr>
<td>Insecure</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
</tr>
</tbody>
</table>
Table D12. Three-way attachment classifications with respect to mother and father

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Secure</td>
<td>23</td>
<td>72</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
</tr>
</tbody>
</table>

Table D13. Inter-correlations of CAI scales

<table>
<thead>
<tr>
<th></th>
<th>EO</th>
<th>Bal</th>
<th>UoE</th>
<th>PA-M</th>
<th>PA-F</th>
<th>ID-M</th>
<th>ID-F</th>
<th>DS-M</th>
<th>DS-F</th>
<th>RES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bal</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UoE</td>
<td>.92**</td>
<td>.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA-M</td>
<td>-.05</td>
<td>.20</td>
<td>-.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA-F</td>
<td>-.06</td>
<td>.26</td>
<td>-.01</td>
<td>.95**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID-M</td>
<td>-.36</td>
<td>-.25</td>
<td>-.47*</td>
<td>-.22</td>
<td>-.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID-F</td>
<td>-.30</td>
<td>-.30</td>
<td>-.40</td>
<td>-.23</td>
<td>-.18</td>
<td>.51*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS-M</td>
<td>-.68**</td>
<td>.08</td>
<td>-.65**</td>
<td>.34</td>
<td>.31</td>
<td>.35</td>
<td>.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS-F</td>
<td>-.70**</td>
<td>-.02</td>
<td>-.67**</td>
<td>.33</td>
<td>.31</td>
<td>.34</td>
<td>.11</td>
<td>.95**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RES</td>
<td>.65**</td>
<td>.35</td>
<td>.71**</td>
<td>.01</td>
<td>.14</td>
<td>-.33</td>
<td>-.02</td>
<td>-.41</td>
<td>-.47*</td>
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<tr>
<td>COH</td>
<td>.90**</td>
<td>.34</td>
<td>.95**</td>
<td>.00</td>
<td>-.01</td>
<td>-.53**</td>
<td>-.46*</td>
<td>-.67**</td>
<td>-.69**</td>
<td>.63**</td>
</tr>
</tbody>
</table>

Key: *p < .01, **p < .001

1 Key to scale abbreviations. EO – Emotional Openness; Bal – Balance of Positive/Negative References to Attachment Figures; UoE – Use of Examples; PA-M/F – Preoccupied Anger with respect to Mother/Father; ID-M/F – Idealisation with respect to Mother/Father; DS-M/F – Dismissal with respect to Mother/Father; RES – Resolution of Conflicts; SO – Self-Organisation; COH – Overall Coherence.
Table D 14. ICC3 correlation coefficients and percentage of exact agreement and agreement within 1 scale-point for all CAI scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>ICC3 Coefficients</th>
<th>% Exact Agreement</th>
<th>% Agreement within 1 scale-point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>.63</td>
<td>43</td>
<td>72</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>.60</td>
<td>23</td>
<td>77</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>.50</td>
<td>43</td>
<td>72</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>.29</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>.80</td>
<td>46</td>
<td>85</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>.56</td>
<td>46</td>
<td>69</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>.74</td>
<td>50</td>
<td>86</td>
</tr>
<tr>
<td>Dismissing of Father</td>
<td>.79</td>
<td>57</td>
<td>93</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>.70</td>
<td>43</td>
<td>86</td>
</tr>
<tr>
<td>Overall Coherence</td>
<td>.82</td>
<td>43</td>
<td>93</td>
</tr>
</tbody>
</table>

Key: *p < .001

Table D15. Two-way attachment classifications with respect to mother and father across two judges

<table>
<thead>
<tr>
<th>Attachment to Mother/Father-1st judge</th>
<th>Attachment to Mother/Father- 2nd judge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Secure</td>
<td>Insecure</td>
</tr>
<tr>
<td>Secure</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Insecure</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>
Table D16. Comparisons between secure versus insecure classifications to mother and father on CAI scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=22)</th>
<th>Insecure (N=10)</th>
<th>t-tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Emotional Openness</td>
<td>6.2 (1.1)</td>
<td>5.0 (.92)</td>
<td>3.24*</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.2 (1.4)</td>
<td>4.6 (1.6)</td>
<td>.88</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.5 (1.1)</td>
<td>5.2 (1.0)</td>
<td>3.20*</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.2 (.66)</td>
<td>1.0 (.00)</td>
<td>1.28</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.1 (.21)</td>
<td>1.0 (.00)</td>
<td>1.00</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.9 (1.1)</td>
<td>2.9 (1.6)</td>
<td>-1.58</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>2.1 (1.2)</td>
<td>2.7 (1.5)</td>
<td>-1.06</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>2.3 (1.1)</td>
<td>3.2 (1.8)</td>
<td>-1.43</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>2.4 (1.1)</td>
<td>3.2 (1.8)</td>
<td>-1.36</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.9 (1.2)</td>
<td>5.0 (.89)</td>
<td>2.18*</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.1 (1.1)</td>
<td>4.5 (.91)</td>
<td>4.42**</td>
</tr>
</tbody>
</table>

Key: * p < .05, ** p < .001
# Appendix D. Additional Data

## Chapter 6

### Table D17. Descriptive data relating to the CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Mean</th>
<th>(SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
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<td>1.7</td>
<td>2-9</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>4.6</td>
<td>1.4</td>
<td>2-9</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>5.1</td>
<td>1.7</td>
<td>1-9</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.6</td>
<td>1.4</td>
<td>1-8</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.7</td>
<td>1.4</td>
<td>1-7</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>3.0</td>
<td>1.8</td>
<td>1-7</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>2.2</td>
<td>1.8</td>
<td>1-6</td>
</tr>
<tr>
<td>Dismissing of Mother</td>
<td>3.7</td>
<td>2.2</td>
<td>1-9</td>
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<tr>
<td>Dismissing of Father</td>
<td>3.8</td>
<td>2.2</td>
<td>1-9</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>4.2</td>
<td>1.7</td>
<td>1-8</td>
</tr>
<tr>
<td>Coherence</td>
<td>4.2</td>
<td>1.7</td>
<td>2-9</td>
</tr>
</tbody>
</table>

### Table D18. Two-way attachment classifications with respect to mother

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>13</td>
<td>28</td>
</tr>
<tr>
<td>Insecure</td>
<td>34</td>
<td>72</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>100</td>
</tr>
</tbody>
</table>
Table D19. Two-way attachment classifications with respect to father

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Insecure</td>
<td>32</td>
<td>76</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

1In 5 cases fathers were absent and thus no classification was assigned with respect to father.

Table D20. Three-way attachment classifications with respect to mother

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>28</td>
<td>59</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Secure</td>
<td>13</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>100</td>
</tr>
</tbody>
</table>

Table D21. Three-way attachment classifications with respect to father

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing</td>
<td>26</td>
<td>62</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Secure</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

1In 5 cases fathers were absent and thus no classification was assigned with respect to father.
Table D22. Inter-correlations between CAI scales

<table>
<thead>
<tr>
<th></th>
<th>EO</th>
<th>Bal</th>
<th>UoE</th>
<th>PA-M</th>
<th>PA-F</th>
<th>ID-M</th>
<th>ID-F</th>
<th>DS-M</th>
<th>DS-F</th>
<th>RES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bal</td>
<td>.51**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UoE</td>
<td></td>
<td>.80**</td>
<td>.43*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA-M</td>
<td>.25</td>
<td>.12</td>
<td>.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA-F</td>
<td>.09</td>
<td>-.02</td>
<td>.16</td>
<td>.43**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID-M</td>
<td>-.40*</td>
<td>-.37*</td>
<td>-.42*</td>
<td>-.13</td>
<td>-.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID-F</td>
<td>-.27</td>
<td>-.30</td>
<td>-.21</td>
<td>-.11</td>
<td>-.30</td>
<td>.61**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS-M</td>
<td>-.72**</td>
<td>-.33</td>
<td>-.58**</td>
<td>-.21</td>
<td>-.08</td>
<td>.15</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS-F</td>
<td>-.72**</td>
<td>-.48*</td>
<td>-.55**</td>
<td>-.20</td>
<td>-.12</td>
<td>.17</td>
<td>.05</td>
<td>.96**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RES</td>
<td>.67**</td>
<td>.38*</td>
<td>.59**</td>
<td>.10</td>
<td>-.06</td>
<td>-.54**</td>
<td>-.31</td>
<td>-.50**</td>
<td>-.52*</td>
<td></td>
</tr>
<tr>
<td>COH</td>
<td>.83**</td>
<td>.63**</td>
<td>.82**</td>
<td>.03</td>
<td>.07</td>
<td>-.55**</td>
<td>-.37</td>
<td>-.64**</td>
<td>-.65**</td>
<td>.77**</td>
</tr>
</tbody>
</table>

