

**DEVELOPMENT OF A PROJECTIVE TECHNIQUE TO ASSESS EXPERIENCE  
OF ATTACHMENT IN MIDDLE CHILDHOOD:  
A PILOT STUDY**

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## DECLARATION

“I, Elizabeth Westphal, declare that the Doctor of Psychology (Clinical Psychology) thesis entitled Development of a Projective Technique to Assess Experience of Attachment in Middle Childhood: A Pilot Study is no more than 40,000 words in length, exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.”

I further declare that the ethical principles specified by the School of Psychology’s document on human research and experimentation have been adhered to in preparation of this thesis.

Signature:

Date:

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## **ABSTRACT**

Research on attachment in human relationships has flourished with the development and validation of measures of attachment for infants, small children and adults, and, more recently, adolescents. However, research on attachment in middle childhood has been limited by relatively less attention to the development of relevant assessment techniques for this age group. At the same time, despite recognition of the powerful impact of attachment on overall child functioning, its assessment in clinical work has been hampered. Existing techniques for this age group rely on direct observation of actual behaviour, parent or child self-report of actual or hypothetical behaviour, or the interpretation of doll play in response to suggested specific situations of stress or separation. The present research represents the development of a more versatile technique for assessing quality of attachment in middle childhood, the “Child’s Experience of Attachment Technique (CEAT)”. Design and piloting of this projective tool involved a number of steps. First, an in-depth exploration of relevant literature, particularly that relating to internal working models of attachment, was undertaken. On this basis, a series of ten ambiguous pencil drawings of children in various social situations was devised. Employing a storytelling technique, these drawings were trialled with a non-clinical sample of five boys and five girls, aged 6-12 years of age. The data collected enabled the stimulus drawings to be evaluated and refined, and a scheme for coding responses in the stories elicited to be created. The development of a coding scheme that could reflect some of the complexity of coexisting internal working models of attachment was the main thrust of this research. A revised set of stimulus drawings and

the coding scheme were designed and piloted with a non-clinical sample of 20 girls and 20 boys, and with a clinical sample of 10 boys receiving psychotherapy for severe behavioural difficulties. When the matched samples were compared using the CEAT, the clinical group was found to have significantly lower security of attachment scores than the non-clinical group, as hypothesised. These results gave a preliminary indication of appropriate concurrent validity of the CEAT and its coding scheme. In addition, the CEAT provided rich multifaceted qualitative information concerning participants' internal representations of attachment. Overall, findings suggested that further investigation of the reliability and validity of the CEAT is warranted.



## **CHAPTER 1**

### **ATTACHMENT THEORY AND CHILD DEVELOPMENT**

According to Bowlby's attachment theory (1969/1982, 1973, 1980), a central developmental task of the infant is to form an affectionate bond or attachment to a caregiver. From an evolutionary perspective, this attachment bond ensures that infants and small children maintain close proximity to caregivers when threatened, thereby promoting species survival. Bowlby considered that this attachment influences the processing of thoughts, feelings and expectations concerning particular relationships throughout the individual's life.

The present study, through the design and piloting of a projective storytelling technique for assessment of attachment, focuses upon internal representations of attachment, encompassing multiple representations of attachment, and challenges current categorical models of quality of attachment. To date, understanding of the development of attachment experience, and triggers that activate attachment behaviour in middle childhood has been limited by the paucity of available measures of attachment in middle childhood. The study extends the scope for future exploration of the development of attachment in middle childhood, in both research and clinical settings.

This introductory chapter briefly reviews Bowlby's attachment theory, the framework for this research, in particular its formulation of how attachments develop and their role in psychological development, and the conceptualization of internal working models of attachment. The second part of the chapter provides the context

within which the study was conceived, discussing the grounding of attachment theory in empirical research and its impact beyond attachment assessment.

## **1.1 Bowlby's theory of attachment**

As an integration of psychoanalytic theory, ethological principles and cognitive control theory, attachment theory embraces the concepts of interpersonal relationships from both behavioural and experiential perspectives. From birth, through the innate process of proximity-seeking, the infant learns to expect certain reactions from the caregiver, and to adapt his or her behaviour in ways that are most likely to facilitate the caregiver's responding appropriately and effectively (Bowlby, 1969/1982, 1973, 1980). Bowlby proposed that these early interactional patterns between infant and caregiver become organized as internal psychological structures he termed internal working models of attachment (IWMs), which have a persisting influence on the infant's thoughts, feelings and expectations about future interactions with the primary caregiver and other attachment figures.

## **1.2 From behavioural interactions to internalized representations of attachment**

### **1.2.1 Attachment internalized on the basis of behavioural interactions in infancy**

The process of internalization of attachment has been conceived as involving four developmental phases, the first three unfolding in the first year of life (Marvin &

Britner, 1999). Until about twelve weeks of age, the infant signals a need for interaction through attachment behaviours (Bowlby, 1969/1982, 1973, 1980), such as crying, responding to the human voice by quieting, visually orienting to and tracking others (McGraw, 1943; Wolff, 1969), smiling, reaching, grasping and clinging (Marvin & Britner). These behaviours have been seen as part of an attachment behaviour system, activated by the infant's distress and deactivated by comforting contact with an attachment figure. Thus Bowlby (1969/1982) proposed proximity as the set goal of this system, with the infant's attachment behaviours being random at first, and interactions with caregivers largely depending on their responsiveness. As the latter becomes more predictable, stable patterns of interaction emerge, signaling the second phase, in which the infant's attachment behaviours become elaborated and embedded in self-initiated chains of behaviour directed differentially toward specific caregivers (Marvin & Britner).

Phase three begins when the infant can move independently of the caregiver and can actively seek proximity. Ainsworth, Blehar, Waters, and Wall (1978) observed that the infant then begins to use the caregiver as a "secure base" (pp. 22), moving away to explore and quickly returning for comfort or reassurance when feeling anxious. With the advent of speech, the infant relies increasingly on verbal signals to initiate and maintain interaction with a caregiver (Marvin & Britner, 1999). Bowlby (1969/1982) noted that with "the powerful extraordinary gift of language, a child is busy constructing working models of how the physical world may be expected to behave, how his mother and other significant persons may be expected to behave, how he himself may be expected to behave and how each interacts with each other. Within the framework of these working models he evaluates his situation and makes his plans" (p. 354).

The fourth phase of attachment, occurring from two to three years of age, is reached when the infant can inhibit attachment behaviours, take some responsibility for meeting of his or her own needs, and can simultaneously comprehend his or her own plans and goals, and those of the caregiver (Marvin, 1977), and can begin to negotiate proximity. This latter process Bowlby (1969/1982) referred to as the child and caregiver having formed a goal-corrected partnership. Engaging in a goal-corrected way with the caregiver requires the child to “have an especially complex, dynamic, internal representation of relevant aspects of self, his or her behaviour, the environment, and the object or person toward whom the behaviour is directed” (Marvin & Britner, 1999, p. 48).

### **1.2.2 The nature of internal working models of attachment**

Bowlby (1980) defined internal working models of attachment (IWMs) as mental maps which regulate the attachment behaviour system by predicting the outcome of interactions with the attachment figure (Larose & Boivin, 1998). According to Collins and Read (1994, cited in Feeney & Noller, 1996), IWMs have four main components:

- a) memories of attachment experiences with the caregiver;
- b) beliefs, attitudes, and expectations of self and others, in regard to the self being worthy of love and care, and in regard to others being available and accessible to provide help;
- c) goals and needs related to attachment; and
- d) strategies and plans related to securing attachment goals and needs.

Bretherton (1985) and Main, Kaplan and Cassidy (1985) proposed that IWMs also include affective, defensive, and descriptive cognitive components, and provide a mechanism whereby an individual anticipates, predicts, and interprets the intentions and behaviour of others (Rothbard & Shaver, 1994).

The concepts of “scripts” or “event schemas” (Bartlett, 1932; Nelson, 1986, cited in Bretherton & Munholland, 1999; Schank & Abelson 1977, cited in Bretherton & Munholland, 1999) are similar to that of IWMs. Schemas such as “the mother role (p. 95)” are seen as the building blocks of a child’s IWMs. Schank (1982) purported that experiences stored in short-term memory can be broken down and then stored in the long-term memory as smaller schematised units, resulting in a complex hierarchical system of schemas with related information being represented at varying levels of generality. For example, according to Schank, the ‘Mum helps me when I can’t do something,’ schema may be embedded in a network of other schema, such as the ‘general comforting schema’ or the ‘I am loved’ schema, and may also be generalized in the ‘people in general are helpful’ schema.

Such schemas or IWMs can become so taken for granted that they operate outside an individual’s consciousness (Bowlby, 1973, 1988). These unconsciously maintained representations tend to persist, organizing an individual’s expectations and strategies for forming, renewing, controlling, and ending his or her interactions, thereby influencing the way the child subsequently experiences the world and interactions with significant others (Diamond & Marrone, 2003). Nevertheless, as Diamond and Marrone elaborated, IWMs have not been conceived as static structures. Bowlby (1988) himself stated that the securely attached individual gradually revises or modifies IWMs in the face of unexpected or contradictory relationship interactions. Acknowledging the complexity of the internal world of IWMs, Bowlby (1978) noted

that an individual can develop multiple IWMs in relation to the same caregiver, and that “inappropriate but persistent representational models often coexist with more appropriate ones” (p. 16).

In other words, while Bowlby (1969/1982, 1988) and others have considered IWMs to be relatively stable over time, they have also been seen as subject to changing when a person’s circumstances change, resulting in a lack of fit between the IWM and experienced reality (Bretherton, Ridgeway, & Cassidy, 1990). Bowlby (1978) believed that when external factors necessitated change of an IWM, appropriate restructuring does not always take place. He was convinced by his clinical work that defensive processes influenced the development and revision of IWMs, causing what he termed distortions. Such distortions, he suggested, were most likely to occur in response to situations which caused the child intolerable mental pain, confusion or conflict (Bowlby, 1980). For example, defensive exclusion was likely where the reality of an unloving or abusive parent was excluded from awareness, allowing the child to maintain conscious access to IWMs featuring only a loving idealized parent. While such defensive exclusion might be adaptive in the short-term, by bringing relief from mental anguish, it may interfere with adequate revision of working models, leaving the person vulnerable to psychopathology, by compromising the ability to reflect on relationship issues and cope effectively in interpersonal situations.

Defensive processes were understood by Bowlby (1980) to operate at varying levels of consciousness, with exclusion facilitated by the segregation of contradictory information into different memory systems. A situation he speculated as likely to result in defensive exclusion was when a child’s attachment behaviour was intensely aroused, but instead of distress being assuaged, the child was ridiculed or punished by

the caregiver. A second example involved the child having knowledge about the parent which the parent does not wish the child to accept as true; the parent may punish or threaten to punish the child for knowing, or may insist that something else is true. A consequence of defensive exclusion, Bowlby postulated, is that the child develops two sets of incompatible working models of the self and the attachment figure, one based on false information, held consciously, and one reflecting the child's real experience, held unconsciously (Bretherton et al., 1999). This is one process by which multiple IWMs of attachment may be established.

### **1.2.3 Attachment and psychological wellbeing**

As indicated above, Bowlby's conceptualization of the formation, maintenance and modification of IWMs of attachment implies a highly complex system of internal representations that govern the attachment behaviour system. This enables attachment theory to be used to explain many complexities of interpersonal life, and indeed psychiatric disturbances (Bowlby, 1987), in terms of deviations in the development of attachment behaviour or the failure of attachments to develop. Inadequate and distorted IWMs compromise an individual's ability to accurately perceive and deal with potential caregivers, and so predispose the individual to development of psychopathology (Bowlby, 1969; Diamond & Marrone, 2003).

This was not a new idea of course, as psychoanalytic theory had assumed from the outset that unconscious processes stimulated early in life could lead to psychopathology (Karen, 1998). However, Bowlby (1969) was the first to articulate the theory that actual attachment experiences, unconsciously held in IWMs, could have direct influences on psychological wellbeing throughout life. He opened the door

to profound understandings of individual and group psychological life, such that the impact of attachment theory is still expanding, with many implications emerging, as empirical research proceeds.

In other words, growing out of Bowlby's work as a psychiatrist, attachment theory is not only a theory of development but also a theory of psychopathology, which he hoped would inform diagnosis and treatment of emotional distress (1978, 1988). He was convinced of the clinical usefulness of attachment theory, and of understanding psychotherapy as providing a "secure base" for a patient, "from which he can explore both himself and his relations with those with whom he has made, or might make an affectional bond" (Bowlby, 1978, p. 18). Other psychoanalysts have criticized the theory as "reducing etiological considerations to the single variable: that of physical separation" (Fonagy, 1999, p. 595). Another stumbling block for psychoanalysts has been the use of attachment classification based on mutually exclusive categories to describe the individual in relation to others (Slade, 1999). This has been perceived as too simplistic a way to describe the complex, fluctuating ways of relating, observed in interactions of and with patients.

The Adult Attachment Interview (George, Kaplan, & Main, 1985, cited in Hesse, 1999; Main, Kaplan, & Cassidy, 1985) and development of the Reflective-Self Function Scale (Fonagy, Steele, Moran, Steele & Higgitt, 1991), together with Main's (1991) findings concerning metacognitive monitoring, have been instrumental in a growing engagement of the field of psychoanalysis with attachment theory. These insights have operationalized aspects of listening and reflection that have always been part of clinical listening (Slade, 1999). Findings linking security of attachment with coherence have also confirmed what psychotherapists have long claimed, namely that psychotherapy is successful when the patient can tell a coherent life story (Marcus,

1984, cited in Bretherton & Munholland, 1999). Consequently, tools such as the Adult Attachment Interview Coherence Scale and the Reflective-Self Function Scale have been found useful as ways of measuring the effectiveness of therapy with adults.

### **1.3 The grounding of attachment theory in empirical research**

As Bowlby developed his ideas about attachment, he was strongly influenced by research with animals and children, especially Robertson's observations of children undergoing separations from parents, and Ainsworth's observations of mothers and babies in Uganda (Hinde, 2005). As these ideas were further tested, a symbiotic relationship developed between theory and research, particularly in relation to the conceptualization of attachment and its measurement, at both behavioural and experiential levels. Theory has proceeded hand in hand with the development of certain key techniques for the assessment of quality of attachment. Critical steps in the progress of this research are briefly outlined below.

#### **1.3.1 Establishing categories of attachment behaviour and internal representation**

The development of the Strange Situation Procedure (SSP) by Ainsworth et al. (1978) facilitated initial empirical explorations of Bowlby's theory, particularly the identification of secure, avoidant, and anxious patterns or styles of attachment behaviour, and of accompanying caregiver characteristics. Secure attachment was considered to be associated with infant distress following separation, and on reunion with a positive response to the mother who was seen to be available, responsive and

warm with the infant, who then returned to independent exploration. In contrast, avoidant attachment was associated with infant detachment during separation, and avoidance of the mother upon reunion, the mother being observed to be rejecting, rigid, hostile, or averse to making contact with her infant. Anxious or ambivalent attachment was associated with the infant exhibiting protest and distress at separation, and on reunion exhibiting angry-ambivalence toward the mother, who was observed to behave in an insensitive, intrusive, or inconsistent way toward the distressed infant. Ainsworth et al. undertook painstaking naturalistic work in validating the Strange Situation Procedure, making detailed narrative records of monthly home observations of 23 babies and mothers, throughout a year. The Strange Situation classification system included a number of subcategories of each of the main categories and was seen as an open-ended classificatory system that “could comfortably accommodate...new patterns encountered in further samplings.”(p. 235).

Main and Solomon’s (1990) review of Ainsworth et al.’s (1978) Strange Situation Procedure data identified a fourth style of attachment, which they labelled disorganized and, or disoriented attachment. This style of attachment did not involve a coherent strategy for relieving attachment distress, but was associated with infant behaviours indicating approach-avoidance, such as averting the face after an aborted approach to the parent, freezing, trance like facial expressions, or rising to greet the parent and then falling to the floor. Mothers were observed to behave in insensitive, frightened or frightening ways in response to the infant.

Infant behaviours defining patterns of attachment were postulated by Bowlby (1969), to represent expectations born out of repeated patterns of interaction with a primary caregiver. The infants had learned that when they were distressed, their mothers responded in particular ways, and so they had adapted the expression of their

need for proximity and attachment in ways that optimised their chance of gaining proximity to her (Weinfeild, Sroufe, Egeland, & Carlson, 1999).

Strange Situation Procedure assessment has had a powerful influence on the design of subsequent attachment assessment techniques, firstly by its focus on the assessment of behavioural responses to separation and reunion, and secondly by its clear definition of four mutually exclusive attachment categories. A still growing body of empirical work related to Strange Situation Procedure assessment has had a formative influence on infant and child health and welfare fields, especially in social work practice in welfare (Howe, 2005; 1995; Howe, Brandon, Hinings & Schofield, 1999; Steinhauer, 1991), and in public policy areas such as child care (Rutter & O'Connor, 1999).

### **1.3.2 Assessing internal representations of attachment**

The growing body of infant attachment research ignited a desire to explore the impact of early attachments on later development across the life cycle. Main, Kaplan, and Cassidy's (1985) groundbreaking longitudinal study of attachment followed the attachment relationships of 40 infants with their parents for 6 years. Infants were assessed at 12 and 18 months of age using the Strange Situation Procedure, while at 6 years of age various methods of assessment were employed. Results of this study marked a dramatic shift away from the almost exclusive emphasis on assessment of non-verbal behaviours, to what the authors in their subtitle called a "move to the level of representation" (p. 1).

Infant classifications were found to predict 6-year-old responses to a version of the Separation Anxiety Test (Main et al., 1985), which seeks children's responses to a

photograph of a child experiencing a separation from his or her parents. Children previously assessed as securely attached in infancy were able to identify the pictured child's emotional experience and suggest constructive coping strategies. Children previously classified as avoidantly attached identified the pictured child as sad, but were unable to suggest any coping strategies. Previous classification of anxious attachment was associated with identifying the pictured child's feelings and suggesting contradictory coping strategies, which often combined proximity-seeking with rage, or reflected intense involvement with parents. Responses suggesting a fourth category of more disturbed children identified the pictured child's emotion as intense fear, and indicated bizarre and extreme consequences of the separation, such as parents being hurt or killed. Coping strategies described were also bizarre and extreme, such as a child killing himself, and included contradictions, repetitions, aggressive behaviour and nonsense language.

Reunion assessment at 6 years of age revealed patterns of child-parent discourse again differing between attachment styles. Children classified securely attached as infants spoke fluently, discussing a wide range of topics with their parents. Dialogue of children previously classified as avoidantly attached was restricted and focused on activities or objects, using closed questions. Dialogue of the more disturbed group was dysfluent, marked by false starts and stumbling, and often focused on relationship topics. Main et al. (1985) did not comment on the reunion behaviour at this stage of the children previously classified as anxious, due to attrition of this group in the sample.

The researchers concluded that the children's different responses to the photographs and the separation reunion procedures at 6 years of age, were manifestations of their IWMs, which had organized not only their behaviour in

relation to the caregiver, as had previously been observed in the Strange Situation Procedure, but was also organizing and directed the children's feelings, attention, memory and thinking. In other words, this work established a linking of IWMs with different "patterns of language and structures of the mind" (Main et al., 1985, cited in Karen, 1998, p. 215). It shifted assessment away from a sole reliance on behavioural observations, opening up different pathways for possible assessment of internal representations of attachment.

Parents of children in the study were interviewed about their attitudes to and early experiences of attachment (Main et al., 1985). Analysis of transcripts of these responses revealed some concordance between the parent's attachment experiences and attitudes and those of their children (Karen, 1998). This discovery suggested how attachment experiences may be psychologically incorporated in adulthood, and it contributed directly to the development of a technique for assessing IWMs in adulthood, the Adult Attachment Interview.

### **1.3.3 IWMs in adults and links to coherence**

The Adult Attachment Interview developed by George, Kaplan, and Main (1985, cited in Hesse, 1999), had its basis in the view that "mental processes vary as distinctively as do behavioral processes," (Main et al., 1985, p. 78). It requires participants to evaluate their early attachment experiences and reflect on the impact these experiences have had on their personality development and functioning (Hesse, 1999). Scoring is complex, taking into account both the content and coherence of responses, and results in categories of attachment corresponding to those used in the Strange Situation Procedure.

Validation of the Adult Attachment Interview forged a link between IWMs and the coherence of narrative responses. This link has been increasingly influential in enhancing the assessment of attachment in adults, adolescents and young children.

#### **1.3.4 Linking IWMs with reflective-self thought**

In conjunction with the use of the Adult Attachment Interview, Fonagy, Steele, Steele, Moran, and Higgitt (1991) developed a scale for Reflective-Self Function, emerging from the study of theory of mind. This scale assesses the Adult Attachment Interview transcript for evidence of a “recognition of the existence and nature of mental processes taking place in both the self and others”, placing emphasis on the respondent’s “general awareness of the mental states of others” (Hesse, 1999, p. 420-241), especially their thoughts, intentions, and wishes. In a study of 200 parents, high scores on this scale were associated with coherence of verbal responses, but a parent’s Reflective-Self Function score was a better predictor of her own infant’s security than was the coherence score.

While this work is still in an early stage of development, it has suggested, as did Main et al.’s (1985) research with children, that security of attachment can have a strong relationship to the development of skills of thinking and understanding in the context of social relationships.

#### **1.3.5 Implications of research for understanding IWMs of attachment**

By challenging reliance on behaviour alone to assess the quality of attachment in young children, and by focusing on verbal abilities of individuals, the advances in

research reviewed above have led to some important conclusions concerning IWMs of attachment. Firstly, this line of research has linked patterns of communication and thinking to IWMs of attachment. Secondly, it has linked adult IWMs not only to the content of their self-report of early relationships and of the development of these relationships but also to the coherence of their discourse about attachment relationships. Finally, IWMs of attachment have been found to be linked to the ability to recognize and reflect on one's own and others' mental processes.

This work has clearly challenged the narrow focus of assessment on behaviours related to separation and reunion, and has opened doors to other avenues of assessment, especially at stages of development beyond toddlerhood. However, research has still not grappled with Bowlby's proposition concerning the multiplicity of IWMs. The focus of assessment has remained on simply assigning individuals to one of the four commonly accepted categories of attachment, without taking into account the complexity of quality of attachment that has been identified by exploration of attachment in clinical settings (Bowlby, 1980).

#### **1.4 Research exploring attachment across the lifespan**

Since the publication of Main et al.'s (1985) first longitudinal study, exploring the impact of attachment beyond infancy, further empirical work across the lifespan has been reported (Grossmann, Grossmann, & Waters, 2005, Thompson, 1999). Indeed, a vast volume of research has been produced. As yet, the focus has mainly been upon attachment in early childhood, adolescence and certain stages of adulthood. Less work has been conducted concerning middle childhood, the subject of Chapter 2 below.

### **1.4.1 Attachment in early childhood**

Studies of attachment in early childhood have developed a variety of techniques to assess IWMs of attachment in children 3 to 6 years of age, and a large range of variables have been investigated, including some which Thompson (1999) noted as unlikely to be influenced by attachment. Despite some conflicting findings, many well-conceived studies have confirmed some of Bowlby's core propositions concerning the stability of attachment and its ongoing influence on psychological functioning (Weinfield et al., 1999).

While early childhood is a period when a child develops a goal corrected partnership with a primary attachment figure (Bowlby, 1968/1987), it is also a time when, in Western Society at least, the child is introduced to relationships outside the family through involvement in pre-school and child care activities. Research here has often addressed social competence, which could be expected to be influenced by attachment status, in the context of preschool activities.

For example, toddlers with secure attachment histories were found on entering preschool to adapt better to functioning as part of a group of peers (as rated by their teachers) than did children with insecure attachment histories (Pastor, 1981). Similarly, preschool children assessed as securely attached as infants were found to have a more open quality of communication with parents, and more harmonious relationships with peers (Beeghly & Cicchetti, 1994; Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1985; Matas, Arend, & Sroufe, 1978).

### **1.4.2 Attachment in adolescence**

In adolescence, being the stage of transition between childhood and adulthood, individuals reduce dependence on primary attachment figures. Research here has used various assessment techniques, including adaptations of the Separation Anxiety Test, and variations of the Adult Attachment Interview to determine quality of attachment.

Adolescents classified as securely attached on the Separation Anxiety Test predominantly identified a parent as their principal support person, whereas the dismissing attachment classification was associated with identification of the self, a friend or sibling as main support person (Freeman, 1997; cited in Bretherton & Munholland, 1999). Preoccupied attachment was associated with passive overdependence on a sibling or best friend respectively. This study did not investigate disorganized attachment.

A number of studies reviewed by Crowell, Fraley, and Shaver (1999) found adolescents classified as securely attached regarded their mother as their primary attachment figure, and indicated a preference for communicating with her about attachment issues.

Like several other studies, Zimmermann and Grossmann's (1996; cited in Bretherton & Munholland, 1999) longitudinal study found complex relationships between infant classifications using the Strange Situation Procedure, mother Adult Attachment Interview classification, and their adolescent's Adult Attachment Interview classification. After removing from the study families that had experienced risk factors such as divorce and separation, they found that a child's infant classification predicted the mother's Adult Attachment Interview classification, and that the mother's Adult Attachment Interview classification predicted the child's

Adult Attachment Interview classification at the age of 16 years. Adolescents whose attachment classification changed from infancy were found to have experienced risk factors such as parental separation, divorce, or a parent having a life-threatening illness. This latter finding confirmed the relationship Bowlby (1988) expected between changes in IWMs resulting from stressful life events.

### **1.4.3 Attachment in adulthood**

Adulthood brings with it possibilities of the individual becoming involved in a committed romantic relationship, and becoming an attachment figure for his or her own children. Bowlby (1969) was impressed by persistence of early attachment to the caregiver into adulthood, and he hypothesised that infant attachments were a “prototype of later love relationships” (Crowell & Waters, 2005, p. 226).

Since the 1990s, research associated with adult attachment has proliferated (Hazan & Zeifman, 1999). It has generally involved one of two different approaches to assessment, namely an interview based technique such as the Adult Attachment Interview, described in Section 1.3.3 above, or a self-report approach such as Hazan and Shaver’s (1987) attachment scale. The Adult Attachment Interview seeks to understand more unconsciously held material related to early attachment relationships, while self-report questionnaires collect information about conscious judgements adults make about their current behaviour, affect and thinking in romantic relationships. Theoretically, both approaches assess attachment patterns analogous to the Strange Situation Procedure classifications. However, the two approaches are not highly concordant and, despite critics on both sides, it is unclear how this difference can be explained (Bretherton & Munholland, 1999).

Nevertheless, research using the self-report method has corroborated Adult Attachment Interview findings of security of attachment being highly correlated with open communication styles (Mikulincer & Nachshon 1991, cited in Bretherton & Munholland, 1999), and use of problem-solving strategies (Pistole, 1989). Also, adults self-identifying as securely attached indicated they found it easy to get close, and were comfortable depending on others, as well as being depended on by others. They also said they did not worry much about being abandoned (Feeney, 1999).

Further, in their review, Shaver and Mikulincer (2002) highlighted known correlates of secure, avoidant and anxious attachment styles. They noted that secure attachment as assessed by self-report measures was correlated with ready access to painful memories, an ability to openly express emotions, the adoption of support-seeking to regulate affect, an ability to express anger in ways that were reparative, and a reliance on problem-solving strategies to cope with personal and interpersonal stressors. Insecure avoidant attachment styles were reported to be associated with deactivation strategies that distance themselves from the source of distress and minimised the experience of distress. On the other hand, individuals evidencing anxious attachment style were found to predominantly use hyperactivation strategies to deal with their distress, seeking increased contact with attachment figures and emphasizing their experience and expression of distress.

Many studies using the Adult Attachment Interview have assessed parent-infant relationships and the transition to parenting, finding a significant correspondence between parent Adult Attachment Interview classification and infant Strange Situation Procedure classification (Fonagy, Steele, & Steele, 1991; Steele, Steele, & Fonagy, 1996; van IJzendoorn, 1992). Indeed concordance of attachment status across three generations has emerged (Benoit & Parker, 1994). Bowlby (1973) postulated that

patterns of verbal and non-verbal communication facilitated development of IWMs, and he maintained that because children tend to unconsciously identify with their parents, they were predisposed to adopting similar behaviour patterns. Thus IWMs can be transmitted from one generation to the next. Findings cited above seem to confirm this notion.

On a different dimension, mothers coded as autonomous in their internal working models of attachment by the Adult Attachment Interview have been observed to be more responsive and sensitive to their infants (Grossmann, Fremmer-Bombik, Rudolph, & Grossmann, 1988; Haft & Slade, 1989; Ward & Carlson, 1995), and more effective in preparing their toddlers for the separations that preschool necessitates, than are mothers coded as insecurely attached (Crowell & Feldman, 1991). At children's transition to school, mothers with autonomous IWM's were found to be warmer and more supportive when interacting with their children than were insecurely attached mothers (Crowell, O'Connor, Wollmers, Sprafkin, & Rao, 1991).

## **1.5 Conclusions concerning progress of research on attachment theory**

Attachment theory has proven to be a framework with unusually rich implications for understanding many aspects of human psychological and social development. It has facilitated a solid, productive link between theoretical formulation and empirical investigation, each enhancing the other. Attachment theory has been found not only to stimulate research, but also to generate a wealth of useful propositions relevant to practice and policy in human welfare, education and health systems in society. It has recognized implications for public policy in relation to child

care, and clinical mental health practice which was a special area of concern and interest to Bowlby himself (1987), and many others as well.

As Section 1.2.3 above indicates, clinical experience and some research has highlighted the complexity of attachment behaviour systems and the IWMs underpinning them (Dean, 1988). However, of particular note has been: the strong emphasis in the research field on attachment as a response to separation and loss, rather than as a feature of engagement; the focus upon attachment as characteristic of infant behaviour, rather than as a system underlying reciprocal interpersonal behaviour throughout life; and the focus on unitary categories of attachment to discern attachment styles. Highlighted, too, has been the co-existence of multiple IWMs which may be contradictory, and which may well play a defensive role in psychopathology. These are all features of attachment behaviour and IWMs which as yet have not been fully taken into account in research.

Another area needing to be explored more fully is the actual process of change or development in the experience of attachment and attachment styles across the lifespan. In this context, a stage explored relatively little so far is that of middle childhood.

## **CHAPTER 2**

### **EMPIRICAL STUDY OF ATTACHMENT IN MIDDLE CHILDHOOD**

The study of attachment during middle childhood is a relatively new field of endeavour, both theoretically and empirically. This is despite its recognized importance for linking the abundant literature on attachment in infancy with the accumulating evidence of the centrality of coherence and metacognitive abilities in adult mental health (Moss, St-Laurent, & Parent, 1999), for public policy (Rutter & O'Connor, 1999) especially in the realms of child health and welfare and protection (Howe, 2005), and for education (Watson & Ecken, 2003). Research is critical, especially given that studies of continuity of attachment experience and behaviour currently provides evidence for both stability and change (Thompson, 1999). No assumptions can be made concerning attachment development from early childhood through middle childhood to adulthood.

This chapter briefly considers attachment in the context of child development during middle childhood, and the conceptualization of attachment in middle childhood. It then proceeds to review approaches to research in this developmental phase, highlighting the small range of techniques developed so far for assessing quality of attachment experienced in middle childhood.

#### **2.1 Developmental changes in middle childhood**

Between the ages of 6 and 12 years of age, children normally undergo rapid psychological development and changes in cognitive capability, with consistent,

abstract reasoning gradually emerging (Flavell, Miller, & Miller, 2002). Becoming more insightful and systematic in their thinking (Raikes & Thompson, 2005), children at this stage develop metacognitive skills which support learning and reflection about thoughts and feelings. The early development of metacognitive skills has been associated with secure attachment (Main, 1991).

As a child reaches middle childhood, their growing cognitive abilities and an increasing repertoire of coping capacity can alter the child's appraisals of danger, and of the availability of the attachment figure (Mayseless, 2005). An unfamiliar situation or environment, or the presence of a stranger that trigger attachment behaviour in infants, are unlikely to activate the attachment system of children in middle childhood. However, emergency situations that produce intense fear, and less extreme situations involving exploratory behaviour (Waters & Cummings, 2000), as well as threatened or actual disruptions to the attachment relationship, have been shown to trigger the attachment system of children in middle childhood. The aspects of development in middle childhood discussed below contribute to this alteration in appraisals of danger.

Social abilities also expand and the social world becomes more complex and extensive (Kobak, Rosenthal, & Serwik, 2005). Social competence in school aged children has been associated with a warm parenting style indicative of secure attachment (Laible, Carlo, Torquati, & Ontai, 2004). The ability to understand that others have thoughts and motivations different to one's own grows (Raikes & Thompson, 2005), and perspective-taking improves, as children become less egocentric. Such changes could be expected to facilitate the ongoing development of the goal-corrected partnership that is evident in early secure attachment relationships. Indeed securely attached children (from Grades 3 and 6) were found to contribute

actively to their parents efforts to monitor their activities and whereabouts, especially in the older age group (Kerns, Aspelmeier, Gentzler, & Grabil, 2001).

At this stage, children are increasingly better able to regulate and predict their likely responses in certain situations, which contributes to understanding and control of emotional responses and behaviour, as well as to high self-esteem (Harter, 1998). This greater psychological insight suggests IWMs of self may undergo considerable growth and differentiation during this period (Raikes & Thompson, 2005).

Children are seen to take more responsibility for mediating their own distress without the actual presence of an attachment figure (Raikes & Thompson, 2005), and to use sophisticated and constructive coping skills than younger children (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000), as well as accessing a variety of relevant resources. They also have been noted to take more responsibility for maintaining secure-base relationships with caregivers than younger children do (Kerns et al., 2001). Nevertheless, the expectation of the attachment figure's availability and responsiveness is considered to remain quite influential (Bowlby, 1973). Having secure attachment expectations of a caregiver's availability has been associated with the positive school adaptation of 9 to 12-year-olds (Kerns, Tomich, Aspelmeier, & Contreras, 2000). However, with increased separations from caregivers, it becomes increasingly likely that when attachment behaviour is activated in middle childhood, peers and non-parental adults may serve attachment functions in contexts where parents are not physically present (Kobak, Rosenthal, & Serwik, 2005).

In middle childhood, exploration is enhanced as children learn to access independently a variety of direct educational and relationship experiences by interacting with their environment. As secure attachment has been associated with

effective exploration in infants (Ainsworth et al., 1978), it is likely that IWMs of attachment in middle childhood will also be associated with patterns of exploration.

In this period of growth, children develop more focused relations with peers, teachers, coaches, and other adults, allowing them opportunities for exposure to different types of relationships outside the family. Multiple attachments begin to consolidate. Family relationships can change due to shifts in family dynamics, the child's growing autonomy, or the impact of separation, divorce or death. Daily involvement in school and other activities entails longer separations from parents, giving children increased practice in managing experiences alone. Together with exposure to a variety of relationships, this contributes to the older child's comparing and reflecting on relationships (Collins, Madsen, & Susman-Stillman, 2002). Such changes could also be expected to contribute to the development of multiple IWMs and transformations of IWMs.

The magnitude of these changes can be quite variable, especially when comparing younger and older children in middle childhood. Even so, as Thompson and Raikes (2003, cited in Mayseless, 2005) emphasised we might expect developmental changes in middle childhood to be manifested in a "broadening array of behavioural strategies reflecting more differentiated variations of security and insecurity" (p. 9).

## **2.2 Conceptualization of attachment in middle childhood**

Laible (2005), Dwyer (2005), and Weinfield (2005) have all pointed to the relative scarcity of theoretical propositions able to guide attachment research in middle childhood. Nevertheless, there are a number of theories about how multiple

IWMs of attachment are organized. Howes (1999) cited three fundamental ways that multiple IWMs have been conceptualized, namely in terms of hierarchical, integrative and independent organization. Concerning the first, Bretherton (1985) suggested that IWMs of attachment are organized with the most salient caregiver (often the mother) being the most influential, and attachments to multiple caregivers being concordant with this most influential one. In integrative organization, van IJzendoorn et al. (1992) purported that the child brings together all attachment relationships into one internal representation, but with no prediction about a concordance of attachment relationships. Suess, Grossmann, and Sroufe (1992) suggested an independent organization of attachment representations, with each having influence for different developmental domains. For example, the attachment representation for the child-father relationship may be important in the domain of interpersonal conflict, while the child-mother representation may have more influence in the domain of caring relationships. Again, concordance across a child's attachment relationships was not necessarily predicted. Such detailed theoretical propositions are yet to be tested.

From the evolutionary perspective adopted by a number of researchers (for example, Kerns & Richardson, 2005), attachment is seen to be generalized during middle childhood to other relationships with peers, thus setting the stage for the shift in attachment relationships from parents to others that eventually facilitates the choice of a mate, and the passing on of the individual's genes.

### **2.3 Approaching research on attachment in middle childhood**

A growing body of evidence has indicated 70% to 85% stability of attachment organization from infancy to six years of age and on into adolescence (Ammaniti &

Speranza, 2002, cited in Ammaniti, Speranza, & Felele, 2005; Gloger-Tippelt, Gomille, Koenig, & Vetter, 2002; Hamilton, 2000; Main & Cassidy, 1985; Wartner, Grossmann, Fremmer-Bombik, & Suess, 1994; Waters, Merick, Treboux, Crowell, & Albershiem, 2000). However, other studies have found little stability of attachment between infancy, middle childhood, and beyond (Becker, Stoll, & Femmer-Bombik, 1997, cited in Ammaniti et al., 2005; Lewis, Feiring, & Rosenthal, 2000; Weinfield, Sroufe, & Egeland, 2000).

Discontinuity in attachment from infancy to adolescence has been associated with a number of contextual factors, including changes in quality of care received by the child (Belsky & Pasco-Fearon, 2002; Erickson, Sroufe, & Egeland, 1985), changes in the mother's employment status and arrival of a new sibling (Ammaniti et al., 2005; Teti, Saken, Kucera, Corne, & Da Eden, 1996), loss of a parent through divorce or death, life threatening illness, parental mental illness, the physical and sexual abuse of the child (Waters et al., 2000), or family stress, financial problems, maternal depression, and lack of social support (Belsky & Pasco-Fearon).

Samples used in studies cited above have predominantly included children aged 6 years old and younger, and 11 years old and older, while the contextual changes noted would seem to have occurred in the years between 6 and 11 years of age, in middle childhood. As Thompson (1999) has pointed out, "the attributes of fully developed working models do not characterize the simpler, developing representational systems of young children. Consequently, it is important to consider working models in a developmental context (as Bowlby did) in order to understand them as a source of developmental continuity (p. 268)." Doing so facilitates the developmental impact of the IWMs, and allows consideration of influences that may intervene between early IWMs and later psychosocial functioning (Thompson, 1999).