Key: *p < .01; **p < .001

1Key to scale abbreviations. EO – Emotional Openness; Bal – Balance of Positive/Negative References to Attachment Figures; UoE – Use of Examples; PA-M/F – Preoccupied Anger with respect to Mother/Father; ID-F/M – Idealisation with respect to Father/Mother; DS-F/M – Dismissal with respect to Father/Mother; RES – Resolution of Conflicts; COH – Overall Coherence.
Table D23. Comparisons between secure versus insecure classifications to mother on CAI scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=13) Mean (SD)</th>
<th>Insecure (N=34) Mean (SD)</th>
<th>t-tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>6.8 (1.0)</td>
<td>4.4 (1.5)</td>
<td>5.49*</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.6 (1.4)</td>
<td>4.1 (1.1)</td>
<td>3.82*</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.5 (1.3)</td>
<td>4.5 (1.4)</td>
<td>4.37*</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.4 (.70)</td>
<td>1.7 (1.6)</td>
<td>-.54</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.5 (.83)</td>
<td>1.7 (1.6)</td>
<td>-.34</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.6 (1.1)</td>
<td>3.6 (1.7)</td>
<td>-3.76**</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.4 (.90)</td>
<td>2.5 (2.0)</td>
<td>-2.43*</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.8 (1.1)</td>
<td>4.5 (2.1)</td>
<td>-4.14*</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>1.9 (1.0)</td>
<td>4.6 (2.1)</td>
<td>-3.89*</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>6.0 (1.1)</td>
<td>3.5 (1.3)</td>
<td>6.07*</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.3 (1.2)</td>
<td>3.4 (1.2)</td>
<td>7.18*</td>
</tr>
</tbody>
</table>

Key: *p < .05; **p < .01

Table D24 Comparisons between secure versus insecure classifications to father on CAI scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=10) Mean (SD)</th>
<th>Insecure (N=32) Mean (SD)</th>
<th>t-tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Openness</td>
<td>6.8 (.85)</td>
<td>4.4 (1.6)</td>
<td>6.19**</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.6 (1.5)</td>
<td>4.0 (1.0)</td>
<td>3.78**</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.7 (1.1)</td>
<td>4.5 (1.6)</td>
<td>3.91**</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.5 (.76)</td>
<td>1.6 (1.6)</td>
<td>-.14</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.4 (.76)</td>
<td>1.8 (1.6)</td>
<td>-.56</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.5 (1.1)</td>
<td>3.4 (1.8)</td>
<td>-3.76**</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.5 (.97)</td>
<td>2.5 (1.9)</td>
<td>-2.04*</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.8 (1.0)</td>
<td>4.3 (2.2)</td>
<td>-4.82**</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>2.0 (1.0)</td>
<td>4.4 (2.2)</td>
<td>-4.61**</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.9 (1.1)</td>
<td>3.8 (1.4)</td>
<td>4.12**</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.4 (1.2)</td>
<td>3.5 (1.3)</td>
<td>5.95**</td>
</tr>
</tbody>
</table>

Key: *p < .05; **p < .01
Table D25. Comparison of three-way attachment classification to father on CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=10)</th>
<th>Dismissing (N=26)</th>
<th>Preoccupied (N=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Emotional Openness</td>
<td>6.8 (.85)</td>
<td>4.0 (1.2)</td>
<td>6.4 (1.5)</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.6 (1.4)</td>
<td>4.0 (.95)</td>
<td>4.2 (1.3)</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.6 (1.1)</td>
<td>4.2 (1.4)</td>
<td>6.0 (1.4)</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.5 (.76)</td>
<td>1.4 (1.2)</td>
<td>2.7 (2.7)</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.4 (.75)</td>
<td>1.4 (1.1)</td>
<td>3.3 (2.6)</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.5 (1.1)</td>
<td>3.8 (1.8)</td>
<td>1.9 (1.0)</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.5 (.97)</td>
<td>2.7 (2.1)</td>
<td>1.7 (1.2)</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.7 (.98)</td>
<td>4.5 (2.3)</td>
<td>3.3 (1.9)</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>2.0 (1.0)</td>
<td>4.8 (2.2)</td>
<td>3.2 (1.7)</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.8 (1.1)</td>
<td>3.5 (1.1)</td>
<td>5.0 (2.2)</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.3 (1.2)</td>
<td>3.3 (1.1)</td>
<td>4.5 (2.0)</td>
</tr>
</tbody>
</table>

Table D26. Comparison of four-way attachment classification to father on CAI Scales

<table>
<thead>
<tr>
<th>CAI Scales</th>
<th>Secure (N=10)</th>
<th>Dismissing (N=23)</th>
<th>Preoccupied (N=6)</th>
<th>Disorganised (N=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Emotional Openness</td>
<td>6.8 (.85)</td>
<td>3.9 (1.2)</td>
<td>6.4 (1.5)</td>
<td>4.3 (1.9)</td>
</tr>
<tr>
<td>Balance of +/-</td>
<td>5.6 (1.4)</td>
<td>4.0 (.97)</td>
<td>4.2 (1.3)</td>
<td>3.8 (1.0)</td>
</tr>
<tr>
<td>Use of Examples</td>
<td>6.6 (1.1)</td>
<td>4.2 (1.5)</td>
<td>6.0 (1.5)</td>
<td>3.8 (1.4)</td>
</tr>
<tr>
<td>Preoccupied Anger Mother</td>
<td>1.5 (.76)</td>
<td>1.2 (.38)</td>
<td>2.7 (2.7)</td>
<td>3.0 (3.5)</td>
</tr>
<tr>
<td>Preoccupied Anger Father</td>
<td>1.4 (.76)</td>
<td>1.4 (1.1)</td>
<td>3.3 (2.6)</td>
<td>1.3 (.58)</td>
</tr>
<tr>
<td>Idealisation of Mother</td>
<td>1.5 (1.1)</td>
<td>3.7 (1.7)</td>
<td>1.9 (1.0)</td>
<td>4.0 (2.6)</td>
</tr>
<tr>
<td>Idealisation of Father</td>
<td>1.5 (.97)</td>
<td>2.5 (2.1)</td>
<td>1.7 (1.2)</td>
<td>3.5 (2.5)</td>
</tr>
<tr>
<td>Dismissal of Mother</td>
<td>1.8 (1.0)</td>
<td>4.9 (2.2)</td>
<td>3.3 (1.9)</td>
<td>2.0 (1.0)</td>
</tr>
<tr>
<td>Dismissal of Father</td>
<td>2.0 (1.0)</td>
<td>5.1 (2.1)</td>
<td>3.2 (1.7)</td>
<td>2.3 (1.1)</td>
</tr>
<tr>
<td>Resolution of Conflict</td>
<td>5.8 (1.1)</td>
<td>3.6 (1.1)</td>
<td>5.0 (2.2)</td>
<td>2.3 (.58)</td>
</tr>
<tr>
<td>Coherence</td>
<td>6.3 (1.2)</td>
<td>3.4 (1.1)</td>
<td>4.5 (2.0)</td>
<td>2.7 (.58)</td>
</tr>
</tbody>
</table>
Table D27. Samples and CAI Versions.

<table>
<thead>
<tr>
<th>CHAPTER NO &amp; STUDY NO.</th>
<th>POPULATION</th>
<th>SAMPLE SIZE</th>
<th>CAI PROTOCOL VERSION</th>
<th>CAI CODING VERSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 4</td>
<td>Normal (Pilot)</td>
<td>N = 17</td>
<td>I</td>
<td>-</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Normal</td>
<td>n = 20</td>
<td>II</td>
<td>I</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>CF</td>
<td>n = 20</td>
<td>II</td>
<td>I</td>
</tr>
<tr>
<td>Chapter 5, Study 1</td>
<td>Normal</td>
<td>N = 28</td>
<td>III</td>
<td>II</td>
</tr>
<tr>
<td>Chapter 5, Study 2</td>
<td>Normal</td>
<td>N = 32</td>
<td>IV</td>
<td>III</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Clinical</td>
<td>N = 47</td>
<td>V</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 7</td>
<td>Clinical</td>
<td>N = 16</td>
<td>V</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Normal</td>
<td>n = 28</td>
<td>III</td>
<td>IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 32</td>
<td>IV</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Clinical</td>
<td>n = 43</td>
<td>V</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 9, Study 1</td>
<td>Normal</td>
<td>n = 28</td>
<td>III</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 9, Study 2</td>
<td>Clinical</td>
<td>n = 26</td>
<td>V</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 9, Study 3</td>
<td>Normal</td>
<td>n = 28</td>
<td>III</td>
<td>IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 29</td>
<td>IV</td>
<td>IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 29</td>
<td>IV</td>
<td>IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 4</td>
<td>II</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 9, Study 3</td>
<td>Clinical</td>
<td>n = 45</td>
<td>V</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 10, Study 1</td>
<td>Normal</td>
<td>n = 28</td>
<td>III</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 10, Study 2</td>
<td>Normal</td>
<td>n = 27</td>
<td>III</td>
<td>IV</td>
</tr>
<tr>
<td>Chapter 40, Study 3</td>
<td>Normal</td>
<td>N = 32</td>
<td>IV</td>
<td>IV</td>
</tr>
</tbody>
</table>

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5. Picture Arrangement

Discontinue after 3 consecutive failures.
Items 1 and 2 are considered failed only if both trials are failed.
For ages 9-16, normal sequence of proceeding items after failure on Item 3.

**Note:** Set out cards in sequence of dot patterns (right-hand corner of card) and record the child's card response order according to card number (left-hand corner).

<table>
<thead>
<tr>
<th>Item</th>
<th>Time Limit</th>
<th>Completion Time</th>
<th>Response Order</th>
<th>Score (Circle Appropriate score)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample: Drinks Machine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 1</td>
<td>45''</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Slide</td>
<td>Trial 2</td>
<td>45''</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Trial 1</td>
<td>45''</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2. Picnic</td>
<td>Trial 2</td>
<td>45''</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. River crossing</td>
<td>45''</td>
<td>0</td>
<td>45-16</td>
<td>5-1</td>
<td>5</td>
</tr>
<tr>
<td>4. Snack time</td>
<td>45''</td>
<td>0</td>
<td>45-21</td>
<td>5-1</td>
<td>5</td>
</tr>
<tr>
<td>5. Missing the boat</td>
<td>45''</td>
<td>0</td>
<td>45-21</td>
<td>5-1</td>
<td>5</td>
</tr>
<tr>
<td>6. Hold-up</td>
<td>45''</td>
<td>0</td>
<td>45-21</td>
<td>5-1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Activity</td>
<td>Score</td>
<td>45-21</td>
<td>20-16</td>
<td>15-11</td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>7</td>
<td>Gone fishing</td>
<td>45°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>House fire</td>
<td>45°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Seeing stars</td>
<td>45°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Ducks crossing</td>
<td>45°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Rain shower</td>
<td>45°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>*Walking the dog</td>
<td>60°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Ploughman’s lunch</td>
<td>60°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>*Snow Scene</td>
<td>60°</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 456123 is an equally acceptable response.

* The response 654321 scores 1 point
4. **Similarities**

Discontinue after 4 consecutive failures

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Ages</strong></td>
<td>Sample: Red-Blue</td>
</tr>
<tr>
<td>1.</td>
<td>*Piano-Guitar</td>
</tr>
<tr>
<td>2.</td>
<td>*Candle-Lamp</td>
</tr>
<tr>
<td>3.</td>
<td>Shirt-Shoe</td>
</tr>
<tr>
<td>4.</td>
<td>Wheel-Ball</td>
</tr>
<tr>
<td>5.</td>
<td>Milk-Water</td>
</tr>
<tr>
<td>6.</td>
<td>*Apple-Banana</td>
</tr>
<tr>
<td>7.</td>
<td>Cat-Mouse</td>
</tr>
<tr>
<td>8.</td>
<td>Elbow-Knee</td>
</tr>
<tr>
<td>9.</td>
<td>Anger-Joy</td>
</tr>
<tr>
<td>10.</td>
<td>Telephone-Radio</td>
</tr>
<tr>
<td>11.</td>
<td>Painting-Statue</td>
</tr>
<tr>
<td>12.</td>
<td>Family-Tribe</td>
</tr>
<tr>
<td>13.</td>
<td>Ice-Steam</td>
</tr>
</tbody>
</table>

Score 0 or 1 or 2
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Temperature-Length</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Mountain-Lake</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Rubber-Paper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. First-Last</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. <strong>Numbers 9 and 25</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Salt-Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total subtest score</strong>&lt;br&gt;(maximum =33)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* If the child says that they are not alike, fails to respond, or gives an incorrect response, give an example of a 1 point response.
  * If the child gives a 1-point response, give an example of a 2-point response.
  ■ If the child gives a 1-point response, ask "How else are the numbers 9 and 25 alike?"
7. **Block Design**

Discontinue after 2 consecutive failures.

For ages 8-16, normal sequence of preceding items after failure on either trial of Design 3.

<table>
<thead>
<tr>
<th>Child</th>
<th>Correct Design</th>
<th>Time limit</th>
<th>Incorrect Design</th>
<th>Completion time</th>
<th>Correct design</th>
<th>Score (Circle the appropriate score for each design)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6-7</td>
<td><img src="image" alt="Correct Design" /></td>
<td>30&quot;</td>
<td>Trail 1</td>
<td>Trial 2</td>
<td>Y</td>
<td>N</td>
<td>0</td>
</tr>
<tr>
<td>2. 45&quot;</td>
<td><img src="image" alt="Correct Design" /></td>
<td>Trail 1</td>
<td>Trial 2</td>
<td>Y</td>
<td>N</td>
<td>0</td>
<td>Trail 1</td>
</tr>
<tr>
<td>3. 45&quot;</td>
<td><img src="image" alt="Correct Design" /></td>
<td>Trail 1</td>
<td>Trial 2</td>
<td>Y</td>
<td>N</td>
<td>0</td>
<td>Trail 1</td>
</tr>
<tr>
<td>4. 45&quot;</td>
<td><img src="image" alt="Correct Design" /></td>
<td>Trail 1</td>
<td>Trail 2</td>
<td>Y</td>
<td>N</td>
<td>0</td>
<td>45-16</td>
</tr>
<tr>
<td>5. 45&quot;</td>
<td><img src="image" alt="Correct Design" /></td>
<td>Trail 1</td>
<td>Trail 2</td>
<td>Y</td>
<td>N</td>
<td>0</td>
<td>45-21</td>
</tr>
<tr>
<td>6. 75&quot;</td>
<td><img src="image" alt="Correct Design" /></td>
<td>Trail 1</td>
<td>Trail 2</td>
<td>Y</td>
<td>N</td>
<td>0</td>
<td>75-21</td>
</tr>
</tbody>
</table>
8. Vocabulary
Discontinue after 4 consecutive failures.
For ages 9-16, reserve sequence of preceding items after failure on either of first two items administered.

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
<th>Score 0, 1 or 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clock</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>2. Umbrella</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Hat</td>
<td>9-10</td>
<td></td>
</tr>
<tr>
<td>4. Thief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cow</td>
<td>11-13</td>
<td></td>
</tr>
<tr>
<td>6. Bicycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Donkey</td>
<td>14-16</td>
<td></td>
</tr>
<tr>
<td>8. Alphabet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Ancient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Leave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Brave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Island</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Absorb</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>29. Dilatory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Aberration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total sub-test score</td>
<td></td>
<td>(maximum =60)</td>
</tr>
</tbody>
</table>
APPENDIX E. ADDITIONAL MEASURES

CELF-R EXPRESSIVE LANGUAGE SUBTESTS

<table>
<thead>
<tr>
<th>Standard Score</th>
<th>Standard Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Concepts</td>
<td>Oral Expressions</td>
</tr>
<tr>
<td>Sentence Structure</td>
<td>Word Clues</td>
</tr>
<tr>
<td>Oral (Discourse)</td>
<td>Semantic Relationships</td>
</tr>
<tr>
<td>Expressive Language Score</td>
<td>Expressive Language Score</td>
</tr>
<tr>
<td>Total Language Score</td>
<td>Total Language Score</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Score</th>
<th>Standard Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening to Paragraphs</td>
<td>Word Associations</td>
</tr>
<tr>
<td>Word Associations</td>
<td>Semantic Relationships</td>
</tr>
<tr>
<td>Semantic Relationships</td>
<td>Sentence Structure</td>
</tr>
<tr>
<td>Word Structure</td>
<td></td>
</tr>
</tbody>
</table>
# Formulated Sentences

<table>
<thead>
<tr>
<th>Used</th>
<th>Picture Stimuli</th>
<th>Requirements</th>
<th>Discontinue Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 5+</td>
<td>Required to compute Expressive Language score and CELF-R Total Language score</td>
<td>Stimulus Manual?</td>
<td>One repetition allowed</td>
</tr>
</tbody>
</table>

Write the pupil's response verbatim in the space provided.
Refer to Tables 2.1 and 2.2 in Section 2 of the Examiner's Manual for scoring guidelines.

**Demonstration:** books

**Trial:** shoes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>gave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>before</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>when</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>after</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>if</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>because</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>but</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>although</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>tall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>either</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>neither</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Before presenting the remaining items, say, "Now, I'll give you two words to use in the same sentence. You can use the words in any order you choose, but you must use both words in the same sentence. Here's the next picture."

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>and</td>
<td>because</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>whatever</td>
<td>until</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>and</td>
<td>but</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>before</td>
<td>if</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>whenever</td>
<td>until</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>after</td>
<td>unless</td>
<td></td>
</tr>
</tbody>
</table>

**Special Instructions:**

Calculate Total: 20

**Final Score:** 526
Recalling Sentences

<table>
<thead>
<tr>
<th>Age 5+ Required to complete Expressive Language score and CELF-R: Total Language score</th>
<th>None</th>
<th>None allowed</th>
<th>4 consecutive zero scores (i.e., responses or sentences the 4 + error)</th>
</tr>
</thead>
</table>

Circle 3 if response is repeated exactly, 2 if there is one error, 1 if there are two to three errors, 0 if there are four or more errors, and NR if there is no response. Mark errors on the sentence or write an incorrect response verb in the space provided.