However, without reliable attachment assessment techniques for middle childhood, the developmental continuity of attachment representations will remain untested. The following section reviews the development of a number of techniques reported to date.

#### **2.4 Assessment techniques used in middle childhood attachment research**

Techniques developed, for research purposes, to explore attachment in middle childhood, fall roughly into five groups. These groups are behavioural observation techniques, representational techniques, self-report techniques, Q-sort techniques and interview techniques

The principal techniques available for use in research on attachment in middle childhood are presented in Table 1, on pages 29, 30, and 31 below, which summarizes the administration of each technique, and reported reliability and convergent validity (associations with other measures of child and adult attachment) where available.

**Table 1***Reported Techniques for the Assessment of Attachment Security in Early and Middle Childhood Used in Research*

<b>Name of Test</b>	<b>Age</b>	<b>Technique</b>	<b>Reliability/Convergent Validity</b>
<b>Behavioural Observation Techniques</b>			
The Cassidy and Marvin System (MacArthur Group) Cassidy & Marvin (1987, 1991, 1992, 1999, cited in Cassidy & Shaver, 1999)	4-7 years	A laboratory separation and reunion technique which is video-taped and utilizes a one-hour separation reunion experience which is coded to assign children to one of five attachment groups	<ul style="list-style-type: none"> <li>• Intercoder agreement 75%</li> <li>• No reported short-term stability</li> <li>• Secure/insecure rating significantly positive relation to Doll Play and SAT</li> </ul>
Attachment Classification for Kindergarten-Aged Main & Cassidy (1988)	3-5 years	This is a laboratory procedure which is video taped and utilizes a one-hour separation reunion experience which is coded to assign children to one of four attachment groups or is rated unclassifiable.	<ul style="list-style-type: none"> <li>• Intercoder agreement 70%-82%.</li> <li>• Short term stability 62%.</li> <li>• Strongly related to scores on SAT and doll-play measures.</li> </ul>
Crittenden's Preschool Assessment of Attachment (PAA) Crittenden (1992)	3-6 years	A laboratory separation and reunion technique that is videoed and assigns children into 6 major classification groups.	<ul style="list-style-type: none"> <li>• Intercoder agreement 80-90%</li> <li>• No test-retest reliability reported</li> <li>• Has shown 82% agreement on secure insecure split with Cassidy Marvin reunion measure</li> </ul>
<b>Representational Semi-Projective Assessment Techniques</b>			
Separation Anxiety Test Slough & Greenberg (1990)	4-7 years	Uses a series of photographs of child experiencing separations from parents, 3 mild and 3 severe. Child is asked how the child in the photo feels and what the child will do next. Responses are coded for emotional openness and constructiveness of coping responses. Responses are first coded into four major attachment categories and then into one of 21 subcategories.	<ul style="list-style-type: none"> <li>• Intercoder agreement 84%.</li> <li>• No test-retest reliability reported.</li> <li>• Evidence of relations to the Strange Situation Procedure.</li> </ul>
Separation Anxiety Test Shouldice & Stevenson-Hinde (1992)	4-7 years	The child is shown a series of 6 photographs of a child undergoing various separation experiences these range from mild to sever situations. Child asked how the child in the photo feels and what the child will do next. Taped verbatim transcripts are used for scoring on 12 rating scales. Five main attachment classifications and 4 sub-classifications are used.	<ul style="list-style-type: none"> <li>• Intercoder agreement 83%.</li> <li>• No test retest reliability reported.</li> <li>• No significant agreement with infant Strange Situation assessment</li> </ul>
Separation Anxiety Test Resnick, (1993, cited in Dwyer, 2005)	11-14 years	Uses photos of severe separation scenarios as would be appropriate for older children. Child asked how the child in the photo feels and what the child will do next. Coded on 7 scales including coherence. Classification to one of 3 attachment categories.	<ul style="list-style-type: none"> <li>• Intercoder agreement 80% to classify as secure of insecure.</li> <li>• No reported test-retest reliability.</li> <li>• Moderate negative relation with infant Strange Situation classification.</li> </ul>
Doll-Play Assessment George & Solomon (1996)	3-6 years	A videoed laboratory procedure in which children are told the beginning of an attachment-sensitive story. They are then asked to complete the story using dolls, 4 story stems are used. Differences in the content and process of the child's stories are used to place each child in one of 3 attachment categories.	<ul style="list-style-type: none"> <li>• No intercoder information reported.</li> <li>• No test-retest reliability reported.</li> <li>• Strong relation to Attachment Q-Sort security scores at 25 and 37 months.</li> </ul>

**Table 1 continued.**

Name of Test	Age	Technique	Reliability/Convergent Validity
<b>Representational Semi-Projective Assessment Techniques (continued)</b>			
Attachment Story Completion Task Bretherton, Ridgeway, & Cassidy (1990)	3 years	A video taped laboratory procedure in which the child is asked to complete stories that are begun by an administrator using small dolls, 5 story stems are used. Then stories are coded as reflecting secure or insecure attachment patterns on the basis of the structure and content of the stories. Classification into 3 categories of attachment.	<ul style="list-style-type: none"> <li>• No intercoder information reported.</li> <li>• No test retest reliability reported.</li> <li>• Strongly related to Strange Situation classifications at 18 months.</li> </ul>
Manchester Child Attachment Story Task (MCAST) Green, Stanley, Smith, & Goldwyn (2000)	5-7 years	Children are asked to complete six stories (5 involve distress) using doll figures. It emphasises participant identification with the pictured child. Coding considers coding of attachment behaviours represented in the stories and a rating of coherence. Classification into 4 major attachment categories.	<ul style="list-style-type: none"> <li>• Intercoder agreement 4% secure vs. Insecure.</li> <li>• Test retest reliability at 5.5 months 76.5%.</li> <li>• Strong association of child's disorganized classification and mother's AAI unresolved coding.</li> </ul>
Family Drawings Kaplan & Main (1986) cited in Solomon & George (1999)	5-7 years	Children are first asked to draw a picture of a person and then to complete a drawing of his or her family. When the drawing is completed the child is asked to identify all the persons included in their drawing and to tell how these persons are related to the child. A checklist of signs is used for scoring and assigning participants to a particular attachment category.	<ul style="list-style-type: none"> <li>• No intercoder information available.</li> <li>• No test retest reliability figures.</li> <li>• No reported relation to other measures of security.</li> </ul>
Family Drawings Fury, Carlson, Sroufe (1997)	8-9 yrs	Children are asked to draw a person as a warm up activity and then to draw a picture of their family using white paper and coloured pens. Coding involves a series of seven 7 point rating scales with attention given to the context and patterning of the separate drawing signs in the drawing as a whole. Children are assigned to one of 4 major attachment categories.	<ul style="list-style-type: none"> <li>• Intercoder agreement 75%-100%.</li> <li>• No test retest reliability figures.</li> <li>• No reported relation to other measures of security.</li> </ul>
<b>Self-Report Techniques</b>			
Coping Strategies Questionnaire (CSQ) Finnegan, Hodges, & Perry (1996)	6-12 years	A 36 item self report questionnaire that measures preoccupied and avoidant styles of relating to a parent during everyday stresses. Children are asked to imagine they were experiencing an event with their parent and to indicate their likely response. The CSQ uses a some kids/ other kids format that results in each item being scored on a 4 point scale.	<ul style="list-style-type: none"> <li>• Alphas 0.67-0.88 preoccupied coping and 0.71-0.84 avoidant coping</li> <li>• Test re test 2weeks .83 preoccupied scale and .76 avoidant scale.</li> <li>• No reported positive relation to other measures of security.</li> </ul>
Security Scale (SS) Kerns Klepac, & Cole (1996)	6-12 years	A 15 item Scale that assesses children's perceptions of the degree to which they believe an attachment figure is responsive and available, how much they rely on an attachment figure in times of stress, and their ease and interest in communicating with the attachment figure. Children are asked to indicate which statement is characteristic of them and then to indicate how true this statement is of them (eg. "sort" of or "really" true). Scale provides a continuous measure of security.	<ul style="list-style-type: none"> <li>• Alpha ranging from 0.64 – 0.93</li> <li>• Test retest reliability across two weeks 0.75.</li> <li>• Positive associations with Bolck Q-sort, Resnick (1993) SAT, amd Mayselless Doll-Play measures (Kerns et al 2000).</li> </ul>

**Table 1 Continued**

Name of Test	Age	Technique	Reliability/Convergent Validity
<b>Self-Report Techniques continued</b>			
Inventory of Parent and Peer Attachment (IPPA) Armesden & Greenberg (1987)	11 yrs or older	This is a self-report questionnaire designed to measure felt security regarding attachment figures, anger and detachment toward those attachment figures. The IPPA assess 3 broad constructs in relations with mothers, fathers, and peers: degree of mutual trust, quality of communication and degree of anger and alienation. It does not use categories of attachment.	<ul style="list-style-type: none"> <li>• Alphas ranging 0.90 – 0.93</li> <li>• No test retest reliability info available.</li> <li>• No reported positive relation to other measures of security.</li> </ul>
<b>Interview Techniques</b>			
Attachment Interview for Childhood and Adolescence (AICA) Ammaniti, van IJzendoorn, Speranza, & Tambelli (2000)	8-12 yrs	Children are questioned about their relationships with their parents and events related to attachment as well as the manner in which early relationships have influenced their personalities. Scoring uses 7 rating scales. AAI training needed for coding.	<ul style="list-style-type: none"> <li>• Intercoder agreement 82% across four AAI classifications.</li> <li>• Test retest reliability across four years 71%.</li> <li>• No reported relation to other measures of security.</li> </ul>
Child Attachment Interview (CAI) Target, Fonagy, & Shmueli-Goetz (2003)	7-12 yrs	This is an adaptation of the AAI with new questions aimed at activating children’s attachment system and eliciting information related to attachment. A new coding system uses 9 rating scales, coding looks at form/content and non-verbal communication.	<ul style="list-style-type: none"> <li>• Intercoder agreement range from .66 to .94.</li> <li>• Test retest reliability showed stability 1 year.</li> <li>• No reported relation to other measures of security.</li> </ul>
Friends and Family Interview (FFI) Steele & Steele (2005)	11-12 yrs	This interview asks children a series of questions about themselves and their relationships. The number of questions was not reported. Transcripts of the interviews are assessed on 4-point rating scales for coherence and secure-base availability of each parent. The focus of assessment is security or insecurity of attachment.	<ul style="list-style-type: none"> <li>• No intercoder agreement reported</li> <li>• No test retest reliability reported</li> <li>• No reported relation to other measures of security.</li> </ul>
<b>Techniques used by Parents and/or Observers</b>			
Attachment Q-Sort (AQS) Waters, E (1987).	Infancy-5 yrs	The ASQ assesses the quality of the child’s secure-base behaviour. The Q-Sort consists of 90 items designed to tap a number of dimensions believed to reflect the secure-base phenomenon and behaviour associated with it. Sorts are completed by parents or by trained observers who usually have from 2-6 hours of in home observation. Scoring involves counting items in each pile.	<ul style="list-style-type: none"> <li>• Intercoder agreement 0.72-0.95.</li> <li>• Short term stability varies considerably.</li> <li>• Moderate relation to Strange Situation security scores.</li> </ul>
Family Interaction Q-Sort (FIQ) Beckwith, Rodning, & Cohen (1992).	Middle childhood	This test measures parental responsiveness. It is a 33 item Q-Sort that describes behaviour of a parent’s interaction with a child. It is used by trained observers. Scoring involves counting items in each pile.	<ul style="list-style-type: none"> <li>• Intercoder agreement .80 - .82.</li> <li>• No information on test retest reliability.</li> <li>• No reported other measures of security.</li> </ul>
Child Rearing Practices Report (CRPR) Block (1965)	Middle childhood	This test is a Q-Sort of 91 cards that a parent sorts into 7 piles. It assesses a parent’s beliefs about their child and their willingness to serve as an attachment figure for their child (11 cards reflect secure base attitudes). Scores are based on the numerical values of each pile, similar to a 7 point scale. A total score is derived by averaging across the 11 items.	<ul style="list-style-type: none"> <li>• Intercoder agreement 0.72-0.95.</li> <li>• Short term test retest reliability varies considerably.</li> <li>• Positively associated with Kerns et al. Security Scale.</li> </ul>

Not all variations on these techniques have been able to be included here. Each group of techniques is now considered in terms of its advantages and disadvantages.

#### **2.4.1 Behavioural observation techniques**

Behavioural observation techniques derive from the Strange Situation Procedure and concentrate on observation of behaviours related to a child's separation and reunion experiences with a principal caregiver (Crittenden, 1992; Main & Cassidy, 1988).

The advantage of these techniques is that they encompass assessment of the same core variables of mother-child interaction as the Strange Situation Procedure, and code behaviour in similar classifications, facilitating comparisons with previously assessed infant attachment. Disadvantages of behavioural techniques involve the necessity to provide laboratory conditions, video recording equipment, and the need to include one or both of the child's caregivers. Further, these techniques can only be used up to the age of 6 years, because the technique depends on the separation from the caregiver triggering the child's attachment behaviour system. Separation clearly becomes a less reliable trigger of attachment behaviours as middle childhood progresses (Solomon & George, 1999), and children gradually become accustomed to ongoing separations from caregivers.

#### **2.4.2 Representational semi-projective and projective assessment techniques**

A second group of techniques present the child with a symbolic representation of a separation, rather than an actual separation from a caregiver. Semi-projective in

nature, these techniques call for the child's response to structured questions in relation to the separation situations presented. Three different approaches have been used, namely interview techniques accompanying visual images of separations (Main et al., 1985; Resnick, 1993, cited in Cassidy & Shaver, 1999; Shouldice & Stevenson-Hinde, 1992; Slough & Greenberg, 1990), doll play techniques (Bretherton, Ridgeway, & Cassidy, 1990; George & Solomon, 1996; Green, Stanley, Smith, & Goldwyn, 2000), and family drawing techniques (Fury, Carlson, & Sroufe, 1997; Kaplan & Main, 1986).

Image interview techniques ask children to look at visual stimuli, such as a series of drawings or photographs of a child experiencing a separation from parents or another distressing situation, and then to respond to structured questions about the stimuli. Advantages of this approach are that laboratory conditions are not necessary, children are not exposed to an actual distressing situation that might cause emotional distress, and a child's caregivers are not involved. A disadvantage is that the child's responses are necessarily limited to the structured options offered.

Doll play assessment is a semi-projective technique that invites children to use dolls to act out the completion of a series of standard story stems begun by an administrator. The story stems describe separations from parents and other situations that might be likely to activate a child's attachment system. These techniques vary as to the number of scenarios presented and the way coding is done, and some emphasize the child's identifying with the child in the story, while others do not. The doll play is aimed at tapping unconsciously-held IWMs of attachment. Advantages of these techniques are that they give the child more freedom in responding, and severe situations that would be expected to trigger the older child's attachment behaviour system can be suggested without the child being physically exposed to them. In

addition, some of these techniques include an assessment of the coherence of the child's responses, deriving another layer of information about the experience of attachment. Disadvantages associated with these techniques are that they require laboratory conditions and video recording facilities, and children respond only to a dictated scenario. Also, more consciously held IWMs may be elicited by encouraging the child to identify himself or herself with the child. If a child is uneasy about his or her typical way of dealing with the situation presented, the response could be biased to present an outcome that the child feels is more acceptable. Another possible difficulty is that older children are likely to view doll play as relevant only to younger children, and boys may regard dolls as female toys, and so be uncooperative or reserved in their responses.

More projective and less structured are family drawing techniques. Here the child is asked to draw a picture of his or her family and say how the people in the picture are related to him or her. The drawing and the responses are then assessed using a checklist of signs, or a series of seven rating scales regarding family relationships. An advantage of this method of assessment is that it does not require any special equipment or laboratory conditions, and it allows the child to project a wider range of expression of family representations than the semi-projective assessment and doll play techniques, which limit the child's choice of response to the prescribe situations considered. As Fury et al. (1997) have indicated the drawing task is particularly useful for younger children whose verbal skills are quite limited. A disadvantage of drawing techniques is that they provide the child with only one opportunity to share something of their attachment relationships. In addition, affective and behavioural responses during the drawing task are not assessed, although the authors noted that doing so may yield valuable information.

### **2.4.3 Self-report assessment techniques**

Some self-report assessment techniques (Armsden & Greenberg, 1987; Finnegan et al., 1996; Kerns et al., 1996) verbally present a child with a particular attachment-sensitive scenario, ask him or her to choose from two possible responses, and then ask the child to indicate how typical the chosen response would be if he or she were in such a situation. The Security Scale (Kerns et al.) assesses the degree to which a child believes his or her attachment figure is responsive and available, and how much he or she tends to rely on that attachment figure. It also gives an indication of the ease of communication between the child and the attachment figure. It is one of the few techniques that has undertaken observational assessments in an effort to facilitate validation of the technique.

Advantages of these techniques are that they are quick and easy to administer and code, and require no special conditions or equipment. However, the disadvantage is that they are narrowly focused on specific aspects of attachment, such as coping with separation, or use of the attachment figure, and so do not yield a global assessment of attachment. In addition, forced choice techniques such as these exclude the potential for eliciting a wider range of relevant information.

### **2.4.4 Interview assessment techniques**

The Attachment Interview for Childhood and Adolescence (Ammaniti, van IJzendoorn, Speranza, & Tambelli, 2000) and the Child Attachment Interview (Target, Fonagy, & Shmueli-Goetz, 2003), are adaptations of the Adult Attachment

Interview. The Friends and Family Interview (Steele & Steele, 2005) is also similar in nature, exploring a child's self-concept and relationships. These techniques have been used mostly with children aged 10 years old and older. They emphasize the structure of the interview, and assess the content and coherence of responses in much the same way as does the Adult Attachment Interview. Some adjustments have been made to take into account the developmental stage of the children, especially in relation to coherence and the more negative attitudes toward parents that often accompanies pre-adolescence.

Advantages of these techniques are that, like the Adult Attachment Interview, they tap unconscious material associated with past attachment experiences, and also allow the child freedom in their response. Disadvantages are that they require video recording equipment and highly trained administrators and coders, which is costly and time-consuming. Added to this, even though children in middle childhood have more psychological insight "than younger children, they nevertheless lack the abstract representational skills and self-reflection of adolescents", and they have yet to make "the transition from concrete to abstract thinking" (Raikes & Thompson, 2005, p. 257). Thus the assessment of attachment using interviews such as these is necessarily limited to older children in the middle childhood period.

#### **2.4.5 Techniques used by parents and/or observers**

The Attachment Q-Sort (Waters, 1987), The Family Interaction Q-Sort (Beckwith, Rodning, & Cohen, 1992) and the Child Rearing Practices Report (Block, 1965, cited in Solomon & George, 1999) are techniques used by parents or other observers to assess a child's attachment behaviour in the home. Q-Sorts comprise

questions or statements printed on small cards that are sorted into different piles related to dimensions deemed to reflect attachment behaviour. Q-Sorts are often scored in relation to a criterion sort. The child's security score represents where the child is on a continuum with respect to security in relation to a criterion sort (Solomon & George).