Demonstration: Turn left at the postbox.

Trial: The boat sailed across the lake.

<table>
<thead>
<tr>
<th>1. The dog chased the cat.</th>
<th>OK</th>
<th>1 err</th>
<th>2-3 err</th>
<th>4 + err</th>
<th>NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Did the boy kick the ball?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The train was followed by the car.</td>
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<td></td>
</tr>
<tr>
<td>4. Was the car followed by the police?</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Didn’t the rabbit eat the carrots?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The boy was not chased by the girl.</td>
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<td></td>
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</tr>
<tr>
<td>7. The boy and the girl picked the flowers.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8. Wasn’t the ice cream bought by the girl?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9. Has the mouse been chased by the cat?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>10. If the bus is too big, the man won’t buy it.</td>
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</tr>
<tr>
<td>11. The ball was not thrown by the boy or the girl.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12. The man who painted the windows was very kind.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>13. The dog chased the ball, and the cat didn’t follow.</td>
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<td></td>
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</tr>
<tr>
<td>14. The girl did not like the boy who lived down the street.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>15. The big, brown dog chased the red ball.</td>
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</tr>
<tr>
<td>16. The man stopped to pick up some milk even though he was late for work.</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>17. The trumpets and violins were played by the musicians.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>18. If she would have baked some biscuits, they would have been eaten.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. The boy sent a letter to the lady who was away last year.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. The children can and pasted the pictures and hung them on the wall.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. The weather has been rain for a week.</td>
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<td></td>
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</tr>
<tr>
<td>22. The man who sits on the bench next to the oak tree is our mayor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>23. After the family had finished dinner, they decided to go for a walk in the country.</td>
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</tr>
<tr>
<td>24. The boy who didn’t turn up for practice wasn’t allowed to play in the team until a week later.</td>
<td></td>
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</tr>
<tr>
<td>25. The postman sorted, labelled, hand delivered, and delivered the newspapers.</td>
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</tr>
<tr>
<td>26. The man in the house next door promised to water our flowers during our holiday.</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stimulus Type</th>
<th>Raw Score</th>
<th>Controlled Trials</th>
</tr>
</thead>
</table>

527
Check the blank next to the pupil's responses. The pupil must give 2 of the sentence responses listed for an item to be scored as correct. Circle 1 for a correct response, 0 for an incorrect response, and NR for no response. If the pupil gives a response not listed, record it in the space provided.

Demonstration: tall | the boy | is
a) The boy is tall.
b) Is the boy tall?

1. saw | the dog | the woman
   a) The woman saw the dog.
   b) The dog saw the woman.

2. the man | the dog | chased by: was
   a) The man was chased by the dog.
   b) The dog was chased by the man.
   c) Was the man chased by the dog?
   d) Was the dog chased by the man?

3. in the box | the ball | is
   a) The ball is in the box.
   b) Is the ball in the box?

4. tall | strong | the man | and: is
   a) The man is tall and strong.
   b) Is the man tall and strong?
   c) The man is strong and tall?

5. they watched | they ate | dinner | TV | before
   a) They watched TV before they ate dinner.
   b) They ate dinner before they watched TV.
   c) Before they ate dinner, they watched TV.
   d) Before they watched TV, they are dinner.

6. the girl: the present | the man | gave
   a) The man gave the girl the present.
   b) The girl gave the man the present.

7. the boys: the boys walking | were: with
   a) The boys were walking with the girl.
   b) The girls were walking with the boys.
   c) Were the boys walking with the girls?
   d) Were the boys walking with the boys?
   e) The boys were with the girls walking.

8. the team: the girls: going to join | are
   a) The girls are going to join the team.
   b) Are the girls going to join the team?

Score

9. bone: hurt: in | the dog's
   a) The dog's bone is hurt.
   b) Is the dog's bone hurt?

10. the boys: the race: to win: going: isn't
     a) The boy isn't going to win the race.
     b) Isn't the boy going to win the race?

11. the fence: to fall off: going: is: the girl
     a) The girl is going to fall off the fence.
     b) Is the girl going to fall off the fence?

12. on the table: the ball: will: put: you
     a) Will you put the ball on the table?
     b) Will you put the ball on the table?
     c) Put the ball on the table, will you?

13. and: running: is falling: the girl: the boy
     a) The girl is running and the boy is falling.
     b) The boy is running and the girl is falling.
     c) The boy is falling and the girl is running.
     d) The girl is falling and the boy is running.

14. in painting: is cutting: and: the man
     the girl: the grass: the house
     a) The man is painting the house, and the girl is cutting the grass.
     b) The girl is cutting the grass, and the man is painting the house.
     c) The girl is painting the house, and the man is cutting the grass.
     d) The man is cutting the grass, and the girl is painting the house.

15. the car: that: Dad bought: that: I like
     a) I like the car that Dad bought.
     b) Dad bought the car that I like.
     c) The car that I like Dad bought.
     d) The car that Dad bought I like.

16. the lamp: the woman: put: didn't: on
     a) The woman didn't put the lamp on the table.
     b) Didn't the woman put the lamp on the table?
### Sentence Assembly Continued

<table>
<thead>
<tr>
<th>Number</th>
<th>Original Sentence</th>
<th>Modified Sentence</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>The brother and sister played the piano and the guitar.</td>
<td>The brother and sister played the piano and the guitar.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>a) The brother and sister played the piano and the guitar.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) The brother and sister played the piano and the guitar.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) The sister and brother played the piano and the guitar.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) The brother and sister played the guitar and the piano.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>The girl sent the boy a letter.</td>
<td>The girl sent the boy a letter.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>a) The girl sent the boy a letter.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Did the girl send the boy a letter?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) The boy did not send the girl a letter.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) Did the boy send the girl a letter?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Even though it is expensive, I want it.</td>
<td>Even though it is expensive, I want it.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>a) Even though it is expensive, I want it.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) I want it even though it is expensive.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>The man was met by the boy whose dog was lost.</td>
<td>The man was met by the boy whose dog was lost.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>a) The man was met by the boy whose dog was lost.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) The boy was met by the man whose dog was lost.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) The man whose dog was lost was met by the boy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) The boy whose dog was lost was met by the man.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Semantic Relationships

<table>
<thead>
<tr>
<th>Task</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

### Item Analysis for Sentence Assembly

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

### Check the blank next to the pupil's responses. Circle 1 for a correct response, 0 for an incorrect response, and NR for no response. The pupil must give both responses indicated in color for an item to be scored as correct.

**Trial 1:** A man is bigger than

- a) a house
- b) a coin
- c) a spoon
- d) a plane

**Trial 2:** Jim was hit by Fred. John was hit by Frank. Who was hit?

- a) Jim
- b) John
- c) Fred
- d) Frank

<table>
<thead>
<tr>
<th>Comparison Relationship</th>
<th>Score</th>
</tr>
</thead>
</table>
| 1. Footballs are bigger than
  a) bicycles
  b) pencils
| Score 1: 0
| 2. Birds are faster than
  a) voles
  b) kites
| Score 2: 0
| 3. Books are heavier than
  a) TV's
  b) feathers
| Score 3: 0

| 4. Hours are longer than
  a) minutes
  b) days
| Score 4: 0
| 5. Rooms are smaller than
  a) flowers
  b) buildings
| Score 5: 0

529
<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2</td>
<td>58.</td>
<td>Picks nose, skin, or other parts of body (describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>59.</td>
<td>Plays with own sex parts in public</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1 2</td>
<td>60.</td>
<td>Plays with own sex parts too much</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1 2</td>
<td>61.</td>
<td>Poor school work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>62.</td>
<td>Poorly co-ordinated or clumsy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>63.</td>
<td>Prefers playing with older children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>64.</td>
<td>Prefers playing with younger children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>65.</td>
<td>Refuses to talk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>66.</td>
<td>Repeats certain acts over and over: compulsions (describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>67.</td>
<td>Runs away</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>68.</td>
<td>Screams a lot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>69.</td>
<td>Secretive, keeps things to self</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>70.</td>
<td>Sees things that aren’t there</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1 2</td>
<td>71.</td>
<td>Self-conscious or easily embarrassed</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>72.</td>
<td>Sets fires</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>1 2</td>
<td>73.</td>
<td>Sexual problems (describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>74.</td>
<td>Showing off and clowning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>75.</td>
<td>Shy or timid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>76.</td>
<td>Sleeps less than most children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>77.</td>
<td>Sleeps more than most children during the day and/or night (describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>78.</td>
<td>Smears or plays with bowel movements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>79.</td>
<td>Speech problem (describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>80.</td>
<td>Stares blankly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>81.</td>
<td>Steals at home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>82.</td>
<td>Steals outside the home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>83.</td>
<td>Stores up things he/she doesn’t need (describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1 2</td>
<td>84.</td>
<td>Strange behaviour describe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>85.</td>
<td>Strange ideas (describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 2 86. Talks about killing self
1 2 91. Talks about killing self
1 2 92. Talks or walks in sleep (describe)
1 2 93. Talks too much
1 2 94. Teases a lot
1 2 95. Temper tantrums or hot temper
1 2 96. Thinks about sex too much
1 2 97. Threatens people
1 2 98. Thumb-sucking
1 2 99. Too concerned with neatness or cleanliness
1 2 100. Trouble sleeping (describe)
1 2 101. Truancy, skips school
1 2 102. Underactive, slow moving, or lacks
1 2 103. Unhappy, sad or depressed
1 2 104. Unusually loud
1 2 105. Uses alcohol or drugs (describe)
1 2 106. Vandalism
1 2 107. Wets self during the day
1 2 108. Wets the bed
1 2 109. Whining
1 2 110. Wishes to be of opposite sex
1 2 111. Withdrawn, doesn’t get involved with others
1 2 112. Worrying
1 2 113. Please write in any problems your child has that were not listed above
APPENDIX E. ADDITIONAL MEASURES