The advantage of these techniques is that they are easy to administer and score, can be used by parents of quite young children, and lend themselves to a number of qualitative and quantitative analyses. Disadvantages are that, when used by parents, results may be influenced by the parent's desire to be seen in a positive light by the researcher, and so a biased view of the child's behaviour may be represented. This shortcoming can be avoided by using trained observers, but doing so involves extra expense and a large commitment of time on the part of both the observer and the family. Despite this, Solomon and George noted that Q-Sorts have been shown to be valid, valuable assessment tools for quite young children, when used in conjunction with other assessment techniques.

## **2.5 Attachment assessment techniques used in clinical work**

Clinical psychological work with children in mental health settings has increasingly been concerned with experience of attachment issues, as the value of attachment theory has been recognized. No relevant techniques have been developed specifically for clinical use. However, over decades of clinical practice, several techniques which have potential relevance to the specific understanding of security of attachment have been developed, for assessment of a child's attitudes to self and

others and interpersonal relationships. Table 4, on page 37 below, provides a summary of such techniques that have been available for use in clinical practice.

**Table 2.***Clinical Assessment Techniques that Elicit Attachment Related Information*

<b>Name of Test</b>	<b>Age</b>	<b>Description of Test</b>	<b>Reliability/Validity Recorded</b>
The Test of Family Attitudes (FTA) Jackson (1950) ) cited in Semeonoff (1976)	6-12 yrs.	Uses a series of 7 slightly larger than postcard-sized pictures, which were spiral bound. Administration is much the same as TAT. Sketchy pictures depict common family situations. In general the child figures are androgynous with only one card having a boy and a girl version. The faces all have features but there are no obvious emotional expressions. Stories obtained were analyzed to give 68 types of response or themes. No details of coding are available	<ul style="list-style-type: none"> <li>• Norms were given for normal, neurotic and delinquent children.</li> <li>• No information on reliability or validity available.</li> </ul>
The Object Relations Technique (ORT) and the Children's Object Relations Technique Phillipson (1955) cited in Semeonoff (1976)	4yrs-adult	Used 15 pictures in 3 series (A, B,C). Administration is almost identical to the TAT, however the style and content of the pictures is noticeably different, as they are very ambiguous, vague and misty. Some pictures have color in them. Scoring of the child's stories resembles the content analysis of the Rorschach technique rather than the TAT.	<ul style="list-style-type: none"> <li>• No information available.</li> </ul>
The Family Relations Test (FRT) Bene & Anthony (1957)	3-7yrs	A self-report Q-Sort. The child is engaged in the task of assembling a group of cardboard people, with attached boxes, to represent people in his or her family. As statements on cards are read, the child must put each card into the box of the person who fits with that statement. Cards that do not fit with family members are put in the 'Nobody' box. A score sheet that sorts the statements is used to reveal the child's level and intensity of involvement with various family members.	<ul style="list-style-type: none"> <li>• No norms for this measure but gives indication of patterns of response that indicate pathology.</li> <li>• No information about reliability or validity available.</li> </ul>
The House Tree Person Projective Drawing Technique (HTP) Buck (1992)	8yrs-adult	HTP materials include a Drawing Form and an Interpretation Booklet, which are used in the inquiry phase. Several Diagnostic manuals are available for this test. The child is seated at a table and provided with the Drawing Form, pencils and crayons. The test has 4 steps: The invitation to draw a house, a tree, and a person in pencil; The inquiring phase; The child is asked to draw another house, tree and person using colored crayons; and finally the interviewer asks a series of questions. Analysis of the drawings includes a consideration of general observations, proportion, perspective, detailing and use of color.	<ul style="list-style-type: none"> <li>• No norms given.</li> <li>• Research on validity and reliability has been mixed.</li> </ul>
TAT, CAT (Animal & Human) Bellak & Abrams (1997).	3yrs-adult	The Thematic Apperception Test and its derivatives are projective tests. The CAT is specifically designed for children. It consists of 10 pencil drawings of humans or animals in various social situations. Cards are presented in a sequential order and children are invited to participate in a storytelling game, telling a story for each picture. Responses are scored in 10 different categories including concept of world, relationship to others and significant conflicts.	<ul style="list-style-type: none"> <li>• No norms included.</li> <li>• Research on reliability and validity has been mixed.</li> </ul>

The Test of Family Attitudes (Jackson, 1950) and the Object Relations Technique (Phillipson, 1955) are both out of print and this would make it very difficult for a clinician to be able to obtain them.

The Family Relations Test (Bene & Anthony, 1957) was developed to assess a child's emotional attitudes in relation to their family. This technique is a self-report Q-Sort technique, engaging the child in sorting statements that he or she associates with particular family members. It gives an indication of the quality and intensity of the child's emotional involvement with these others, and yields information about the child's view of self (self-love vs. self-hate). This technique mainly taps a child's conscious thoughts and feelings, and depends on a limited number of responses, which can be problematic for a child with a large family network. The FRT does not deal specifically with attachment-sensitive issues, and would demand considerable interpretation to be used to assess IWMs of attachment.

The House, Tree, Person Projective Drawing Technique (Buck, 1992) is a projective technique that involves drawing a house, a tree, and a person, with each drawing being followed by an inquiry phase. It aims to facilitate the "projection of personality elements and the area of conflict into the therapeutic setting, allowing them to be identified for the purpose of assessment and shared for the purpose of establishing effective therapeutic communication" (Buck, p.1). The child can project feelings, needs, goals, and attitudes related to their drawings, including those related to the family. Again, while attachment issues may well be elicited by this technique, House Tree Person responses would require considerable interpretation to be used to assess IWMs of attachment.

The Children's Apperception Test (Bellak & Abrams, 1997) was designed to assess personality from a classically psychoanalytic theoretical orientation. It has been

found useful for eliciting responses to feeding problems, oral problems, sibling rivalry and the child's relationship to his or her parents as a couple (Bellak & Abrams). Responses provide information about ego and superego strength and the child's conflicts and defenses. The Children's Apperception Test stimuli (human and animal versions) depict social situations, but only a couple of these scenes portray situations likely to stimulate representations highlighting attachment in a clear way. Therefore, while attachment issues may arise, the CAT is also unlikely to be an adequate tool for assessing attachment IWMs. On the positive side, the CAT is a projective tool thought to reveal unconsciously held information (Semeonoff, 1976). It has been shown to produce rich descriptive data and it gives respondents a great deal of freedom in choosing the content and manner of their responses.

## **2.6 Critique of research and clinical techniques for assessing aspect of attachment in middle childhood**

All of the attachment research techniques for children aged 6 to 12 years of age reviewed above can be seen to be methodologically limited in their capacity to evaluate IWMs relating to the experience of security of attachment in middle childhood. Firstly, the usefulness of behavioural observation techniques that utilized parent child separations to activate the attachment behaviour system of older children is problematic because, as children get older and become accustomed to separations from their parents, it is difficult to identify standard situations that trigger the attachment behaviour system (Solomon & George, 1999). Further, it may be difficult to find separation situations that are stressful enough to elicit attachment behaviour without causing the child potential or actual alarm or distress. As Solomon and

George have also noted, at this stage the child's behavioural reactions to such situations can be more subtle and so harder to identify. For these reasons, behavioural assessments of attachment in middle childhood are both conceptually and ethically problematic.

Indeed, Dean (1988), in a study of self-reported attachment interactions in middle childhood, found that interaction in actual ongoing engagement between the child and the other was a more powerful context, than either separation or reunion, in eliciting experience of attachment.

Few of the techniques for children aged 6 to 12 years reviewed in Table 3 have validity that has been demonstrated. Dwyer (2005) and Laible (2005) identified this as the most pressing issue to be addressed by creators of assessment techniques. Likewise, Solomon and George (1999) identified several problems related to issues of validity associated with the techniques they reviewed. They noted that some attachment assessment techniques developed for younger children had been used to assess attachment in older children without validating the technique for the older age group. Also, procedures and coding systems used in other techniques had been incorporated into new techniques and then validity for the new measure had been based on data collected in the validation of the original measure. They also pointed to a lack of refinement in coding and classification due to a relative failure to use empirical findings in this particular area to refine new techniques. Further some measures have relied solely on "expert" (p.311) opinions to establish reliability or validity for the new measure.

The majority of techniques available for research have indeed been developed by adapting techniques previously validated for use with younger children or with adults. Even those that have taken into consideration the developmental differences

of children aged 6-12 have limited the information of attachment information obtained from this group, by restricting the respondent's choices, imposing narrowly focused specific questions, or imposing theory in coding that has been related to other age groups. No doubt, as Solomon and George (1999) remarked, this can be seen as taking creative shortcuts to make research progress. However, considering how little is known about the dynamics of attachment in middle childhood, this may well have hindered investigations and theory development about parent-child attachment in this phase of the lifespan. Theories about attachment in middle childhood, as Weinfield (2005) has commented, remain extremely limited.

A further difficulty, identified by Greenberg (1999), is that most reported research techniques have been developed and tested solely with normative groups. This, he stresses limits their usefulness as clinical tools. He strongly advised the inclusion of clinical populations in the developmental phase of new attachment assessment techniques.

The clinical techniques reviewed above spring from theoretical orientations different to attachment theory, and none could be used as a technique capable of specifically assessing IWMs of attachment. However, many take a projective approach, which generates a lot of rich information about a child's conscious and unconscious ideas and thinking. All the same, except for the Family Drawing technique, all available techniques impose specific scenarios or structured questions that tend to direct the child's attention and ideas to particular attachment-related topics that have been found to be salient in infants and young children. As noted in Section 1.2.2 of Chapter 1, it has been considered that IWMs are largely held unconsciously, and consequently, direct approaches to conscious evaluative processes are at best likely to give only a partial picture of an individual's IWMs.

Further, as Bowlby (1980) noted, children can hold multiple IWMS for the same relationship, and hierarchies of IWMS for different relationships. Since children in middle childhood are inevitably exposed to many relationships beyond the home, the complexity of the IWMS in this age group is likely to be more complex than that of younger children. Because the coding methods of research techniques reviewed emphasize categorical assessment of attachment, defining three or four, more or less mutually exclusive attachment categories, they do not capture the complexity of multiple IWMS, as commented on by Hesse (1996) in respect to the Adult Attachment Interview. Some techniques (Ainsworth et al., 1978; Crittenden, 1992; Shouldice & Stevenson-Hinde, 1992; Slough & Greenberg, 1990) do include subcategories (ranging from 4 to 21 in number) as a way to deal with variation in attachment presentations.

Crittenden (2000, cited in Raikes & Thompson, 2005) argues that the psychological growth that accompanies development in middle childhood and adolescence results in organizational changes in attachment, and that new attachment patterns can be expected to emerge from the infant classifications. Her dynamic-maturational approach posits the development of more differentiated forms of security and insecurity in the attachment relationships of older children, as well as the expression of a wider number of behavioural strategies.

Finally, the use of multiple measures of attachment is highly recommended if a “comprehensive and reliable evaluation of attachment during this age period” (Moss, St-Laurent, Dubois-Comtois, & Cyr, 2005, p. 205) is to be available. To achieve this Moss et al. asserted, it will be necessary to develop new representational measures that are capable of capturing the range of attachment strategies children use with their caregivers.

## **2.7 The call for a new assessment of attachment technique for middle childhood**

In the light of the information and critique presented above, the creation of a new representational technique for the assessment of the experience of attachment in middle childhood, which could be used with ease across the developmental span between 6 to 12 years of age, was deemed timely. It was considered, again in the light of the review above, that such a technique would need to address the following 6 requirements. The technique should:

- (1) be age appropriate, such that children generally would not find the task involved onerous in anyway;
- (2) use visual stimuli, be easy to administer, need no special equipment, and with the visual stimuli being ambiguous, especially in regard to emotional content and gender of pictured children;
- (3) generate information-rich data, using a projective technique likely to tap unconsciously-held IWMs, neither dictating what the child is to think about, or limiting the number or type of responses they can make, but giving the child freedom to choose the content and manner of their response; also it was deemed desirable to give the child multiple opportunities to communicate freely something about their IWMs of attachment.
- (4) provide opportunity for the child to reveal experience of attachment in ongoing engagement with the other, rather than focusing simply on responses to separation and reunion;

(5) be accompanied by a coding scheme grounded in attachment theory that captures the complexity of attachment representations, without diluting the emphasis of the various attachment qualities revealed, but that is also simple to understand and apply;

(6) involve a coding scheme that includes an analysis of both the content and the manner and structure of the child's responses; and

(7) be a technique that can be used in both research and clinical settings to assess IWMs relating to a child's quality of attachment experiences.

The present study was planned to permit the design and preliminary testing of a technique that would meet the requirements set out above. The rationale and aims of this research are discussed in the next chapter.

## CHAPTER 3

### RATIONALE AND AIMS OF THE PRESENT STUDY

As demonstrated in Chapter 2, so far most reported research related to attachment in middle childhood has focused on the youngest and oldest groups of school-aged children. It has largely relied upon techniques of assessment of quality of attachment that have not been validated for use with children between six and ten years of age. This means that very little is known as yet about what happens to the experience of attachment or its correlates during this stage of the lifespan. The scarcity of validated attachment assessment techniques for use in middle childhood is acknowledged (Dwyer, 2005; Laible, 2005; Solomon & George, 1999; Weinfield, 2005), and continues to frustrate investigation of the experience of attachment in this developmental stage.

While Laible (2005) has expressed skepticism about the advisability of researchers developing new measures of attachment for use in middle childhood it seemed prudent in the light of a critical review of available measures to address this gap, so the present study was proposed to develop a new technique named the Children's Experience of Attachment Technique (CEAT). This technique is projective in nature and was designed to assess security of attachment experience in children aged 6 to 12 years of age, by assessment of IWMs of attachment. Further, the study undertook to evaluate the technique's face and content validity, and to test, in a preliminary way, its concurrent/convergent validity, using the "known groups" method, by administering it to two groups of children who could be expected to differ

on security of attachment experience. This chapter outlines the overall aims and shape of the present study.

### **3.1 Nature of the technique that was planned**

The CEAT was to meet the requirements set out in Section 2.7 of Chapter 2 above. It would be a projective technique that utilized the child's ability to use symbolic forms of representation to conceptually organize knowledge (Bretherton, 1985). Such "conceptual structures and processes can be observed in contexts in which a child is asked to develop scripts for actions and events" (Solomon et al., 1999, p. 303), such as when making up a story. It is this capacity that the CEAT aims to tap, in order to assess internalized representations or IWMs of attachment.

It was considered that storytelling is an age-appropriate activity for middle childhood. While this same thinking lies behind techniques using responses to photographs and doll play, these other techniques tend to limit data collected to particular domains of attachment such as coping with separation and responsiveness of an attachment figure. In middle childhood, where so little is known about the dynamics of attachment processes and attachment organization, it was thought that a less focused technique would allow for a wider range of responses related to assessment. This wide ranging kind of technique could certainly generate more specific hypotheses for exploration, whether in research or clinical contexts.

Further, the rich descriptive data elicited by a projective technique would seem more likely to reveal aspects of attachment relationships that may be unique to this age group. Projective tools have been shown to produce rich descriptive data and to give respondents a great deal of freedom in choosing the content and manner of their

responses, and they are thought to reveal unconsciously held information (Bellak et al., 1997; Semeonoff, 1976).

As IWMs are thought to operate mostly outside of consciousness, it was decided to design a projective technique that would give children multiple opportunities to freely communicate something about their attachment representations. Both the content they choose to reveal and their manner of communicating their responses would form part of the data of the CEAT, to be coded and interpreted in terms of security of attachment experience.

### **3.2 Phases of the study**

The study was planned to have two phases, a Design Phase, focused on the creation and initial non-clinical trial of the CEAT, and its accompanying Coding Scheme, and a subsequent Pilot Phase, focused on an initial trial of the CEAT with both non-clinical and clinical groups. Each phase had its own set of aims, and the Pilot Phase involved hypotheses concerning the CEAT's ability to discriminate security of attachment between two groups that could be expected to so differ.

### **3.3 Aims of the Design Phase of the study**

The Design Phase of the study aimed to develop a projective story-telling technique that did not require laboratory conditions, expensive special equipment such as video cameras or audio recorders, or highly trained administrators. The materials were to be small in size, so that the technique could be easily transported and handled by even small children. A set of 10 pencil drawings (the CEAT stimulus

cards) in a contemporary style were to be developed and tested with a non-clinical sample of children in the target age group. In order to enhance the projective quality of the drawings, the children portrayed and their facial expressions would be ambiguous (Bellak et al., 1997). Attachment theory, particularly propositions concerning IWMs, was to inform both the drawings and the Coding Scheme.

Further, it was aimed to create a Coding Scheme based upon a review of previous assessment techniques' coding of security of attachment, a review which would generate a comprehensive list of indicators of attachment styles or categories. The Coding Scheme would allow interval measurement of each attachment style that could be combined into a pattern reflecting greater complexity of IWMs than possible previously. Given how little is known about experience of attachment in middle childhood, the aim in designing the Coding Scheme was initially to take a qualitative approach that allowed the trial data to speak without the imposition of either a scheme of coding borrowed from another technique, or a rigid set of theoretical considerations traditionally used for determining secure and insecure attachment. Rather, it was planned to approach the data generated by the story-telling activity in a way that facilitated the individual children's projections of IWMs of attachment experience to be considered first and then later to view them through the lens of theory. Finally, it was intended to include in the Coding Scheme an assessment of coherence of the individual's narratives, which has been found to be associated with experience of attachment in adults and adolescents.

A further aim of the study was to design the CEAT as a clinically useful tool. To this end, a format and administration technique familiar to clinicians through their use of the TAT (Thematic Apperception Test) was to be used.

Once the Coding Scheme was in place and the stimulus cards had been evaluated, and refined if necessary, a finalized version of the CEAT was to be produced and trialled in the Pilot Phase of the study.

### **3.4 Aims of the Pilot Phase of the study**

The aim of the Pilot Phase was to trial a revised version of the CEAT and the Coding Scheme that had been developed. As the critical literature surveyed highlighted the need for assessment techniques to be developed using clinical samples (Greenberg, 1999), the Pilot Phase of the study aimed to include both a clinical and a non-clinical sample in the trial. This would permit comparisons between two groups that could be expected to differ on IWMs of security of attachment, thus providing an indication of the predictive ability of the CEAT, while in addition demonstrating its content validity. It was hypothesized that, while there would be no difference in security of attachment between the males and females in the non-clinical sample, the non-clinical sample would have significantly higher security of attachment scores than the clinical group on the CEAT measure of security of attachment.

It was decided to target security of attachment as the variable to test differences between the groups, as it is in this area of experience of attachment that differences could be clearly hypothesized. The state of both theory and knowledge about insecure styles of attachment in middle childhood is as yet minimal.

Before proceeding to planned comparisons, an analysis of the internal consistency of the CEAT stimulus cards and qualitative analyses of aspects of the collected data would be conducted.

It was also aimed to evaluate the potential clinical usefulness of the technique, through its implementation with the clinical group.

## **CHAPTER 4**

### **METHODOLOGY**

This chapter outlines in detail the planned method of the two phases of the design and piloting of the Children's Experience of Attachment Technique (CEAT), encompassing the nature of the samples of participants, the procedures of the research, and the type of analysis planned for each phase.

Before the study began, Research Ethics Approval was sought and received from Victoria University, from the Victorian State Department of Education and Training and from the Catholic Education Office.

#### **4.1 A two phase design**

An overview of each phase sets the context for the procedures of the study.

##### **4.1.1 The Design Phase**

In the Design Phase, 10 stimulus cards were to be created and a method of administration determined. The technique would then be trialled with a group of 10 children in the target age group, drawn from a non-clinical population. This trial aimed to evaluate firstly, the appropriateness of the administration method and, secondly, the effectiveness of the technique in eliciting storytelling responses relevant to IWMS of attachment. Data collected would then inform the development of a

Coding Scheme, grounded in attachment theory and reported research findings, which would afford a score on security of attachment.

Stages planned for this phase would take the following sequence.

- (1) Ten pencil stimulus card drawings would be created, of A5 size and drawn in a style in tune with those currently used in children's picture books.
- (2) An administration method was to be chosen.
- (3) The stimulus card drawings were then to be tested with a non-clinical convenience sample of 10 children.
- (4) Data collected in the test of the CEAT stimulus card drawings were to be transcribed and qualitatively analysed through repeated readings. Simultaneously, a literature review was to be conducted to identify how other techniques assessing attachment at different stages of life coded indicators of quality of attachment behaviour and representations of attachment.
- (5) A Coding Scheme, grounded in attachment theory and research findings, was to be developed using the collected data.
- (6) An assessment of the capacity of the stimulus card drawings to elicit internal representations relevant to quality of attachment was to be conducted, and, if necessary, drawings would be changed or replaced in order to arrive at a finalized version of the CEAT.

The Design Phase would conclude with the finalization of a satisfactory set of CEAT stimulus cards, an administration method, and a Coding Scheme which could then be trialled in the Pilot Phase of the study.

#### **4.1.2 The Pilot Phase**

The stages of the Pilot Phase were planned as follows.

- (1) Forty non-clinical participants and ten clinical participants, which groups could be expected to differ on security of attachment, would be recruited.
- (2) The finalized version of the CEAT stimulus cards and its administration method were to be administered to the clinical and non-clinical participants at their schools.
- (3) Data collected would be coded, using the CEAT Coding Scheme developed in the Design Phase of the study.
- (4) To control for socio-economic differences and the influence of family risk factors previously associated with insecure attachment 20 non-clinical participants, 10 males and 10 females, drawn from a pool of 40 non-clinical participants, were to be matched as closely as possible on family income, participant's birth order, number of siblings, and intact or broken family status, with the 10 clinical participants. Matching would be based on group measures of central tendency across the samples, rather than on a participant to participant basis.
- (5) After coding, the internal consistency of the CEAT was to be calculated using the Sign Test, with stimulus cards found less consistent to be excluded before the planned comparisons would be made.
- (6) The CEAT security of attachment scores of the clinical group of 10 males and a non-clinical group of, 10 males and 10 females would then be compared, in order to test hypotheses concerning the CEAT's capacity to differentiate the two groups on security of attachment.

The Pilot Phase would end with a qualitative assessment of the data related to different patterns of attachment revealed by the CEAT coding, and subsequent evaluation of the technique's potential for clinical usefulness.

## **4.2 Sampling**

### **4.2.1 Design Phase sample**

It was planned to use a convenience sample of 10 non-clinical children, 5 girls and 5 boys, who attended a local State primary school in western Melbourne, in the State of Victoria, Australia. All data collection was to be carried out during school hours at the participants' school.

### **4.2.2 Pilot Phase sample**

Sampling for the Pilot Phase was to involve a non-clinical group of 40 participants and a clinical group of 10 participants. The larger group of non-clinical participants was intended to provide a pool of 40 participants from which a sample of 10 girls and 10 boys could be matched as closely as possible to the clinical sample. Matching was to be based on measures of central tendency across the samples rather than on a participant to participant basis.

#### **4.2.2.1 The non-clinical group**

Twenty boys and twenty girls would be selected for the non-clinical group meeting the following criteria:

- (1) attending primary school in Grades 1, 3, and 5;
- (2) ages ranging between 6 and 12 years;
- (3) all English-speaking; and
- (4) no behavioural, emotional or learning difficulties, according to their parents or guardians.

Catholic and State primary schools in western Melbourne would be approached to recruit participants.

Criterion four would be included on the Invitation to Participate which, together with the Consent Form, would be given to children at school to take home for their parents/guardians to consider and sign. Signing of the Consent Form would be taken to mean that the child had not experienced behavioural, emotional, or learning difficulties. Nevertheless, a follow up telephone call to all parents/guardians would verify this. If a child was found, at that point, to indeed have experienced problems of some kind, that child's data would be excluded and a replacement participant would be sought. Details of the actual recruitment process are set out in Section 4.4.1 below.

#### **4.2.2.2 The clinical group**

The ten participants in the clinical group would be drawn from the Larmenier Child and Family Centre School, which caters for children in the Victorian Catholic School system who have emotional and behavioural difficulties severe enough to

make continued participation in their normal classrooms impossible. Because Larmenier School caters largely for boys, these participants were likely to all be boys.

This group would meet the following criteria:

- (1) attending primary school in Grades 1, 3, and 5;
- (2) ages ranging between 6 to 12 years;
- (3) all English-speaking;
- (4) experiencing emotional and, or behavioural difficulties; and
- (5) all receiving weekly psychotherapy.

The advantage of selecting the clinical group from the Larmenier Child and Family Centre School was that all children attending there receive a psychiatric diagnosis before acceptance at the school common symptoms include symptoms of depression, anxiety, hyperactivity and general behaviour problems. All students receive weekly psychotherapy at the school. As no particular diagnosis was under investigation in this study, inclusion in the clinical group was to be defined by the participant's being the subject of a psychiatric diagnosis and receiving weekly psychotherapy. Details of intended recruitment process for the clinical group are outlined in Section 4.5.1.2 below.

### **4.3 Procedures of the Design Phase**

#### **4.3.1 Creation of the assessment technique**

##### **4.3.1.1 Design and production of the stimulus cards**

A set of stimulus cards for the CEAT would be pencil-drawn images created by Elizabeth Westphal, after compiling ideas drawn from a number of sources, including the relevant literature on the assessment of attachment style generally, contemporary children's picture books, and photographs of children in different situations. The scenes depicted in these drawings would include situations which, according to attachment theory, would be likely to activate attachment behaviour in children of the target age group, for example, separation, injury and solitude, as well as scenes depicting engagement but not necessarily suggesting stress. An effort would be made to create drawings that would be ambiguous as to gender, cultural background, emotional responses of characters, and the exact nature of the situations presented.

##### **4.3.1.2 Design of the method of administration of the technique**

An administration technique similar to that used with other projective storytelling techniques, such as the Thematic Apperception Test and Children's Apperception Test (Bellak & Abrams, 1997), was selected. Participants would be asked to look at a stimulus card and tell a story about it, a story with a beginning (what happened before the pictured scene), a middle (the part of the story shown in the picture), and an end (what would happen after the picture). Participants would also

be asked to say what they thought the characters in their story might be thinking and feeling.

#### **4.4 Initial trial of the technique**

##### **4.4.1 Recruitment of non-clinical trial sample**

The researcher would send the letter presented as Appendix A to the Principals of several suburban State Primary Schools, proposing the study and inviting participation in the Design Phase. With the permission of the Principal and Classroom Teachers, the researcher would directly issue a verbal invitation to students in Grades 1, 3 and 5, to participate in the study. All students expressing interest in participating would be given an Invitation to Participate, presented as Appendix B, and a Consent Form, presented as Appendix C, for their parents/guardians to read and consider. Consenting parents/guardians and children would then sign the Consent Form.

Signed Consent Forms would be returned to Classroom Teachers who would forward them to the school receptionist, from whom the researcher would collect them. The first 10 children to return signed Consent Forms would participate in the Design Phase of the study.

A telephone call to consenting parent/guardians by the researcher would first confirm their consent and confirm the absence of identified psychological difficulties. The researcher would then arrange an appointment to come to the school and collect the data.

#### **4.4.2 Administration of the technique**

Administration of the CEAT would be conducted individually with the children by the researcher, in school hours, and in a private room provided by the school. Children themselves would be asked to confirm their consent prior to administration, and if at that time they declined, arrangements would be made for another participant to be involved.

As part of the CEAT method, all stories would be recorded verbatim in writing by the researcher. They would then be transcribed using a word processing program. These data would then be used in the evaluation of the stimulus cards and procedures, and in the development of the Coding Scheme. Details of the evaluation of the stimulus cards and development of the Coding Scheme are presented in Chapter 5 in Section 5.2.2 below.

#### **4.4.3 Evaluation of the appropriateness of the technique**

Data collected in the trial of the technique would be evaluated in an effort to understand the effectiveness of each card in eliciting responses relevant to quality of attachment. This evaluation would look at the range and quality of individual responses to the CEAT stimulus cards, especially noting:

- (1) difficulties participants might have had in responding to the activity;
- (2) the frequency with which participants' responses included interactions with others and other attachment-related material;
- (3) differences in responses of children in the various age groups; and

(4) which cards presented difficulties for the children and which the children seemed to connect with easily.

This analysis would consider the grade level of participants, so that judgments could be made about differences in effectiveness associated with using the technique across the three different age groups included in the study. Stimulus cards that were judged as failing to produce usable data would be eliminated or revised, and new ones produced if necessary. Finally, a decision about the order in which the stimulus cards would be presented would be made. Results of this analysis are set out in Chapter 5, Sections 5.2.2 and 5.3 below. Following this analysis, the creation of a Coding Scheme would be undertaken.

#### **4.4.4 Development of the quality of attachment Coding Scheme**

Several steps were planned for the development of a Coding Scheme and an accompanying Coding Manual.

##### **4.4.4.1 Analysis of the literature conceptualizing attachment**

Next the literature on the empirical investigation of attachment would be reviewed and summarized, to highlight coding methods used in other attachment assessment techniques, and characteristics previously deemed to be associated with IWMs of attachment. The following considerations were central.

(1) Previously created coding methods would not be imposed on the CEAT Coding Scheme, but they would inform the researcher's choice of attachment variables and indicators. As other story-telling narrative activities do it was planned to

include evaluation of both Story Content (what was represented in the narrative) and Discourse Features (narrative coherence, perspective taking, themes and defensive processes).

- (2) Attachment would be conceptualized as being multifaceted rather than merely categorical, such that the Coding Scheme would capture the hierarchy of different qualities of attachment presented in a story, where this was the case. In other words, the intent was to create a Coding Scheme which would allow for obtaining scores on each of four styles of attachment quality, if each of these were represented in a child's responses. It also was intended that the coding would indicate which quality of attachment was predominant and which qualities were subsidiary.
- (3) Because it would not be expected that each story contained a particular number of indicators, a process of scoring that would proportionally include all indicators identified would be designed.

#### **4.4.4.2 Analysis of the trial data collected**

The development of a Coding Scheme for the CEAT would first involve a systematic qualitative analysis, of the stories collected in the Design Phase trial. Stories would be read repeatedly to help understand the kind of coding information that seemed relevant to experience of attachment and that needed to be coded, and to establish a preliminary list of coding variables likely to be useful in making sense of the data.

#### **4.4.4.3 Formalization of Coding Guide and Coding Manual**

A Coding Guide would be produced to standardize the coding of CEAT responses, along with a Coding Manual elaborating administration and coding and its interpretation. To facilitate coding, a Summary Sheet would be designed to collate all the attachment indicators identified in the set of stories told.

#### **4.4.4.4 Modification of the technique**

After analysis of the trial data using a preliminary Coding Guide and Summary Sheet, it was planned to produce a revised version of the CEAT Stimulus Cards, Coding Guide, and Summary Sheet. This modified version of the technique would then be used in the collection and coding of data in the Pilot Phase of the research.

### **4.5 Planned procedures for the Pilot Phase**

#### **4.5.1 Recruitment of samples**

##### **4.5.1.1 Procedures used to recruit non-clinical Pilot sample**

The researcher would send the letters, presented as Appendix A and D to Principals of several suburban State and Catholic Primary Schools, proposing the study and inviting participation in the Pilot Phase. With permission of the Principal and Classroom Teachers, the researcher would directly issue a verbal invitation to students in Grades 1, 3 and 5, to participate in the study. All students who expressed

interest would be given an Invitation to Participate, presented as Appendix E, and two copies of the Consent Form, presented as Appendix C, for the parent/guardian and the child to consider, and, if consenting, to sign.

Consenting parents/guardians would return the signed Consent Form, in the envelope provided, to the child's Classroom Teacher, who would pass it to the school receptionist. The receptionist would contact the researcher and arrange times for the data to be collected. Data would be collected from the first 20 females and first 20 males whose parent/guardians returned signed Consent Forms.

A telephone call to the parent/guardian by the researcher would confirm their consent, provide an opportunity for the parent/guardian to ask questions, and allow for a brief interview to confirm the child had no identified emotional, behavioural or learning difficulties, and permit collection of information about separation and loss issues, family structure and family income. The proforma for this interview appears as Appendix F. Any child found at that time to have experienced emotional, behavioural or learning difficulties, will be excluded and another participant would be sought as a replacement.

#### **4.5.1.2 Procedures used to recruit clinical sample**

The researcher would send the letter presented as Appendix D to the Principal of the Larmenier Child and Family Centre proposing the study and inviting participation in the Pilot Phase. This letter would be followed by a telephone call from the researcher to the Principal to ascertain willingness of the Centre to participate in the study.

If permission was given, the Principal would then promote the study at the monthly Parent Meeting and distribute Invitations to Participate (presented as Appendix G) and Consent Forms (presented as Appendix C) to interested parents. Signed Consent Forms would be returned by parent/guardians in the envelope provided, to the child's Classroom Teacher, who would give them to the Principal, who would in turn inform the researcher of the participant's availability. Appointments for the researcher to visit the school to collect the data would be arranged with the Principal via telephone.

Prior to collection of the data, the researcher would telephone parents/guardians to confirm their consent, and to allow them to ask any questions they may have about the study. Parent/Guardians would also be asked to complete the brief telephone interview presented in Appendix F, concerning separation and loss issues, family structure, and family income.

#### **4.6 Administration of the technique for non-clinical and clinical groups**

The planned administration of the CEAT was the same for the non-clinical and the clinical groups. It would be conducted individually with students in school hours, in a private room provided by the school.

All children would be asked to confirm willingness to participate prior to commencing the administration. Any now declining would be excused from the study, and another participant found.

All stories would be recorded verbatim in writing by the researcher as the child spoke.

## **4.7 Planned data analyses**

Data collected in the Pilot Phase would be transcribed using a word processing program, and then coded using the Coding Scheme developed in the Design Phase. With coding completed, statistical analyses of the results would be conducted. Following this, some qualitative analyses would be possible.

### **4.7.1 Matching of non-clinical and clinical samples and statistical analyses of Pilot Phase**

Of the non-clinical sample of 20 boys and 20 girls 10 of each were to be selected to be match as closely as possible with the 10 boys in the clinical sample. The variables decided as critical for matching were, grade level, birth order, number of siblings, intact or broken family, and family income. The resulting selected non-clinical group of 10 boys and 10 girls would be included in the data analysis.

Statistical analyses of the Pilot Phase would comprise an investigation of the internal consistency of the CEAT, and analyses related to the hypotheses of the study.

#### **4.7.1.1. Internal consistency of CEAT**

It was anticipated that the internal consistency of the CEAT would not be able to be assessed by means of a parametric statistical technique. This was because the pilot use of the CEAT had generated data resulting from the coding of participants' story responses that were obviously not normally distributed as required by parametric

tests, and the clinical sample to be recruited was unlikely to be large enough to compensate for this.

Therefore, it was decided to use the non-parametric method known as the Sign Test to evaluate internal consistency, first preparing the data in the way described below.

(a) First, it would be determined whether the four attachment style scores coded for a participant's response to a picture were higher or lower than that participant's scores coded for the other pictures. To achieve this, each individual's responses were to be normed across their scores for each of the four attachment styles for each picture.

(b) Then, the normed scores were to be compared with the individual's other coded scores, for each of the remaining pictures. When the comparison was found to be higher than the norm, a plus was to be awarded, and when the comparison was found to be lower than the norm, a minus was to be awarded. When the comparison generated identity, a zero was to be awarded.

The Sign Test would then be used to determine whether the total number of pluses and minuses were significantly different than what could be expected by chance.

Finally, it was planned to assess how the four attachment style scores of the 30 participants for each picture compared, in order to determine if any of the cards were biased toward producing scores associated with particular styles of attachment. Here again, the normed scores were to be compared, and the pluses or minuses awarded these comparisons were to be totaled by adding all the pluses and minuses for each of the four attachment styles across the 30 sets of responses for each picture. Then, the Sign Test was to be applied to determine if these totals were significantly higher or

lower than could be expected by chance. Data related to cards found to be biased could then be removed from the data sets prior to hypothesis testing.

#### **4.7.1.2 Statistical analysis relating to hypotheses of the Pilot Phase**

It was planned to test the two hypotheses in the Pilot Phase of the study that:

- (1) there would be no significant difference between the scores of the male ( $n=10$ ) and female ( $n=10$ ) participants in the non-clinical group on security of attachment; and
- (2) the clinical group ( $n=10$ ) would have a significantly lower mean score on security of attachment than the non-clinical group ( $n=20$ ).

Analysis of variance would be used to detect differences in the mean security of attachment scores of the three groups, namely the clinical boys, the non-clinical boys and the non-clinical girls. A contrast test Helmert would be used to determine the nature of differences emerging.

#### **4.7.1.3 Exploratory analysis of data in Pilot Phase**

It was planned to conduct a general exploratory analysis of the qualitative data collected in the Pilot Phase of the study that would involve:

- (1) discernment of commonalities in stories belonging to the most frequent patterns of attachment quality revealed in the Pilot Phase;
- (2) examination of differences in the responses of girls and boys and the three grade levels to the CEAT activity;
- (3) evaluation of how suitable the activity is for the different age groups participating in the study; and

(4) evaluation of the technique's clinical usefulness.

It was hoped that the process of the analysis would draw attention to issues related to the suitability of the technique for boys and girls in this age group, and perhaps bring to light indicators of attachment in middle childhood that had not been previously noted.

#### **4.8 Modifications of the technique**

In the light of findings of the Pilot Phase, the researcher would make a determination of what, if any further revisions of the CEAT might be needed before proceeding to a validation study.

## **CHAPTER 5**

### **DESIGN PHASE OF STUDY: RESULTS**

The progress and results of the Design Phase of the study are presented in this chapter. The CEAT Design Phase entailed the creation of ten pencil drawing stimulus cards, their trial and refinement, and the development of the associated Coding Scheme. Findings relate to an assessment of the developmental appropriateness of the CEAT activity, the CEAT administration technique, the stimulus card drawings' ability to elicit attachment related material and the development of the Coding Scheme. Finally, reported are refinements made to the CEAT drawings in preparation for the Pilot Phase, the results of which are detailed in Chapter 6.

#### **5.1 Creation of the assessment technique**

##### **5.1.1. Design and production of the stimulus cards**

The CEAT stimulus drawings evolved through examination of the research literature concerning children's attachment experience and behaviour, together with discussions about situations that were considered likely to elicit stories revealing IWMs of attachment. As explained in Chapter 4, Section 4.3.1.1 above, situations were to include some relating to engagement with others that were not necessarily stressful, as well as some that could elicit themes of separation and loss. Extensive perusal of children's story and picture books afforded familiarity with styles of presentation appropriate for children between 6 to 12 years of age. This process generated a collection of ideas from which 10 black and white pencil drawings were

created. The content of each drawing was constructed so as to make the emotional tone of the situation portrayed ambiguous, leaving room for projections of the respondent's own expectations.