THE CHILD BEHAVIOUR CHECKLIST

<table>
<thead>
<tr>
<th>Child I.D. Number</th>
<th>Date of birth</th>
<th>Date of administration</th>
</tr>
</thead>
</table>

Below is a list of items that describe children. For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true of your child. Circle 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

<table>
<thead>
<tr>
<th>0 = Not True (as far as you know)</th>
<th>1 = Somewhat or Sometimes True</th>
<th>2 = Very True or Often True</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1 2 1. Acts too young for his/her age</td>
<td>0 1 2 30. Fears going to school</td>
<td>0 1 2 31. Feels he/she might think or do something bad</td>
</tr>
<tr>
<td>0 1 2 2. Allergy (describe)</td>
<td>0 1 2 32. Feels he/she has to be perfect</td>
<td>0 1 2 33. Feels or complains that no one loves him/her</td>
</tr>
<tr>
<td>0 1 2 3. Argues a lot</td>
<td>0 1 2 34. Feels others are out to get him/her</td>
<td>0 1 2 35. Feels worthless or inferior</td>
</tr>
<tr>
<td>0 1 2 4. Asthma</td>
<td>0 1 2 36. Gets hurt a lot, accident-prone</td>
<td>0 1 2 37. Gets in many fights</td>
</tr>
<tr>
<td>0 1 2 5. Behaves like opposite sex</td>
<td>0 1 2 38. Gets teased a lot</td>
<td>0 1 2 39. Hangs around with children who get in trouble</td>
</tr>
<tr>
<td>0 1 2 6. Bowel movements outside toilet</td>
<td>0 1 2 40. Hears things that aren’t there (describe)</td>
<td>0 1 2 41. Impulsive or acts without thinking</td>
</tr>
<tr>
<td>0 1 2 7. Bragging, boasting</td>
<td>0 1 2 42. Likes to be alone</td>
<td>0 1 2 43. Lying or cheating</td>
</tr>
<tr>
<td>0 1 2 8. Can’t concentrate, can’t pay attention for long</td>
<td>0 1 2 44. Bites fingernails</td>
<td>0 1 2 45. Nervous, high-strung, or tense</td>
</tr>
<tr>
<td>0 1 2 9. Can’t get his/her mind off certain thoughts: obsessions (describe)</td>
<td>0 1 2 46. Nervous movements or twitching (describe)</td>
<td>0 1 2 47. Nightmares</td>
</tr>
<tr>
<td>0 1 2 10. Can’t sit still, restless, or hyperactive</td>
<td>0 1 2 48. Not liked by other children</td>
<td>0 1 2 49. Constipated, doesn’t move bowels</td>
</tr>
<tr>
<td>0 1 2 11. Clings to adults or too dependent</td>
<td>0 1 2 50. Too fearful or anxious</td>
<td>0 1 2 51. Feels dizzy</td>
</tr>
<tr>
<td>0 1 2 12. Complains of loneliness</td>
<td>0 1 2 52. Feels too guilty</td>
<td>0 1 2 53. Overeating</td>
</tr>
<tr>
<td>0 1 2 13. Confused or seems to be in a fog</td>
<td>0 1 2 54. Overtired</td>
<td>0 1 2 55. Overweight</td>
</tr>
<tr>
<td>0 1 2 14. Cries a lot</td>
<td></td>
<td>0 1 2 56. Physical problems without known medical cause</td>
</tr>
<tr>
<td>0 1 2 15. Cruel to animals</td>
<td></td>
<td>a) Aches or pains</td>
</tr>
<tr>
<td>0 1 2 16. Cruelty, bullying or meanness to others</td>
<td></td>
<td>b) Headaches</td>
</tr>
<tr>
<td>0 1 2 17. Day-dreams or gets lost in his/her thoughts</td>
<td></td>
<td>c) Nausea, feels sick</td>
</tr>
<tr>
<td>0 1 2 18. Deliberately harms self or attempts suicide</td>
<td></td>
<td>d) Problems with eyes</td>
</tr>
<tr>
<td>0 1 2 19. Demands a lot of attention</td>
<td></td>
<td>0 1 2 86. Stubborn, sullen, or irritable</td>
</tr>
<tr>
<td>0 1 2 20. Destroys his/her own things</td>
<td></td>
<td>0 1 2 87. Sudden changes in mood or feeling</td>
</tr>
<tr>
<td>0 1 2 21. Destroys things belonging to his/her family to other or other children</td>
<td></td>
<td>0 1 2 88. Sulks a lot</td>
</tr>
<tr>
<td>0 1 2 22. Disobedient at home</td>
<td></td>
<td>0 1 2 89. Suspicious</td>
</tr>
<tr>
<td>0 1 2 23. Disobedient at school</td>
<td></td>
<td>0 1 2 90. Swearing or obscene language</td>
</tr>
<tr>
<td>0 1 2 24. Doesn’t eat well</td>
<td></td>
<td>0 1 2 91. Unhappy, depressed, or sad</td>
</tr>
<tr>
<td>0 1 2 25. Doesn’t get along with other children</td>
<td></td>
<td>0 1 2 92. Unwieldy or uncontrollable</td>
</tr>
<tr>
<td>0 1 2 26. Doesn’t seem to feel guilty after misbehaving</td>
<td></td>
<td>0 1 2 93. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 27. Easily jealous</td>
<td></td>
<td>0 1 2 94. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 28. Eats or drinks things that are not food (describe)</td>
<td></td>
<td>0 1 2 95. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 29. Fears certain animals, situations, or places, other than school (describe)</td>
<td></td>
<td>0 1 2 96. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 30. Fears going to school</td>
<td></td>
<td>0 1 2 97. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 31. Feels he/she might think or do something bad</td>
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<tr>
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<td></td>
<td>0 1 2 100. Uncontrollable</td>
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<tr>
<td>0 1 2 34. Feels others are out to get him/her</td>
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<td>0 1 2 101. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 35. Feels worthless or inferior</td>
<td></td>
<td>0 1 2 102. Uncontrollable</td>
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<tr>
<td>0 1 2 36. Gets hurt a lot, accident-prone</td>
<td></td>
<td>0 1 2 103. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 37. Gets in many fights</td>
<td></td>
<td>0 1 2 104. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 38. Gets teased a lot</td>
<td></td>
<td>0 1 2 105. Uncontrollable</td>
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<tr>
<td>0 1 2 39. Hangs around with children who get in trouble</td>
<td></td>
<td>0 1 2 106. Uncontrollable</td>
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</tr>
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<td>0 1 2 114. Uncontrollable</td>
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<tr>
<td>0 1 2 48. Not liked by other children</td>
<td></td>
<td>0 1 2 115. Uncontrollable</td>
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<tr>
<td>0 1 2 49. Constipated, doesn’t move bowels</td>
<td></td>
<td>0 1 2 116. Uncontrollable</td>
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<tr>
<td>0 1 2 50. Too fearful or anxious</td>
<td></td>
<td>0 1 2 117. Uncontrollable</td>
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<tr>
<td>0 1 2 51. Feels dizzy</td>
<td></td>
<td>0 1 2 118. Uncontrollable</td>
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<tr>
<td>0 1 2 52. Feels too guilty</td>
<td></td>
<td>0 1 2 119. Uncontrollable</td>
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<tr>
<td>0 1 2 53. Overeating</td>
<td></td>
<td>0 1 2 120. Uncontrollable</td>
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<tr>
<td>0 1 2 54. Overtired</td>
<td></td>
<td>0 1 2 121. Uncontrollable</td>
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<tr>
<td>0 1 2 55. Overweight</td>
<td></td>
<td>0 1 2 122. Uncontrollable</td>
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<tr>
<td>0 1 2 56. Physical problems without known medical cause</td>
<td></td>
<td>0 1 2 123. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 57. Physically attacks people</td>
<td></td>
<td>0 1 2 124. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 58. Stubborn, sullen, or irritable</td>
<td></td>
<td>0 1 2 125. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 59. Sudden changes in mood or feeling</td>
<td></td>
<td>0 1 2 126. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 60. Sulks a lot</td>
<td></td>
<td>0 1 2 127. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 61. Suspicious</td>
<td></td>
<td>0 1 2 128. Uncontrollable</td>
</tr>
<tr>
<td>0 1 2 62. Swearing or obscene language</td>
<td></td>
<td>0 1 2 129. Uncontrollable</td>
</tr>
</tbody>
</table>
APPENDIX E. ADDITIONAL MEASURES

THE ADULT ATTACHMENT INTERVIEW PROTOCOL

INTRODUCTION

I'm going to be interviewing you about your childhood experiences, and how those experiences may have affected your adult personality. I'd like to ask you about your early relationship with your family, and what you think about the way it might have affected you. We'll mainly focus on your childhood, but later we'll get on to your adolescence and then to what's going on right now. This interview usually takes about an hour.