The format of the drawings was kept within a 15 by 21 centimeter size (A5 size), in order to be easily handled by a child. An order of presentation was decided, the first and last drawings being scenes deemed less likely to arouse attachment distress and so be upsetting for vulnerable respondents. Drawings most likely to arouse attachment distress were placed in the middle of the set. Finally, the stimulus cards were laminated and bound as a book in a landscape orientation.

The final set of stimulus card pictures is presented as Appendix H. Please note that this set contains 9 and not 10 pictures, as it is the set eventually used in the Pilot Phase.

### **5.1.2 Design of method of administration of the technique**

An administration technique similar to that used with the Thematic Apperception Test (TAT), and the Children's Apperception Test (CAT) (Bellak & Abrams, 1997), was devised. Administration instructions are set out in Chapter 2 of the CEAT Manual (presented as Appendix I) on page 3. The child is invited to tell a story about the picture, with a beginning, a middle and an end, and asked to tell what the characters in the story are thinking and feeling.

A Story Recording Sheet was designed and is presented on page 13 of the Coding Manual (presented as Appendix I). It requires the administrator to write down each story verbatim, and record the respondent's behavioural and emotional reactions during the activity.

## **5.2 Initial trial of the technique**

### **5.2.1 Recruitment of the non-clinical sample**

Recruitment of the non-clinical sample for the Design Phase trial of the CEAT technique successfully followed the plan outlined in Section 4.4.1 of Chapter 4. Ten children, 5 girls and 5 boys aged between 6 and 12 years, were recruited from a State Primary School. One initial participant was replaced because, in the parent telephone interview, it was revealed that she had been diagnosed with an autistic disorder.

### **5.2.2 Administration and evaluation of the appropriateness of the technique**

No difficulties were found with the administration technique and all participants provided complete sets of ten stories. None of the participants became distressed by the activity or refused consent. Most of the participants appeared to enjoy the storytelling session in an enthusiastic way. Therefore the CEAT was judged to be within the developmental capabilities of the target age group, and appropriate to their developmental interests.

However, half of the participants remarked that the activity was a little too long, and therefore it was decided to reduce the activity to the telling of nine stories. How this was done is conveyed below, within the description of the analysis of the story data.

A qualitative analysis of the verbatim transcripts of participant responses to each stimulus card was conducted. The frequency with which stories included material indicative of experience of attachment was noted. All the stimulus picture

cards elicited some responses that were deemed relevant, but three did this to a lesser extent. These pictures were of two adults sitting on a sofa holding a baby, a child sitting on a bed looking out of a window at a woman in a car, and two girls playing a board game on the floor. These three drawings were deleted from the CEAT stimulus picture array. In order, then, to shorten the activity, only two drawings were replaced. Replacement drawings were of a child standing at a doorway looking out at a shadow figure that was waving, and of a boy sitting on a stool looking at a fish in a fish bowl.

Three of the other drawings were made more ambiguous, two by shading in characters and one by giving a child pictured with a closed fist a more open-handed gesture. In recognition of the increasingly multicultural nature of human societies, it was also decided at this point to make characters in the drawings more obviously ethnically diverse, by changing the skin color, hair and facial features of several of the children portrayed. Next, the order of presentation was determined using criteria established for the original set of drawings, described in Section 5.1.1 above.

Finally, it was found that having the stimulus cards bound together made it hard to control the children's access to successive drawings, and it was therefore decided not to bind them together, but to present them to the child one at a time. Appendix H comprises the final set of drawings in order of their presentation to the respondent.

### **5.3 Development of Coding Scheme for quality of attachment**

The aim in designing the Coding Scheme was to ground it in essential elements of attachment theory, and to ensure that it would, as indicated in Chapter 2, Section 2.7 above, highlight and preserve the complexity of internal representations of quality

of attachment as much as possible, rather than reduce the outcome of the assessment to the assignment of individuals to a single category of attachment.

The development of the CEAT Coding Scheme involved six steps, the first two being taken simultaneously. Step 1 was the documentation of indicators of attachment found in a wide ranging review of attachment research and measurement literature. Step 2 was the qualitative assessment of attachment features of the stories collected in the Design Phase. Step 3 involved collating a set of attachment indicators previously found by research to have differentiated quality of attachment, as well as some that made sense theoretically, culminating in the creation of the CEAT Coding Guide. Step 4 saw the development of the overall structure and rules that would govern the CEAT Coding Scheme. Step 5 was the creation of a Summary Sheet for use in coding CEAT story material. Step 6 was the production of a Coding Manual, to aid the researcher or clinician in administering, coding and interpreting the CEAT responses. The results of each step are now described.

### **5.3.1 Step 1: Analysis of the literature conceptualizing attachment**

An extensive review of empirical attachment research across the lifespan was undertaken. This afforded a list of the specific behaviours considered indicators of the four styles of attachment agreed upon by the field so far, and ascertained the different approaches to coding taken by past techniques of assessment. The results of this review have been summarized in the document labeled Summary of Key Research Re Categories of Attachment, which is displayed in full detail as Appendix J. The review encompassed attachment assessment in a chronological way, beginning with the work of Ainsworth et al. (1978). Assessment techniques for infants, children and adults

were all included in this review, and are listed in Table 5 below, in chronological order of their development.

Table 3

*Assessment Techniques Reviewed*

<b>Name of Technique</b>	<b>Author/s</b>
The Adult Attachment Interview, AAI	Main & Goldwyn, 1984, cited in Hesse, 1999
The Attachment Q Sort	Bretherton & Waters, 1985
The Separation Anxiety Interview	Main, Kaplan, & Cassidy, 1985
Separation Reunion Procedure	Main & Cassidy, 1988
Attachment Story Completion Task	Cassidy, 1988
Story Completion Task	Bretherton, Ridgeway, & Cassidy, 1990
Identification of infant Disorganized Attachment Style	Main & Solomon, 1990
Reflective-Self Scale	Fonagy, Steele, Steele, Moran, & Higgitt, 1991
Separation Anxiety Test	Shouldice & Stevenson-Hinde, 1992
Separation Anxiety Test	Resnick, 1993
Children's Coping Strategies	Finnegan, Hodges, & Perry, 1996
Family Drawings	Fury, Carlson, & Sroufe, 1997
Manchester Child Attachment Story Task	Green, Stanley, Smith, & Goldwyn, 2000
Adult Attachment Projective	George & West, 2001
Current Relationships Interview	Grossmann, Grossmann, Fremmer-Bombik, Kindler, Scheuerer-Englisch, & Zimmermann, 2002
The Caregiving Behaviour Classification System	Britner, Marvin, & Pianta, 2005

From this review emerged several alternative ways of structuring a coding scheme, and a plethora of observable indicators of quality of attachment employed in the past. These features, in conjunction with the preliminary qualitative assessment of

the Design Phase data, noted in Section 5.3 above, informed the creation of the CEAT Coding Scheme described below.

### **5.3.2 Step 2: Qualitative analysis and preliminary consideration of trial data**

Data collected in the Design Phase were transcribed and, through repeated readings, were systematically examined for the nature, detail, and style of material that would need coding. At this point in the analysis, no firm conclusions were drawn about attachment coding. Rather, the intent was to explore the story data without preconceived ideas about how the coding would be implemented, and to become familiar with the nature and variety of responses that would need to be coded.

Early in this part of the analysis, it was clear from the data that the number of quality of attachment indicators and the possible number of relationship interactions included in respondents' stories could not be predicted, so the Coding Scheme would need to accommodate considerable variability.

Note was made of the kind of relationships each story portrayed, and of aspects of each story that might be designated as indicating the child's experience of attachment, in terms of IWMs.

### **5.3.3 Step 3: Selection of indicators of quality of attachment for Coding Scheme: Development of Coding Guide**

#### **5.3.3.1 Basic requirements**

In the process of developing the Coding Scheme, basic requirements, already half decided as outlined in Section 4.4.4.1, were finally crystallized. The Scheme would:

- (1) be grounded in attachment theory, particularly concerning IWMs of attachment;
- (2) differentiate the four major styles of attachment recognized in the field, namely secure attachment, avoidant attachment, anxious attachment, and disorganized attachment, but would also be able to preserve the multifaceted complex information related to all these qualities of attachment;
- (3) include assessment of both story content and discourse, and
- (4) be easy to use and understand.

#### **5.3.3.2 Coding content of dyadic interactions in stories**

From the review of empirical literature on assessment of quality of attachment, a number of indicators of various dimensions of the four major styles of attachment quality were discerned and assembled. These lists of attachment indicators of secure, avoidant, anxious and disorganized attachment, as used in the past, were then considered in conjunction with the material that emerged from the qualitative analysis of the trial stories collected.

Indicators were first thought about in terms of attachment theory's central concepts of attachment influencing **dyadic interactions**, namely its set goals of balancing exploration and proximity maintenance, including attachment providing a haven of safety in the face of threat or conflict.

From this process emerged six relationship variables with associated indicators relevant to each of the four styles of quality of attachment that were to be assessed and scored. The first four variables concern general aspects of relationship interactions: (1) the focus, affective tone of the interaction and its aura (the feeling of the interaction rather than the feeling quality of the overall relationship depicted), (2) the child's role in the interaction, (3) the other's role in the interaction, and (4) the style of communication. The last two variables relate to safe haven behaviour and modes of assuagement as portrayed in (5) coping with distress, and (6) coping with conflict. This work went through a number of revisions before the first part of the Coding Guide evolved.

The intent was to design a Coding System that was capable of recording all indications of the various attachment styles that were expressed in the participant's responses to the different stimulus cards. In this way, coding would give an indication of which attachment style was predominant and how the others were subsidiary.

### **5.3.3.3 Coding discourse features of stories**

Several of the assessment techniques reviewed coded narrative material similar to CEAT stories, namely:

- The Adult Attachment Interview (Main & Goldwyn, 1984, cited in Hesse, 1999)

- The Separation Anxiety Interview (Main, Kaplan, & Cassidy, 1985),
- The Attachment Story Completion Task (Cassidy, 1988),
- The Story Completion Task (Bretherton, Ridgeway, & Cassidy, 1990),
- The Manchester Child Attachment Story Task (Green, Stanley, Smith, & Goldwyn, 2000), and
- The Adult Attachment Projective (George & West, 2001).

Perusal of these particular measures revealed that features of **discourse** or narrative style, as well as story content, were deemed useful in assessing and coding narrative data, particularly the assessment of narrative coherence. It was therefore decided to include an assessment of discourse features in the Coding Scheme. Unlike in other techniques, where coherence is generally rated on four rating scales, it was decided to differentiate indicators previously found to be related to four aspects of coherence, quality, quantity, relevance and manner. These were then delineated across the four attachment styles.

The next step in the process incorporated some research findings related to attachment quality and reflexive-self function (Fonagy et al., 2002). This helped establish patterns of **empathy** and **perspective-taking** associated with each of the attachment styles, which were then incorporated in the Coding Scheme.

After perusal of Marone's (1998) and Slade's (1999) writings on psychotherapy and attachment theory, and noting George and West's (2001) approach to the assessment of defensive processes in their projective attachment technique, it was decided to also include in the Coding Scheme patterns of **defences** across the four attachment styles.

Finally, Main et al. (1985) had observed that the themes of children's responses to photographs of children undergoing a separation from parents varied in

association with the various attachment categories, and so an assessment of the story **theme** was added to the Coding Scheme.

#### **5.3.3.4 Method of coding: Use of Coding Guide**

Initially, a set of questions to aid coding informed by attachment indicators was developed to guide a coder through the process of differentiating different styles of quality of attachment revealed in the story material. However, given that a story could contain a number of different dyadic interactions that needed to be coded, this process proved cumbersome, and it did not preserve information indicating various attachment styles or address the issue of Discourse Features. Therefore this approach to coding was abandoned.

It was then decided to take all selected indicators and arrange them in a table according to the variables noted above. This initial division of indicators evolved through a number of different versions, by testing it on the collected story material. Eventually an assessment of **safe haven** behaviour was differentiated from the more general interaction variables. This would be assessed only when a story included distress or conflict.

The final version of the Coding Guide is presented as Figure 1 on pages 77 and 78 below.

Examination of this Coding Guide reveals that, for each dimension on which an interaction is coded for quality of attachment, fine-grained indicators point in a distinct way to one of the four main styles of attachment. In other words, at this level of fine detail, indicators point to various categories of experience of attachment in a

mutually exclusive fashion. It is in the balancing of codes across stories, then, that the interacting complexity of IWMs can be taken into account.

## GUIDE FOR CODING CEAT

### Assessment of Content of Dyadic Interactions Including Interactions Resulting from Distress or Conflict

*Every Dyadic interaction included in a story is assessed*

	<b>Secure</b>	<b>Avoidant</b>	<b>Anxious</b>	<b>Disorganized</b>
<b>Focus, Affective Tone and Aura of Interaction</b> <i>Three marks</i>	Focus balanced between realistic, trusting, reciprocal interaction and activity or situation Warm, caring accepting, tolerant of negative feelings Has an aura of genuineness	Strong focus on situation, activity or achievement rather than on interaction which may be described as a stereotypical social script Bland, restrained, vague tone and/or devoid of strong negative feelings Has an aura of superficiality	Strong focus on relationships and especially relationship problems Prevalence of exaggerated emotions or affect-swings Has an aura of enmeshment or unrequited longing	Focus on inconsistent, or unrealistic strange interaction with a nonentity Prevalence of anxious, sad or uncertain feelings Has an aura of loneliness, isolation, confusion and/or cruelty
<b>Child's Role</b>	Child connecting easily with Other or cooperating adaptively Controlling self in relation to the Other	Child independent, self-focused and self-contained relation to Other distant or vague Bossy or bullying with peers	Child dependent clinging to Other, or seeking attention and/or seen as victim or submissive in relation to Other Resisting Other's demands	Child is alone, frozen, frightened or alert to danger Controlling Parent Other by either punishing, distracting or acting as Other's caregiver
<b>Other's Role</b>	Other caring, responsive, sensitive, appreciative and containing in relation to Child Willing and able to help, seen as capable, wise and/or trustworthy Fosters autonomy by sensitively offering advice or support to Child	Other's role vague, implied, or assumed or seen as ignoring, or rejecting of Child or giving things with no sense of closeness Other represented as perfect when situation would indicate otherwise Fosters independence by leaving Child to cope alone	Other anxious, unreliable, unpredictable, intrusive, critical, angry, demanding or punishing Multiple Others reflect a split Fosters dependence by restricting autonomy and/or rewards Child's clinging or developmentally immature behaviour	Other frightening or frightened Un responsive, preoccupied with own distress and/or needs Fosters a fear of dependence by making dramatic, traumatic responses to the Child's dependency needs
<b>Verbal &amp; Non-Verbal Communication</b>	Direct, open and mutually satisfying including touching and physical affection	Restricted, superficial or implied, but generally satisfying for Child	Protracted or insensitive discourse that is directed by Other generally unsatisfying for Child	Disrupted, vacillating, directed by Child and generally mutually unsatisfying
<b>Assessment of Safe Haven</b>				
<i>Only assessed when a narrative contains and account of conflict or distress</i>				
<b>Child's Response to Distress &amp; Mode of Assuagement</b> <i>Two marks</i>	Capacity to assess need for and act to access help, comfort, or protection from Other Distress assuaged by contact with a caring Other or by accessing internalised representation of Other	Capacity to deny need for protection, comfort or contact with Other Distress assuaged by Child acting in a self-reliant way and/or focusing on the environment action or	Capacity to identify distress and need for help or comfort, but only limited capacity to use Other Distress may seem amplified by contact with Other, may not be completely assuaged or may magically be reversed	No capacity to act to assuage distress, because seems helpless, or trapped Distress unassuaged as Child ineffective in making contact with Other, or Other is the source of the distress and/or is physically or emotionally unavailable
<b>Mode of Handling Anger &amp; Conflict</b> <i>Two marks</i>	Child and Other able to consider each other's point of view eg. sharing their needs and ideas Anger and conflict is resolved satisfactorily	Potential disagreements are left unaired as conflict is avoided and/or unacknowledged Anger and conflict satisfactorily resolved by Child imposing a solution	Conflict is drawn out and/or intense Anger and conflict unsatisfactorily resolved for Child as Other imposes a solution which Child accepts or resists	Conflict leads to extreme fight or flight behaviours by Child or Other Anger and conflicts left unresolved

Figure 1 Coding Guide for the CEAT

## Assessment of Discourse

*Each narrative is assessed for coherence, emergent patterns of empathy and defensive processes*

### COHERENCE OF NARRATIVE

*One mark is given for each of the four aspects of coherence unless more than one applies*

	<b>Secure</b>	<b>Avoidant</b>	<b>Anxious</b>	<b>Disorganized</b>
<b>Quality</b>	Story is clear including a sense of plot or sequence of related events and realistic characters, includes all 3 parts and has some originality	Story is mainly a description of the picture, with little plot, flat characters and/or missing the beginning or end	Story has alternate events or competing storylines, polarized all good or all bad characters, and/or some part missing	Story has poor flow, inconsistencies and numerous breaks that make it confusing or hard to follow and/or middle of story may be missing
<b>Quantity</b>	Story is succinct with adequate length and elaboration	Story brief and thinly elaborated	Story long and/or rambling and overly elaborate	Story very brief and unevenly elaborated or lacking sufficient elaboration
<b>Relevance</b>	Story congruent with the pictured situation with only brief inclusion of personal experience	Story avoids some character or aspect of the pictured situation and no inclusion of personal experience	Story expands as the narrative is related or in response to probes or it is told in the first person and may include significant personal experience	Story is unrelated to or misinterprets the pictured situation, is fixated on one aspect of the pictured or repeats aspects of a previous story plot or theme
<b>Delivery</b>	Participant is cooperative and keeps within the boundaries of the task although may reflect upon the task, few questions required to complete the task	Participant resists task, gives 'I don't know' responses, includes grim humor, quick topic changes or distracts from the task or requires a number of probes to complete the task	Participant unable or unwilling to end the narrative which drags on and/or skips to a happy ending, or story includes nonsense words or flippant language	Participant struggles with or rejects the task, seems in a 'world of his own' or seems debilitated by the task, or the response includes evidence of a lapse of reasoning

### EMERGENT PATTERNS OF EMPATHY & DEFENSES

	<b>Secure</b>	<b>Avoidant</b>	<b>Anxious</b>	<b>Disorganized</b>
<b>Empathy</b>	Participant projects individual feelings and thoughts onto Child and/Other in story that seem congruent with the situation described	Participant avoids projecting individual feelings and thoughts onto Child and/Other in story or supplies positive feelings when negative ones seem more congruent or projects feelings that are really thoughts	Participant projects feelings and thoughts on Child and/Other that are the same, seem exaggerated, are expressed as somatic responses, or are ambivalent	Participant projects feelings and thoughts for the Child and/Other that seem confused, puzzling and/or overwhelming, or indicates painful negative affects for the Child when situation may not suggest it
<b>Defences</b>	Evidence of sublimation or use of a minimal use of a variety of defenses	Evidence of a strong use of denial including idealization of objects or negative situations	Evidence of a strong use of splitting and putting positive and negative aspects onto different objects	Evidence of strong use of isolation of affect and/or difficulty connecting emotionally with the stimulus

### THEMES

*The themes of each story are identified and recorded and then the whole set of stories are coded*

	<b>Secure</b>	<b>Avoidant</b>	<b>Anxious</b>	<b>Disorganized</b>
<b>Themes</b>	A wide range of themes including distressing ones which are always resolved by the end of the story	Constricted range of themes, predominantly activities or innocuous interactions	Interpersonal themes predominantly of conflict or exaggerated intimacy and responses that include two stories with conflicting themes	Themes predominantly of unresolved violence, danger, loss, isolation, helplessness or catastrophe

Figure 1 Continued

#### **5.3.4 Step 4: Overall structure of Coding Scheme and Coding Manual**

The next step in devising the Coding Scheme was the production of a Coding Manual. Assessment tools reviewed in relation to Step 3 were also a source of inspiration for the design of the Coding Manual. The CEAT, unlike many other attachment techniques, was not focused on using rating scales or inclusion and exclusion criteria to classify individuals as belonging to one attachment category or another. Rather, it desired to preserve evidence of differing attachment styles related to an individual's IWMs of attachment as revealed in their responses to the CEAT. This change of emphasis led to the eventual adoption of a proportional method of scoring, and to broader interpretations of IWMs which might appear contradictory according to some categorical models of assessment.