1. Could you start by helping me to get to know your early family situation, where you lived etc? Where born, if you moved around? Your family occupation?
   - Multiple caregivers - Who raised you?
   - See much of grandparents? Died before birth? Did your parents tell you about them?
   - Anyone else living with you?

2. Can you describe your relationship with your parents as a young child from as far as you can remember?

3. Can you choose 5 adjectives to describe your relationship with MOTHER from as far back as you can remember (5-12yrs)? This may take a while; I'll ask why you chose them. (Write down).
   - Your relationship with her was ______. Any memories or incidents that come to mind with respect to ______? Repeat for other 4 words.
   - Long silence - take another minute and see if anything comes to mind.
   - General description - Good general description, but I'm wondering if there was a specific time that happened, that made you think about it as ______?

4. Repeat question 3 and probe for FATHER.

5. Which parent did you feel closest to? Why? Why not other parent?

6. When you were upset as a child, what would you do?
   - Upset emotionally when little, what would you do? Specific time?
   - Hurt, physically? Specific incidents?
   - Ever ill when little? What usually happened?
   - Do you remember being held by either of your parents at any of these times?

7. What is the first time you remember being separated from your parents? Any other times?
   - How did you respond? Do you remember how your parents responded?
8. Did you ever feel rejected as a young child? Looking back you may realise it wasn’t really rejection, but do you remember ever having felt rejected in childhood.
   ➢ How old were you when you first felt this way, and what did you do?
   ➢ Why do you think your parents did those things? Do you think they realised you felt rejected?

8a. Were you ever frightened or worried as a child?

9. Were your parents ever threatening with you in any way - maybe for discipline, or jokingly?
   ➢ Some say parents threatened to leave them/send them away/used silent treatment - did this ever happen?

9a. Some people have memories of threats or of some kind of behaviour that was abusive. Did anything like this ever happen to you/in your family?
   ➢ How old were you/How often?
   ➢ Do you feel this experience affects you now as an adult? Does it influence your approach to your own child?
   ➢ Any such experiences involving people outside you family? If yes repeat above probes.

10. How do you think your overall experience with your parents affected your adult personality?
   ➢ Any aspects to your early experience that held/set development back/negative effect on the way you are now?

11. Why do you think your parents behaved the way they did during your childhood?

12. Were there any other adults you were close to (like parents) as a child?
   ➢ Any adults especially important though not parental?

13. Did you experience the loss/death of a parent (or other close loved one) while young?
   ➢ Could you tell me the circumstances, how old were you?
   ➢ How did you respond then? feelings at that time?
   ➢ Have your feelings regarding this death changed much over time?
   ➢ Did you attend the funeral/what was this like for you?
   ➢ What was the effect on your other parent/household? How did this change over time?
   ➢ Would you say this loss affected your adult personality?
   ➢ How does it affect your approach to your own child?

13a. Did you lose any other important persons during your childhood? Prompt as above.

13b. Have you lost other close persons, in adult years? Prompt as above.

14. Other than any difficult experiences you’ve already described, have you had any other experiences you’d regard as potentially traumatic?
   ➢ Any overwhelmingly or immediately terrifying experiences.
15. I'd like to ask a few questions about your relationship with your parents. Were there any changes in your relationship after childhood? We'll get to the present in a moment, but now I mean changes between your childhood and your adulthood?

16. What is your relationship with your parents like now as an adult? Your current relationship.
   - How much contact with your parents at present?
   - What is the relationship with your parents like currently?
   - Are there any sources of dissatisfaction in your current relationship? Any sources of special satisfaction?

17. I'd like to move now to a different sort of question about an aspect of your current relationship with your child/children/imaginary 1-yr old. How do you respond now, in terms of feelings, when you separate from your child/children? Do you ever feel worried about child?

18. What would 3 wishes for your child 20 years from now be? Partly the kind of future you'd like to see for your child. I'll give you a minute or two to think about this one.

19. Is there any particular thing you feel you learned above all from your own childhood experiences? Maybe something you've gained from the kind of childhood you had?

20. We've been focusing a lot on the past. I'd like to end looking more into the future by asking what you hope your (imagined) child might have learned from their experience of being parented by you.
APPENDIX E. ADDITIONAL MEASURES

SEPARATION ANXIETY TEST (SAT)

TEST ADMINISTRATION

Separate photographs are used for boys and girls so it is of vital importance that you use the appropriate set depending on the gender of the child being tested. The photographs are labelled G1-G9 for girls and B1-B9 for boys as indicated on their back along with each of the photograph’s title.

Introduce the SAT as follows:

“I have got a number of photographs which show a child about the same age as you in different situations which happen nowadays in a lot of families. Maybe these situations have happened to you, maybe not. Regardless of whether or not the same thing happened to you, I would like you to tell me how you think the child in the photograph might feel about the situation and what s/he would do following the situation, or, what would s/he do next. This is not a test and there are no right or wrong answers. I want your opinion about the child in the photograph. Okay?

Present each photograph by reading the title as you hold the photograph in front of the child. Do not embellish on the title or give further explanation of what is going on in the photograph. If the child asks for more information then just say that it is up to him/her and that s/he should make up any story s/he wants for what is happening.

1) The boy/girl is going away on a school trip for two weeks. Here s/he is saying goodbye to his/her mum and dad.
2) Mum is going shopping and the boy/girl is staying at home alone.
3) Mum is going into hospital.
4) Mum and dad are going out for the evening.
5) Dad is leaving home after an argument.
6) The boy/girl is in town with his/her dad. Dad says “Go on and spend your pocket money, I’ll wait here.”
7) It is the boy’s/girl’s first day at a new school.
8) The boy’s/girl’s dad is going away to work.
9) Mum and dad are going away for a few days and the boy/girl is staying with his/her uncle.
For each photograph presented the child is asked the following questions:

1) "How does the boy/girl feel?"

For this question try to elicit a feeling (for example, "he feels lonely") and a justification of that feeling (for example, "because he misses his parents"). However, it is likely that some children will not be able to give both, even after some probing.

**PROBES:**

Use the following probes below for a given type of answer that the child might provide.

<table>
<thead>
<tr>
<th>Child's response</th>
<th>Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the child gives an ambiguous feeling, e.g.,</td>
<td>&quot;What kind of feeling is that like?&quot;</td>
</tr>
<tr>
<td>&quot;weird&quot;, &quot;strange&quot;, &quot;confused&quot;, &quot;bad&quot;, &quot;not so good&quot;, &quot;not happy&quot;</td>
<td>or &quot;How would that feel?&quot;</td>
</tr>
<tr>
<td>If the child gives an action instead of a feeling to</td>
<td>&quot;If s/he were going to do that, how would s/he</td>
</tr>
<tr>
<td>the feeling question, e.g., &quot;he feels like going</td>
<td>feel about it?</td>
</tr>
<tr>
<td>over to a friend's house&quot;</td>
<td></td>
</tr>
<tr>
<td>If the child gives a feeling but no justification,</td>
<td>&quot;Why would s/he feel angry?&quot;</td>
</tr>
<tr>
<td>e.g., &quot;s/he feels angry&quot; (and does not elaborate)</td>
<td></td>
</tr>
</tbody>
</table>

If the child does not appear to be able to give both a feeling and a justification even after providing at least one probe, then do not probe further and move on.

2) "What is the boy/girl going to do next?" Can add, "That is, following the situation in the photograph?"

For this question get as many different answers as the child will give without repeating themselves. Always acknowledge an answer regardless of whether it is constructive or destructive one. Do not say more than just "what will s/he do next?" or "what will s/he do following the situation?"

**PROBES:**

If the child says "I don't know", then probe by reminding him/her of the feeling that they indicated in the earlier feeling question. For example, "well, just before you said that she is going to feel sad. If she is going to feel that way, what might she do next?" However, a child who says "s/he isn't going to do anything" is not the same as a response of "I don't know". In such a case, DO NOT use probe as above and instead ask "do you have any other ideas?".