The proportional method of scoring was developed using the four raw scores on each style of attachment, generated by coding of participant responses to each of the CEAT pictures. These scores represented a numerical count of the number of indicators identified in a story that were indicative of each of the four attachment styles. A set of nine stories is scored in this way by adding together the number of indicators (the raw scores) accrued for each of the attachment styles across all the stories producing a total raw score for each attachment style for the participant. Scoring produces four total raw scores, one for each of the attachment styles. These four totals are then summed, and this sum represents the total number of all indicators scored in the coding of a set of responses. This total is then divided into each of the four total raw scores, in order to compute a proportional score that represents the influence of each of the attachment styles in the participant's set of CEAT responses.

As the Coding Scheme developed, it was tested repeatedly on data collected in the Design Phase. This helped delineate the coding process and the rules that would govern the scoring and interpretation of the CEAT responses. This process contributed greatly to the development of the Coding Manual, described in Section 5.3.6 below

### **5.3.5 Step 5: Production of Coding Summary Sheet**

The repeated testing of the tools for coding, noted above, served to highlight the need for a system to record the rich and varied data resulting from coding. This need was addressed through creation of a Coding Summary Sheet, designed to record the coding of a set of nine CEAT stories. It is presented as Figure 2, on pages 80, 81, and 82 below.

## CEAT SUMMARY SHEET

Participant ..... Date ..... Coder.....

	Story 1				Story 2				Story 3				Story 4				Story 5			
Number of Interactions																				
Attachment Category	S	AV	Anx	Dis																
Nature, Focus and Affective Tone of Interaction																				
Child's Role																				
Other's Role																				
Nature of Communication																				
Child's Response to Distress																				
Mode of Handling Problems and Conflict																				
Coherence																				
<i>Quality</i>																				
<i>Quantity</i>																				
<i>Relevance</i>																				
<i>Delivery</i>																				
Empathy																				
Defence																				
Theme																				
<b>Totals</b>																				

Figure 2 Summary Sheet for coding CEAT data

	Story 6				Story 7				Story 8				Story 9				CODING TIPS
Number Interact/s																	
Attach. Category	S	AV	Anx	Dis													
Nature, Focus and Affective Tone of Interaction																	
Child's Role																	
Other's Role																	
Nature of Communication																	
Child's Response to Distress																	
Mode of Handling Problems and Conflict																	
Coherence Quality																	
Coherence Quantity																	
Relevance																	
Delivery																	
Empathy																	
Defence																	
Theme of Story																	
Totals																	

**Notes**

- It is important to remember that where there are multiple interactions in one story each interaction is coded separately. This will result in multiple entries in the six aspects of relationship. When multiple interactions are noted they will not necessarily result in a code given for each aspect of relationship because some interactions will not be adequately described to indicate all six aspects so only aspects that are included are scored.
- If there is no inclusion of distress and/or conflict in a story then these aspects of relationship are left blank. The exception to this is when the story situation is one that would be expected to result in distress or conflict but none is reported. In such a case the story would be coded Avoidant.
- If the response seems not to fit into any of the categories then it is not coded.

Figure 3 continued

***Quantitative Coding Grid***

Story	Secure	Avoid	Anx	Dis	Unc	Story pattern
1						
2						
3						
4						
5						
6						
7						
8						
9						
Totals						
%						

***Profile of Styles of Attachment***

- 1. Overall pattern of attachment**
- 2. Dominant style of attachment**
- 3. Subsidiary styles of attachment**

*Figure 3 Continued*

***Qualitative Coding***

<b>Distress</b>
<b>Conflict</b>
<b>Coherence</b>
<b>Empathy</b>
<b>Defences</b>
<b>Themes</b>

**Overall Interpretation:**

**Other Comments**

The Summary Sheet takes the form of a series of charts for recording scores as indicated below.

(a) All the indicators of quality of attachment found in the process of coding are summed across all 9 stimulus cards for each style of attachment.

(b) Proportional scores are calculated for each of the attachment styles by first counting the number of indicators of each of the attachment styles for each story and entering these raw scores in the appropriate row and column of the Coding Grid. These four raw scores for each of the stories are then totaled by adding the numbers down each of the four attachment style columns and this total is placed in the row marked totals at the bottom of the Coding Grid under the appropriate attachment style. Once the whole set of nine stories is totaled in this way, the four resulting totals are summed, and this sum is then divided in turn into each of the attachment style totals. The result of this calculation is recorded next to the appropriate attachment style total and is the proportional score for that attachment style and indicates the influence of that specific attachment style in a participant's set of CEAT responses.

(c) An overall pattern of quality of attachment is then noted, indicating the relative emphasis of the four styles of attachment emerging across the individual's set of stories.

The Summary Sheet provides space, on pages one and two (pages 80 and 81 below), to record information pertinent to the four styles of attachment across each of the nine stories. The Sections of the Summary Sheet correspond to the sections of the Coding Guide. It was assumed that any particular story may include indicators of more than one of the four attachment styles, demonstrating the potential complexity of IWMs of attachment as highlighted in Chapters 1 and 2. Specific information related

to the various interactions in the stories is preserved on the Summary Sheet, facilitating a qualitative assessment of various aspects of a participant's profile.

On the last page of the Summary Sheet (page 83 above) a Quantitative Coding Grid provides space for calculating the participant's quality of attachment pattern, as described above. A space is provided beneath the Grid for summarizing the pattern of attachment quality revealed by coding. This is recorded by listing the styles of attachment in order of their predominance across all 9 stories. The most dominant style of attachment and all subsidiary styles are identified. An example of coding using the Summary Sheet is displayed as Appendix K.

The last section of the Summary Sheet provides space for a Qualitative Coding of the participant's responses drawing out aspects of the stories that give insight into the experience of attachment that was revealed in the responses.

### **5.3.6 Step 6: Production of Coding Manual**

The Coding Manual was then produced, to aid the user of the CEAT in administering the technique. It sets out the rules for coding and elucidates the process of scoring and interpretation of the CEAT scores. The Coding Manual (presented as Appendix I) should be considered to be still in draft form, as further refinement is desirable. Nevertheless, the Manual in its present form was able to be used easily in the Pilot Phase of the study, the subject of the next chapter.

## **CHAPTER 6**

### **PILOT PHASE: RESULTS**

This chapter reports the findings of the Pilot Phase, comprising a preliminary validation test of the CEAT. Sampling is described first. Next, an assessment of the internal consistency of the CEAT is reported. This is followed by the findings concerning the hypotheses involving comparisons on security of attachment between the non-clinical and the clinical groups, and within the non-clinical group.

The chapter moves on to demonstrate aspects of the quality of responses elicited by the technique in terms of the complex patterns of attachment experienced by the participants, and in terms of the IWMs possibly underlying these patterns. This latter Section presents briefly a qualitative description of the distribution of attachment styles across the non-clinical and clinical groups, trends in responses to the CEAT related to age, gender, and also the most commonly occurring attachment patterns. Also presented are findings regarding the effect of including the measure of coherence and the observed differences in participant responses to Stimulus Picture Card 3. At the end of the chapter, reference is made to a qualitative analysis of story features further detailing narrative responses associated with various styles of experience of attachment, although this material is included in the thesis in Appendix form only.

## **6.1 Characteristics of the clinical and non-clinical Pilot Phase samples**

Consistent with the recruitment plan outlined in Chapter 4, Sections 4.5.1.1 and 4.5.1.2 a non-clinical and a clinical sample of participants were recruited.

The clinical sample comprised of 10 boys who attended the Larmenier Child and Family Centre, who all met the criteria for participation set down in Chapter 4, in Section 4.2.2.2. Participants were from Grade 1 ( $n=4$ ), Grade 3 ( $n=4$ ), and Grade 5 ( $n=2$ ). These children had received a variety of diagnoses relating to symptoms of anxiety, depression, hyperactivity, and general behaviour problems.

The non-clinical sample of 40 participants comprised 20 girls and 20 boys who attended Catholic and State Primary Schools in the western suburbs of Melbourne. They all met the criteria for participation set out in Chapter 4, Section 4.2.2.1. Participants in this group were from Grade 1 ( $n=14$ ), Grade 3 ( $n=13$ ), and Grade 5 ( $n=13$ ). As noted in Chapter 4, Section 4.7.1, 10 boys and 10 girls drawn from the pool of 40 non-clinical participants were matched as closely as possible with the group of 10 clinical participants, on the variables of age, family income, family intactness and birth order. Table 4 below presents the details of the matched groups on these variables.

Table 4

*Details of Clinical and Two Non-Clinical Groups*

	Non-Clinical Boys	Non-Clinical Girls	Clinical Boys
Mean Age	6.3 yrs ( <i>n</i> =4)/.47	6.5 yrs ( <i>n</i> =4)/.58	6.7yrs ( <i>n</i> =4)/.44
and SD for	9.5 yrs ( <i>n</i> =3)/.50	9.6 yrs ( <i>n</i> =3)/.58	9.7 yrs ( <i>n</i> =3)/.36
three Grade	11.6 yrs ( <i>n</i> =3)/.58	11.4 yrs ( <i>n</i> =3)/.51	11.8 yrs ( <i>n</i> =3)/.29
Levels			
Average	\$44,000	\$51,000	\$40,000
Family	SD \$27,508	SD \$24,383	SD \$22,828
Income and			
SD across			
Grade			
Levels			
Divorced	6 Divorced/4 Intact	7 Divorced/3 Intact	6 Divorced/4 Intact
vs. Intact			
Family			
Birth Order	3 Eldest	3 Eldest	2 Eldest
	6 Youngest	6 Youngest	7 Youngest
	1 Only Child	1 Only Child	1 Only Child

When the three groups are considered together the mean age of the, Grade 1 participants was 6.5 years, the Grade 3 mean age was 9.6 years and the Grade 5 mean age was 11.6 years. While matching on the variables of interest was not exact, it was deemed to be adequate.

## 6.2 Internal consistency of the CEAT

The internal consistency of the CEAT was assessed using repeated Sign Tests to determine each individual CEAT stimulus card's ability to be equally likely to produce a story that was judged to belong in each of the four attachment styles. Each story an individual told received one score (the raw score) for each of the four attachment styles. The raw scores reflected the number of markers of each attachment

style identified in the story. The four raw scores were then normed by converting them into percentages, by first summing the four raw scores and then dividing this sum into each of the four raw scores. Finally, the proportions of responses each individual produced, in the four attachment styles, for each picture, was calculated as the overall proportion of all the stories collected in the total sample.

When the individual's proportional score was higher or lower than the overall proportional score, a plus or minus was recorded. Then all the pluses for each category across all the participant's responses were summed. Finally the pluses for each category for each participant in the whole sample were summed, and these totals were compared using the critical values associated with the Sign Test (totals less than 5 or more than 28).

Only the responses given for Picture 3 fell outside this range. Only two participants gave a disorganized response for Picture 3. This was a significantly lower rate of disorganized responses than was found for all the other pictures. The discrepancy of 2 from the higher number of 15 expected responses was 13. This discrepancy was significant at .05, when the Bonferroni correction for the Sign Test was calculated. When all data related to Picture 3 were removed, and the analysis was repeated using the same procedure, none of the response rates for the remaining pictures differed significantly from what was expected. This demonstrated a satisfactory level of internal consistency. All subsequent comparisons were made using only scores generated by participants for this final set of eight pictures, excluding data for Picture 3.

### **6.3 Comparison of three groups on security of attachment**

As explained in Section 3.4 of Chapter 3 above, in order to test the ability of the CEAT to detect a difference between secure and insecure attachment, it was decided to focus only on security of attachment as it is defined by the CEAT and to compare two groups who could logically be expected to differ on security of attachment.

To test the hypotheses that there would be a significant difference between the non-clinical group and the clinical group on the CEAT security of attachment, and no difference between the non-clinical boys and girls on security of attachment, an ANOVA was calculated for the three groups. Table 5 presents the means and standard deviations of the three groups' proportional CEAT scores for security of attachment, namely for the non-clinical group of boys ( $n=10$ ), the non-clinical group of girls ( $n=10$ ) and the clinical group ( $n=10$ ), as well as the mean and standard deviation for the groups combined. The effect size needed for a significant difference in the means of the two groups would have to be greater than 0.16 approximately, for this size of sample.

Table 5

*Means and Standard Deviations for the Three Groups Proportional CEAT Security of Attachment Scores*

Group	Means	Standard Deviations
Non-clinical Boys	.36	(.24)
Non-clinical Girls	.47	(.29)
Clinical Boys	.13	(.08)
Combined Groups	.32	(.26)

The ANOVA Identified a main effect for the group variable, indicating a significant difference among the mean security of attachment scores of the three groups, with  $F(2, 27) = 5.84, p < .01, \eta^2 = .30$ . In order to determine which groups differed significantly, planned contrasts were performed. Once the Bonferoni correction was calculated in respect to this analysis, it emerged that there was no significant difference, between the non-clinical boys' mean security of attachment scores and those of the non-clinical girls and clinical boys, with  $t(15.26) = 0.67, p = 0.51$ . It also emerged that the mean security scores of the non-clinical girls contrasted with those of the combined clinical and non-clinical boys groups, with  $t(12.52) = 2.21, p = .05$ , were not significantly different.

However, the contrast between the clinical boys' mean security of attachment scores and those of the combined non-clinical girls and boys groups, revealed that the clinical boys group manifested significantly lower mean security of attachment scores than the non-clinical boys and girls, with  $t(23.25) = -4.30, p = .003$ . The relevant means and standard deviations are presented in Table 6 below.

Table 6

*Attachment Security Means and Standard Deviations for the Clinical and Non-Clinical Groups*

Group	Means	Standard Deviations
Non-clinical (boys and girls)	.41	.26
Clinical (boys)	.13	.08

These analyses indicated, as hypothesized, that the non-clinical group displayed significantly higher scores of security of attachment than did the clinical group.

#### **6.4 Findings relating to dominant attachment styles**

##### **6.4.1 Distribution across the clinical and non-clinical groups**

Coding of the CEAT data identified a dominant attachment style expressed across the individuals' set of stories, as well as an overall pattern of the emphasis of secure, avoidant, anxious and disorganized attachment styles. Table 7 presents the dominant attachment styles for the clinical and the non-clinical groups. It shows, for each attachment style, the frequency of participants in each group with that attachment style as the dominant one, and the percentage of the group that that number represents.

Table 7

*Frequency and Percentage of Dominant Attachment Style for the Non-Clinical and Clinical Groups*

Dominant Attachment Style	Non-clinical Group <i>n</i> =20		Clinical Group <i>n</i> =10	
	F	%	F	%
Secure	11	55	0	00
Avoidant	3	15	7	70
Anxious	2	10	2	20
Disorganized	4	20	1	10

Table 7 reveals three notable trends. Firstly, among the non-clinical group, 55% evidenced a dominant style of secure attachment. In contrast, a dominant style of secure attachment emerged for none of the clinical group.

Secondly, for the clinical group, Table 7 indicates that 70% evidenced a dominant avoidant attachment style, and 20% anxious attachment style. Only 15% of the non-clinical group (just 3 participants) evidenced a dominant avoidant attachment style, and 10% a dominant anxious attachment style.

Thirdly, a dominant disorganized attachment style emerged for 20% of the non-clinical group, as compared to only 10% of the clinical group.

#### **6.4.2 Gender and age differences**

Differences in participant responses to the CEAT were observed in relation to gender, age and group membership. The distribution of dominant attachment styles for the non-clinical group boys and girls are set out in Table 8 below.

Table 8

*Frequency and Percentage of Dominant Attachment Styles Coded for Boys and Girls in the Non-Clinical Group*

Dominant Attachment Style	Girls n=10		Boys n=10	
	F	%	F	%
Secure	6	60	5	50
Avoidant	2	20	1	10
Anxious	1	10	1	10
Disorganized	1	10	3	30

Table 8 reveals that the girls in the non-clinical group had 10% more participants with a dominant secure attachment pattern than had the boys. The boys in the non-clinical group, however, included 20 % more participants with a dominant disorganized attachment style than the girls in the group had.

Table 9 below sets out the dominant attachment styles coded in the combined non-clinical and clinical groups, by grade level, illustrating the frequency and percentage of participants with each of the four dominant attachment styles. As reported in Section 6.1 above, the mean age of children in Grade 1 was 6.5 years, in 9.6 years in Grade 3, , and in Grade 5, 11.6 years.

Table 9

*Frequency and percentage of Dominant Attachment Pattern by Grade Level for Clinical and Non-Clinical Sample Combined*

Dominant Attachment Style	Grade 1 n=11		Grade 3 n=11		Grade 5 n=8	
	F	%	F	%	F	%
Secure	1	10	4	36	6	75
Avoidant	5	45	5	45	0	0
Anxious	3	27	0	0	1	12.5
Disorganized	2	18	2	18	1	12.5

The figures in Table 9 show that older participants provided a higher proportion of stories that were coded as representing dominant secure attachment rather than dominant avoidant, anxious or disorganized attachment.

On the other hand in the youngest group, 45% provided stories that were coded as dominantly avoidant rather than secure. At both Grade 1 and Grade 3 levels, the dominant avoidant style of attachment was the most common. The dominant anxious style of attachment was most evident at the Grade one level.

#### **6.5 Findings related to the most common patterns of attachment identified in combined sample**

The CEAT Summary Sheet calculations for each participant led to the emergence of a pattern of attachment styles based on a proportional score calculated for each of the four attachment styles.

Table 10 presents the frequency of the various attachment patterns revealed across the non-clinical and the clinical groups.

Table 10

*Frequency of Patterns of Attachment Observed in Non-Clinical and Clinical Groups*

Pattern of Attachment*	Non-Clinical Group <i>n</i> =20	Clinical Group <i>n</i> =10
S, Av, Ax, D	7	0
S, Ax, Av, D	3	0
S, D, Av, Ax	1	0
Av, S, Ax, D	3	3
Av, D, Ax, S	0	2
Av, D, S, Ax	0	2
Ax, Av, S, D	1	0
Ax, Av, D, S	0	1
Ax, D, Av, S	1	1
D, Av, Ax, S	2	1
D, Ax, Av, S	2	0

*\*The following initials are used for the various styles of attachment:*

*S=Secure, Av=Avoidant, Ax=Anxious, D=Disorganized*

Consideration of Table 10 reveals that 10 of the 16 possible patterns of attachment security occurred across the combined samples. The two most commonly emerging patterns are described below.