Following this question always probe: "Is there anything else?" or "Do you have any other ideas?" or "Is there anything else that s/he might do?".
APPENDIX E. ADDITIONAL MEASURES

THE MANCHESTER CHILD ATTACHMENT STORY TASK (MCAST)

Jonathan Green, Charlie Stanley, Ruth Goldwyn
University of Manchester

Aim

The child attachment interview is a semi-structured play assessment designed for children between about 4 and 7 years inclusive. It aims to evoke within a controlled and repeatable setting patterns of behaviour and reaction from the child which originate from an "inner working model" of attachment relationships that a child is thought to have developed at this time. It is not intended as a general play interview and should be used as part of a comprehensive assessment.

Theoretical Background

Attachment theory argues that a specific "behavioural system" has grown up through evolution in relation to the infant experiences of danger, isolation and other threat. This behavioural system has survival value because it results in the infant seeking proximity and safety with a familiar and safe adult. Elements of the system are activated very early on in development and different developmental skills recruited to it in later months and years. Bowlby's formulation emphasised that this "behavioural system" was discreet and was not equivalent to general behaviour or other personality traits. Indeed, as the child got older, it fought only become activated and apparent under particular situations of distress. However, because the system is concerned with basic feeling states of security, anxiety and the modulation of distressing affect, it forms a core component of the developing personality. It would later effect, Bowlby hypothesised, many areas of developing social functioning, particularly those around intimate relationships and the core sense of self and security.

As cognitive development - including memory, anticipation, reflectiveness, and planning - develops between the second and fourth year, it is hypothesised that the early experiences as infant are internalised into a cognitive model or map, which guides behaviour and generates expectations about the world. As this internalisation proceeds it becomes less accessible to observation and may correlate with external behaviour to a diminishing degree (see Crittenden 1991). While the early work on the attachment behavioural system in infancy largely preceded by way of a direct observation of infant behaviour under certain conditions, the challenge in the assessment of attachment patterns in the later preschool years comes to be this increasing internalisation of attachment constructs. Unless one postulates that attachment patterns are merely a marker for ongoing relationships and thus have no particular internalised structure, it cannot be assumed that a child's overt behaviour will continue simply to reflect attachment experience.

In adults this process further advanced and the effort to elicit attachment patterns within adult experience has largely proceeded with way of detailed verbal interview (The Adult Attachment Interview - Main and Goldwyn). This interview proceeds using some basic assumptions about memory processing and in particular about how early experience is so processed as to be available to current consciousness - and thus memory and action. The assumption is that if defensive patterns in relation to attachment have been developed over childhood, then the memory processing will have
been in some way distorted and the flow of current consciousness in relation to attachment themes will be perturbed by unresolved memory traces and unprocessed experience. The Adult Attachment Interview seeks to "surprise the unconscious" by asking unexpected questions which tap so-called semantic memory structures (or an overall patterning of experience in the n-find) built up over time and to juxtapose these with episodic memory structures (for specific incidences). A number of these questions within the Adult Attachment Interview concern experiences, which in theory should have evoked attachment behaviour in childhood, such as separations, distress, hurt or illness.

In a similar way, the Child Attachment Interview aims to surprise the young child's early version of the construct of attachment relationships, using techniques appropriate to the younger age. The technique of an interview for children between 4 and 7 must use elements of behavioural observation appropriate for infancy as well as elements of dialogue and conversation appropriate for adults. A key feature of the interview is that the child is repeatedly engaged at both an emotional and cognitive level in a stressful imagined situation involving an identified self. It is assumed that the experiencing of this moment of worry or panic will (as in the AAI) "surprise" the child's internal cognitive structures and lead them to act out spontaneously the way in which these relationships have been processed so far in their lives. We hope in this way to uncover the beginning stages of both the secure attachment experience and also the varieties of psychological adaptation that children make in the face of adverse environmental experience. The relationship between the behaviour stimulated in this way and behaviour in other situations is examined using a number of "control vignettes" which are built into the interview. General issues relating to the use of narrative techniques of this kind in assessing attachment phenomena are reviewed by Oppenheim (1995).

General comments on the Interview

Role of the Interviewer

The role of the interviewer is quite particular in this interview and needs careful attention. At the beginning there should be a friendly engaging rapport, which gradually brings the child into a focus on the task of the interview. The interviewer then has the task of evoking a degree of distress in the child. This is often done by the use of the observer's own affect although the focus of attention should remain on the symbolic play materials. After the handover to the child to complete the story, the interviewer becomes an observer for the test period. When this phase for each vignette has been completed the interviewer has a more active role for the probes and then takes the lead again in introducing the next vignette and bringing the situation again to a point of affective intensity.

At the end of the interview, it is important that there be a wind down period. For this there is a fairly neutral "family outing" vignette. During this time, it is important that the interviewer be naturally interactive, returning gradually to the kind of rapport with which the interview started. It is not appropriate to make recordings during this stage and observations even privately should be kept to a minimum. In this way we hope that the child is given an opportunity to process the interview and to minimise the chance that a child be left with distressing after effects.

Although the interview uses play materials familiar from non-directive and other forms of play therapy, it should be noted that the interviewer has a different role here to those situations. In particular, there is no use of the relationship between the child and the interviewer, no focus on transference, and the interviewer takes an active lead in structuring the interview to number of occasions. In this, the parallel is with a semi-structured verbal interview in adult psychiatry. For repeatability it is important that interviewers practice the sequence of the interview until they are well memorised and it is best if the work is done by someone with some clinical experience with young children.

Orientation

The orientation part of the interview mirrors the same part of the AAI. The child is shown the room (see room set-up) and focused first on the pencil and paper. They are asked to do a drawing of their
family, "so I know who is in your family". Many children win have a clear sense of what this means and proceed with the task. Some will have questions about who they are supposed to include. Although the information in this section can be useful, it is mainly intended as a setting exercise and thus if the task seems as though it is going to be very complex for the child, the interviewer can take the decision to restrict the task: viz. "just show me who you live with". The child should not be rushed through this exercise but some children drawn obsessively slowly and will need pacing.

**Choice of Dolls**

The child is shown a selection of dolls which have been pre-selected as racially appropriate. They are asked to choose a doll to represent themselves and their mother/father/other adult in whom the interviewer is interested in. Once they have made this choice, the other dolls should be put away (they are brought out later for the final vignette of the session). The child should not be able to get extra dolls during the interview and some distractible children will need limit setting. Once the dolls have been selected they are identified with a name. In the child’s case, this should be the child’s name and in the adult’s case the name the child chooses. Thereafter, the dolls should be referred to by those names Viz. "Anna doll" or "mummy doll": thus reinforcing the identification of the child with the symbolic material. Once the initial identification is made however, the child doll needs to be allowed to exist relatively independently in the play space to encourage symbolic expression. Too literal a connection between the dolls and the child here and now is avoided. Interviewers can reinforce this symbolic play in a number of subtle ways and this will help the interview - the best thing is to watch demonstration tapes.

**Orientation to the Dolls House**

This is a continuation of the selection of dolls and orientates the child to the other materials to be used in the interview. To a reasonable extent the child can create their own play space using the materials but the interviewer needs to be alert to controlling or obsessional or overactive children who will begin to break the bounds of the structured format. It must be indicated here early on that this is a special kind of playing and the child needs to listen to the interviewer to find out what is going to go on. To reinforce this the interviewer explains the format of the interview. "I am going to show you a story involving X and mummy until I get to a certain point, then I am going to ask you to finish the story off". The control vignette establishes the structure and in it the implicit rules governing the interview must be conveyed clearly.

**Test Vignettes**

For each vignette, the interviewer can encourage the child to participate in setting up the action. Then the interviewer takes the lead in setting the story and developing the necessary level of affective arousal. This can be done through sound, through talk, through noises, through the interviewer’s own affect, but the child must be “brought along” with the interviewer. The interviewer should not proceed to the next phase in each vignette until he or she is satisfied that he has brought the child to the necessary affective level. Clearly, children will differ in the quality and intensity of their affective expression and this should be taken into account. The affect elicited should be appropriate to the context and thus will vary from story to story in its detail. This will avoid the repetition of a similar sort of distress time after time. At the point at which the involvement is made, the interviewer then asks the child to "finish the story". That point represents the beginning of the test situation. The child’s behaviour, habitus, expression, vocalisation and style are all observed during the test period as well as the content of the behaviour acted out. The child is encouraged to verbalise the story along with the actions but should not be allowed to verbalise without acting on the dolls.

**Prompts**

The child should generally be left to make a spontaneous completion of the story. Prompts can be used judiciously to facilitate the narrative in some situations:
1. Prompts to encourage a stuck child ("and then what......" or and then what happens.....")

2. For a highly disorganised/distractible child who has lost the boundaries of the task. A prompt can be used to refocus the child and the interviewer can use this to test whether such a limited prompt can redirect the child to the task or whether they are shying away from the task in a resistant way. E.g. "you remember you were completing a story..." or then more explicitly, "you remember the story you were completing about the boy who hurt his knee...." 

**End of Task**

Theoretically the end of each vignette should be when distress has been signalled, proximity has taken place, distress assuaged and the attachment behavioural system replaced by exploratory behaviour. That moment of transition represents the end of the vignette session. For many children (mainly secure) this end will be clear, for other children the end may not be and this will be a matter for rating. When the ending is unclear, the interviewer will sometimes have to use their judgement as to how long to let the child continue. In practice interviewers look for a point in the narrative where it is clear that the play has "shifted gear" into some other goal orientation.

When the examiner feels there is a natural pause or a clear end to the playing out of the completed story, then several probes are introduced. The aim is to get a rating of the child doll and parent dolls' cognitive/affective state at the end of the vignette session. In technique this should constitute a natural amplification of what has already been communicated during the doll play.

**Probes:**

a) "And what is (child) feeling and thinking now?" Both feelings and thoughts are relevant here and children of this age will often not be able to distinguish between them - in any event what will be most valuable will be an affect laden thought. The child's response to this probe should be recorded.

b) 'And what is the child going to do now.............. (This probe may be unnecessary if the child has clearly acted out what they are going to do next, but there may be room for amplification). Notes should be made of whether the child’s response to this question seems appropriate or not. (Some child will be able to identify feeling states but will not have any idea about what to do with them).

c) The same probes with the mother. Examiners need to be aware that children will often find the decentering involved here difficult and confusion may arise. If this is the case, then the probe should not be pursued although the fact is recorded.

Some children will wish to continue into elaborated, bizarre, destructive or chaotic play that may well represent a kind of flight of ideas. This play can be allowed to continue for a certain period while it is being informative but the interviewer should be wary of the child's tiredness and bring in limits when appropriate.

As with all interactive interviews in which the interviewer is given a certain amount of freedom to elicit a child’s performance, there can be a tendency for interviewers to be active in coaxing normative reactions from a child. This needs to be avoided.

**Closure**

In the final vignette the child is asked to play out the kind of pleasurable family activity that might happen at a weekend. The interviewer can be flexible here to an individual child’s circumstance but the aim should be to allow the child to come back into a more descriptive mode about their surface
The aim is not to get further information about family dynamics (although this may be tempting) but to allow the child to reconstruct their ordinary experience before the end of the session. The interviewer should thus aim to be affirming and supportive of any adaptive strengths represented in the family.

Returning to Parent

Usually children will be returned after the interview to their parents. This handover should be done positively and it is important that the child does not see the interview as a test. In front of the child the interviewer can just emphasise how much they have enjoyed and found interesting their time with the child and how well the child did and co-operated.

Observations about the reunion behaviour between child and parent may of course be pertinent.

CHILD ATTACHMENT INTERVIEW - METHOD

MATERIALS

Dolls House
Furniture and Toys
Doll figures - appropriate racial group and selection of child and adult dolls.
Video camera.

ROOM SET-UP

SEQUENCE

1) FAMILY PICTURE

Pencils and paper.
"Show me / draw me who’s in your family."

2) SET OUT TOYS AND CHOOSE DOLL.

Child is offered a range of figures to choose a child and a mother. It is important that the identification is made between doll and child and between mother, doll and the child’s mother. The doll should be called the same name as the child

3) INTRODUCING THE STORIES.

"What we’re going to do is this. Firstly I’m going to tell you the beginning of a story with you and mummy in it. Then when we get into the story I’m going to ask you to show me with the dogs what happens next.

4) CONTROL VIGNETTE - BREAKFAST

The aim of this vignette is to familiarise the child with the procedure. It will also give incidental information about home structure, parenting style and characteristic child reaction patterns. etc.

The Parent doll and child doll are in bed asleep. The alarm goes off in parents room - parent gets up and goes down stairs to start with the breakfast. Then calls up to the child:

"Time to get up...
What happens next?

5) TEST VIGNETTES.

VIJNETTE 1 - NIGHTMARE

It's night time and here you and mum are in bed asleep.
Child can help you place the dolls where he/she thinks they should be.
It's in the middle of the night and everyone is fast asleep very quiet. Everything is very dark. Then suddenly X doll wakes up (act this out with the doll).
She says oohh.. I've had a horrible dream... oohhh.. horrible dream. And she starts to cry and she says .. oohhhh .... horrible dream....

Now you show me what happens next...

VIJNETTE 2 - HURT KNEE

For this story it's daytime and mummy's inside the house - what do you thinks she's doing there?
Child can help place the parent doll as they see fit
X doll is outside playing in the garden. What does X like to play - what would he be playing?
OK (whatever it is - act it out - say football) He's playing football in the garden running around kicking it here and there (room for creativity as the game is set up but not too elaborate and not allowing involvement of anyone else)

He's running along and suddenly ... oohh .. he falls over ... and... "oowww! " he's hurt his knee and he looks down and he sees it's bleeding ... and it hurts.. and he says "oowww my knee's hull ...my knees hurt...

What happens next in the story?

VIJNETTE 3 - ACHIEVEMENT

This vignette is intended as a relief from the intensity of the distress vignettes and an opportunity for the child to experience a story about a more pleasing event. But the quality of attachment relationship will affect the child's self perception and the reaction to achievement as well as the response they expect from their parent is often revealing. Many reactions here especially in clinical groups are found to be paradoxical and patterns of expectation about success, self esteem and school related problems are also accessed. Psychometrics if the interview show that ratings on this vignette show weaker association with overall attachment status than some others but the vignette is retained to aid the rhythm of the interview. In coding a somewhat different weight is given to this vignette and no 6 (see later).

For this story we're in school
Child can help set up the school and say who is their teacher etc.
And in school they're doing some drawing and X does a lovely drawing on his paper (demonstrate with small piece of paper and make a little drawing)
And Y (teachers name) comes up and says "X - that's a beautiful drawing ... oh yes that's the best one I've seen today .... what a beautiful picture - you take it home at the end of the day and show your mummy" So it's the end of the day and X packs up her bag and puts the drawing inside (demonstrate). Then she goes home. She goes home and rings on the door bell

It is important here that mummy is placed in an accessible position in the house but that any reaction from her is not anticipated by the examiner in the set up. The action of the child ringing on the door bell is the trigger for the hand over to the child - do not represent the mother coming to the door.
What happens next in the story?

**VIGNETTE 4 - ILLNESS**

In this story X doll is at home watching TV. What's your favourite TV programme? X is watching that. Mum is next door - where do you think that she is?

Suddenly X has a pain in the tummy. And it gets worse and she says "oohh ... I've got a pain in my tummy oowww it's getting worse." And she feels she tummy — it's a horrible pain. "Oowww".

What happens next in the story?

**VIGNETTE 5 - FRIENDS FIGHTING**

In this vignette, the distress induced relates to the child having an argument with a friend, falling out and the friend leaving and rejecting the child. The child is then left alone with the feeling of rejection (this is the stress stimulus) and then returns to mother. Because there are a number of confounding themes in this vignette, to do with peer conflict particularly, care must be taken to organise the vignette to allow the focus to end up with a child-mother reunion. The vignette often induces a problem solving task for mother and child.

This story is about X doll playing with a friend. Who are you going to choose as your friend to play with? Let's find a doll.

The interviewer brings out a selection of dolls at this point for the child to choose and to name. So X and Y are playing together. What kind of thing would they play do you think?

Go with the child's suggestion.

So they are playing (say hide and seek) together. (Act this out for a time). Then suddenly Y says "I am fed up with this, I don't like this game and I don't like you anymore. You are not my best friend anymore and I think you are horrible. I am going away now and I am not going to play with you ever again."

The interviewer takes the friend doll out of the picture and puts it away in an inaccessible place.

So then X doll is left all alone feeling upset because his friend left and he goes home to where mum is.

What happens next in the story?

**VIGNETTE 6 - SHOPPING**

In this vignette, the child finds him or herself separated from mother in a crowd while shopping. To set up the vignette the dolls' house is taken away and furniture from the house or other props are used to create a shopping centre with buildings and streets. This only has to be schematic. The essential requirement is that it needs to be possible for the child not to be able to see the mother doll at the trigger point of the vignette. From experience, during this vignette, it is best not to identify shops particularly during the story. In particular, do not to identify sweet shops since this introduces some powerful conflicting themes!

In this story, X doll and mum are going shopping. Here they go into the shopping centre and look at all the shops and there are lots of people around and they have to hold on tight to each other. They look in this shop here and this shop here ——— X doll is looking in this shop here ——— At this point, show the child looking at a shop window and then take the mother doll around to another place which is out of sight of the child doll and leave her there.
And X doll looks around with all the people there and she can't see her mummy and there are all the
people around but mummy's not there. She looks around and can't see her........ Then she feels very
scared and she says "where's my mummy, where's my mummy........

What happens next in the story?

STORY 10 (FAMILY TRIP)

This final story should not relate to attachment themes but is a closure story. The child can suggest a
typical family trip that the family would do together. Other family members can be brought on to the
scene and the child can act out a typical trip. It is valuable if the child is allowed to play naturally
for some time until there seems a natural closure. During this phase, the examiner should not be
rating but should be ordinarily responsive to the child and encouraging of them. The examiner, thus
at this point, steps out of the role that they have maintained through the rest of the interview.

Jonathan Green Revised September 1997
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