The *Secure, Avoidant, Anxious, Disorganized* pattern of attachment was the most commonly coded attachment pattern in the non-clinical group. Both males and females, and participants from all the grade levels received this code (*n*=1, Grade 1, *n*=3, Grade 3s, and *n*=3, Grade 5s). Inspection of the individual Summary Sheets revealed that the proportion of secure indicators represented in this pattern was strikingly strong. In all but one of the seven cases with this pattern of attachment, the secure attachment component of the pattern represented 50% or more of the combined proportional scores. In the other case the percentage was slightly less than this, but still significantly stronger than the scores for the other attachment styles.

In this pattern of attachment, avoidant indicators were often related to self-reliance, or stories that included only vague interactions. Given that the majority of these participants were nine years or older, the observed incidence of self-reliant indicators may reflect a developmentally appropriate autonomy. In general, profiles with this pattern of attachment had low anxious and disorganized scores.

The *Avoidant, Secure, Anxious, Disorganized* attachment pattern was the second most commonly occurring pattern, with 3 participants in the non-clinical group and 3 in the clinical group being coded with this pattern. In the clinical cases (all from Grade 3), the avoidant score was double the secure score, and in all but one of these cases the combined anxious and disorganized scores represented less than 10 % of the total score. Also noteworthy was that one of these cases had an elevated coherence score, which contributed considerably to the overall secure score. The strong difference between the avoidant and secure scores seen in the clinical cases was not evident in two of the non-clinical cases (a Grade 1 boy and a Grade 3 girl), in which these scores were nearly equal. As was the case in the clinical cases, the anxious and disorganized scores in the non-clinical cases represented on average less than 10 % of the total proportional score for the four attachment styles.

Secure content markers coded for participants with this pattern of attachment related to stories involving helpful attachment figures who were often peers, siblings or strangers rather than parents. Also interesting was that stories for stimulus cards including parental figures were most frequently interpreted by participants in this group as older siblings rather than parents.

## 6.6 Effect of scoring coherence

The proportional score for each of the attachment categories that make up the attachment pattern have two components, the story content score and the coherence of narrative score. In order to understand better the impact of including a measure of coherence in the CEAT Coding Scheme, a comparison of participants' story content scores and coherence of narrative scores was made for each of the attachment categories. The coherence of narrative scores of the non-clinical group predicted the dominant attachment style indicated by the story content score in 70% of cases. In the clinical group, the coherence of narrative scores predicted the dominant attachment style indicated by the story content scores in 60% of cases. A comparison of story content scores and coherence of narrative scores for participants evidencing a dominant secure attachment style revealed that in 100% of cases the dominant secure coherence of narrative score predicted a dominant secure story content score.

Table 11 presents by Grade level the average coherence scores for the clinical and non-clinical groups.

Table 11

---

*Average Coherence Score for Secure, Avoidant, Anxious, and Disorganized*

*Attachment by Group and Grade Level*

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Group	Quality of Attachment							
	Secure		Avoidant		Anxious		Disorganized	
	NC	C	NC	C	NC	C	NC	C
Grade 1	.21	.05	.35	.59	.27	.10	.20	.26
Grade 3	.55	.29	.28	.49	.05	.05	.11	.18
Grade 5	.74	.12	.16	.34	.07	.14	.03	.40

Table 11 reveals that the Grade 1 children in both the non-clinical and clinical groups had higher average avoidance scores on coherence of narrative, than the Grade 3 and Grade 5 participants in the non-clinical and clinical groups. Also, the Grade 1 participants in both the non-clinical and clinical groups had lower average secure scores on coherence of narrative than the Grade 3 and Grade 5 participants in both the non-clinical and clinical groups. These results may indicate that the use of the coherence measure with children under the age of 7 years may require adjustment.

In the non-clinical group the Grade 3 and Grade 5 participants had the highest average secure coherence of narrative scores. In general the non-clinical group had more secure scores on coherence of narrative than had the clinical group.

Also of note was the clinical group's average avoidant coherence of narrative scores being nearly double those of the non-clinical group.

## **6.7 Group, gender and age differences in responsiveness to the CEAT**

An assessment of participant responses to the CEAT was a part of the Pilot Phase's evaluation of the usefulness of the technique. This section first reports group differences and then age differences in the responsiveness of participants.

Participants at all grade levels in both the non-clinical and the clinical groups coped well with the activity, producing complete sets of 9 stories that were adequate for coding. It was noted that all the children in the two groups were impressed that the researcher wrote down their stories verbatim. Some, especially in the older group, deliberately slowed their delivery when they sensed the researcher was struggling to keep up.

The non-clinical group in general was eager to participate and found the activity enjoyable. Four participants even asked if they could come back the following week to do it again, expressing disappointment when told that it was not possible. In general the younger participants found it more challenging to remember to include all the parts of the story, they told shorter stories, they were more easily distracted in the process of the storytelling and some (especially in the clinical group) found it hard to sit still as the storytelling progressed. The clinical group while also initially enthusiastic and cooperative found the activity more challenging. This was especially true for the participants who suffered with hyperactivity and found it quite difficult to sit still and concentrate on the task. These participants needed more encouragement to complete their nine stories than did the other participants in the non-clinical group.

The above differences in responsiveness may have contributed to the observed differences in the average length of the stories told by the non-clinical and clinical groups and by the older and younger groups. The average words per story for the non-clinical and clinical groups are set out by grade level in Table 12 below.

Table 12

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*Word Averages for the Clinical and Non-Clinical Groups by Grade Levels.*

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	Clinical Group (n=10)	Non-clinical Group (n=20)
Grade 1	75	118
Grade 3	94	137
Grade 5	122	188

Table 12 shows that the tendency for the clinical group to tell shorter stories was consistent across all three age groups. However, in both the non-clinical and the clinical groups, the older children told longer and more detailed stories. In addition,

younger participants had more difficulty in remembering to include all the parts of the story, and so had to be prompted more frequently.

In general, the children in both the non-clinical and the clinical groups identified easily with the stimulus cards and a number commented on them in a positive and admiring way. Three of the drawings included shadow figures, which raised questions for a number of the children as to who or what these figures represented. From perusing the stories participants composed in response to these stimulus cards, it was noted that a number of the responses contained disorganized aspects that appeared to ignore normal bounds of reality, such as the shadow being a living statue or a ghost, or the child's own shadow which was being friendly and communicating with the child. This was observed even in relation to responses of participants with a dominant secure attachment style.

## **6.8 Findings related to stimulus card three**

Stimulus card 3 is the only picture indicating a peer interaction. As noted earlier in Section 6.1 above regarding the internal consistency of the CEAT, both the non-clinical and clinical groups' responses to this cards produced stories that were less likely to evidence a disorganized attachment style, and more likely to indicate a secure attachment style than the participants' responses to the other 8 CEAT stimulus cards. The majority of the participants in both groups identified the two children depicted as friends or siblings. In both the non-clinical and clinical stories, interactions portrayed were coded as more reality-based. Some of the stories involved bullies, and the two characters were frequently seen as uniting to confront the bully or to get help. When distress was included in these stories, the distressed character

usually received help, and, consequently, stories told for this stimulus card were frequently coded as more secure than were stories for the 8 other stimulus cards. This difference was noted in responses of both groups.

### **6.9 Qualitative analysis of stories in relation to patterns of attachment**

As part of a qualitative analysis of the stories associated with patterns of attachment, some stories which were representative of the four dominant attachment styles were collected into a document to give a flavour of the kind of responses that are indicative of secure, avoidant, anxious and disorganized attachment as coded by the CEAT Coding Scheme. These stories and a report of the most common themes of responses to the CEAT stimulus cards are presented as Appendices L and M respectively.

### **6.10 Emergent face and content validity of the CEAT**

It was considered, that the face and content validity of the CEAT, as a technique designed to elicit the experience of attachment in some complexity, was enhanced by revision of the technique at the conclusion of the Design Phase, when stimulus cards that appeared to elicit standard responses were eliminated and alterations to several of the other drawings made them more ambiguous.

Given the present study's establishment of convincing face validity, content validity, and the establishment of concurrent validity by "known groups" method, for the CEAT, there is ample evidence to justify more comprehensive validation research in relation to the technique.

Another factor considered to enhance the CEAT's face and content validity was related to the inspection and exploration of the data from the Pilot Phase. This revealed varied stories of considerable complexity, which through the application of the Coding Scheme, yielded complex patterns of attachment styles and rich qualitative comments being included on the Summary Sheets of individual participants.

## **CHAPTER 7**

### **DISCUSSION OF THE RESULTS AND IMPLICATIONS OF THE RESEARCH**

This chapter begins by considering the strengths and limitations of the study, and then moves on to discuss the results of the Design Phase and the Pilot Phase of the study in an interpretive way. Next, the effectiveness of the CEAT technique is discussed in relation to its usefulness in eliciting experience of attachment in middle childhood by identifying IWM patterns of attachment. Finally, implications of the study are drawn out concerning attachment theory, clinical practice and research in middle childhood. The chapter then presents a conclusion.

#### **7.1 Strengths and limitations of the study**

##### **7.1.1 Strengths of the study**

A number of strengths related to the methodology of the study were identified concerning the overall design of the research, including the development of the technique, and aspects of the sampling.

###### **7.1.1.1 Overall design of the study**

The emphasis in the design of the research on having the CEAT technique grounded in attachment theory and empirical findings was a clear strength of the

study. The comprehensive investigation of other techniques of attachment assessment and empirical findings provided a strong base of knowledge to draw on in the creation of both the technique and the Coding Scheme. Rather than restricting the new technique to mere imitation of other techniques, it inspired a different approach. This was further strengthened by the inclusion in the study of an extended Design Phase. This allowed sufficient time for the design and refinement of the technique without the necessity for organizing a preliminary evaluation of its ability to discern a difference on security of attachment between two groups that could be expected to differ.

A lack of refinement in coding has been cited as a difficulty with many of the techniques available for middle childhood (Solomon & George, 1999). The Design Phase strengthened the development of the Coding Scheme by permitting it to emerge from a combination of exposure to the trial data, simultaneously with a review of literature on assessment of attachment. This contributed directly to the method of coding developed being unique to the technique rather than a product of a purely theoretical exercise, or the adoption of a coding method that had been designed for another technique.

Further, the inclusion of a Design Phase with a trial of the technique created an opportunity for the researcher to practise administering the technique, thereby gaining skill in administering and coding the CEAT prior to commencement of the Pilot Phase. This familiarity with administration and coding also probably enabled the researcher, in the collection of the Pilot Phase data, to give more attention to the building of rapport with the participants prior to administration, thus contributing positively to the eager participation of the children and to the high quality of the data collected.

### **7.1.1.2 Aspects of sampling**

Techniques available for research in middle childhood have been criticized because they have all been developed using normative populations. The inclusion of a clinical group in the study was an obvious strength. It afforded both an early indication of the CEAT's clinical usefulness, and an opportunity to make refinements to the technique that could make it more useful in a clinical context.

Another aspect of the sample that added strength to the study was the matching of non-clinical participants with the clinical participants. A number of factors have been associated with attachment insecurity, as noted in Chapter 2, Section 2.3. It was decided to match participants from the larger pool of non-clinical participants with participants in the clinical sample. Matching was done across the sample as closely as possible, as a way of controlling for the influence of factors previously associated with attachment insecurity. This added strength to the findings of group differences in security of attachment being related to psychopathology rather than for example socio-economic or family structure.

### **7.1.2 Limitations of the study**

A number of limitations were identified in relation to the Pilot Phase of the study. They also concern sampling and the design of the study.

### **7.1.2.1 Aspects of sampling**

While the inclusion of the clinical sample is considered a strength of the study, the fact that all of its participants were male is considered a limitation. Given the differences in participation by girls compared with boys in the non-clinical sample, it is possible that there would also be differences found between clinical samples of girls and boys. It is therefore necessary to be cautious about generalizing the findings of the study. Further, given the small size of the overall sample and the limitations of power associated with this, it is necessary to be careful in generalizing the findings of this study to wider populations.

Also related to sampling is the limitation posed by these samples being predominantly middle-classed and English-speaking. Although the relative homogeneity of the samples made it possible to draw conclusions about these samples more clearly than otherwise, strengthening internal validity, it certainly limited generalizability and external validity.

### **7.1.2.2 Aspects of design**

Another obvious factor limiting the study was the lack of comparison of results with those of another, validated measure of attachment in middle childhood, or of a measure of known correlates of attachment security. While several existing measures have shown promise as valid measures of attachment in middle childhood none has become universally accepted in the way that the Adult Attachment Interview and the Strange Situation procedure have for adult and infant assessment. As a result

direct testing of the validity of the CEAT was not possible. Further, none of the existing measures cover the age group 6 to 12 years as does the CEAT.

Another possible confounding variable may impact upon the study, as no data were collected in relation to the Clinical sample's prior exposure to other projective techniques. While it is possible that such prior experience (for example of the Children's Apperception Test) may have influenced the Clinical participants' responses, this was not controlled for. On the other hand, as storytelling is a process that was familiar to all primary school aged children in both the Clinical and Non-Clinical samples, prior experience with story telling techniques would not be expected to have been a factor that would contribute to the differences between the two groups.

This means that even though the CEAT did discriminate between two groups that could be expected to differ on security of attachment, more research is needed to determine whether this finding was indeed reflective of participants' IWMs of attachment, or if CEAT scores represent a measure of some other, related constructs.

Findings related to the coherence of narrative measure should also probably be considered cautiously, given the observed differences in assessment of the younger children in the group. As no measure of intellectual development was included in the design of the study, it is not possible to determine whether or not potential differences in cognitive or even in maturational verbal IQ had an influence on participants' coherence of narrative scores, which formed part of the coding of attachment styles. Results of the inclusion of the assessment of coherence are discussed further in Section 7.2.2.6 below.

## **7.2 Interpretative discussion of the results**

The present study attempted to address the identified gap in the assessment of attachment quality of IWMs in middle childhood through the creation of a new technique. The discussion of findings follows the two part design of the study, beginning with the Design Phase and then considering the Pilot Phase. It takes account of the strengths and limitations of the research as discussed above.

### **7.2.1 Discussion of the Design Phase of the study**

The overall aim of the Design Phase of the study was the development of a new projective technique for the assessment of IWMs of attachment in middle childhood that could be tested in the Pilot Phase of the study.

An initial trial of the technique in the Design Phase tested the effectiveness of the drawings and the administration technique and provided data for the development of the Coding Scheme. Findings related to this trial led directly to a refinement of the stimulus drawings with 3 drawings being dropped, 2 new drawings being introduced and 3 other drawings being made more ambiguous. The need to make some drawings more ambiguous related to a preponderance of participants all producing very similar stories about these drawings. This indicated that the scene depicted left little to the imagination of the participants, such that these drawings were working in much the same way as a structured question or a dictated situation like those used in the doll play and semi-projective techniques (Bretherton et al., 1990; George & Solomon, 1996; Green et al., 2000; Resnick, 1993, cited in Dwyer, 2005; Shouldice & Stenvenson-Hinde, 1992; Slough & Greenberg, 1990) reviewed earlier.

Underpinning the creation of the technique was the assumption that children's responses to the stimulus drawings would reveal something of their IWMs concerning experience of attachment, including ideas and expectations they had internalized about attachment relationships (Bretherton, 1985). Findings related to the initial testing of the appropriateness of the technique demonstrated, as Solomon & George (1999) noted, symbolic representation could be used to tap IWMs of attachment in middle childhood.

In line with the study's stated aim of challenging the rigid categorical model of attachment measurement by finding a way to capture the more complex nature of IWMs of attachment that could be expected in middle childhood, the Coding Scheme developed in the Design Phase offers greater flexibility than previously available in the assessment of quality of attachment. It does not rely on immediately placing the child in a discrete category or subcategory of attachment but instead relies on identification, of designated indicators of the secure, avoidant, anxious and disorganized styles of attachment, that have been defined across a number of dimensions related to dyadic interactions, safe haven behaviour and several properties of narrative discourse (or stories in this case), including coherence, empathy, defences and themes of the narrative, in the CEAT responses. This dimensional structuring of the quality of attachment indicators releases these indicators to point more accurately to various aspects of the interactions represented in the narrative. Thus CEAT coding potentially reveals a more complex and comprehensive assessment of IWMs encompassing attachment qualities that previously have not been thought to coexist.

The choice of a proportional representation (Dean, 1988) of the different styles of attachment represented in a participant's narrative means that coding yields a pattern of security of attachment or a hierarchy of attachment qualities rather than a

classification of attachment style. This proportional representation captures and preserves attachment relevant information that is usually lost in a categorical assessment, because it may not agree completely with the assigned attachment classification. More is said about this in Section 7.2.2.5, where patterning of attachment is discussed in relation to the Pilot Phase data analysis.

With the development of the Coding Guide, the Coding Manual and the Summary Sheet to facilitate implementation of the Coding Scheme, the work of the Design Phase was accomplished.

## **7.2.2 Discussion of the results of the Pilot Phase of the study**

### **7.2.2.1 Findings related to the internal consistency of the CEAT**

Internal consistency of the CEAT was satisfactory once the data for stimulus card 3 was excluded. This result supported the researcher's assumptions that firstly, a participant's responses to a series of stimulus cards would reflect an organized pattern of attachment qualities and secondly, that children with differently organized patterns of attachment would respond in different ways to the same stimulus cards. Consequently, the various stimulus cards should be equally likely to produce responses that were associated with each of the attachment styles. Once internal consistency of the CEAT was determined to be satisfactory, the results of the hypotheses of the Pilot Phase were tested. The implications of findings for stimulus card 3 are discussed below in Section 7.2.2.7.

### **7.2.2.2 Results related to the hypotheses of the Pilot Phase**

The aims of the Pilot Phase were to trial the CEAT and to include a clinical group of participants in this trial. Also it was intended to test in a preliminary way the ability of the CEAT detect a difference in attachment between two groups known to differ on security of attachment. While the result of comparisons between the non-clinical boys and non-clinical girls showed no significant difference in security of attachment as hypothesised, these results should be interpreted cautiously due to the small size of the sample and subsequent low power. The hypotheses that the CEAT would not detect a difference between the boys and the girls of the non-clinical group on security of attachment, and that the non-clinical group would have significantly higher proportional security of attachment scores on the CEAT than the clinical group, were both confirmed by the study. The difference in security of attachment between the clinical and non-clinical groups was quite significant, at  $p < .01$ .

Thus the CEAT technique could be seen to be sensitive enough to detect a difference in security of attachment between these two groups. Another possibility is that these results reflect some other difference between the two groups, such as differences in IQ or social competence. Still another possibility is that the CEAT assessment was impacted in some way by the psychopathology of the clinical participants. However, since it has only been in recent times that the interaction of psychopathology and attachment has begun to be investigated (Greenberg, 1999), it is difficult to say what aspects of psychopathology might be involved.

Since neither IQ or measures of social competence or measures of correlates of attachment were included in this study further research is needed to replicate the present results and to further investigate the validity of the CEAT.

### **7.2.2.3 Distribution of the attachment styles found in the non-clinical and the clinical groups**

The distribution of dominant attachment styles in the non-clinical group showed that the largest group of participants, 55%, had a dominant secure attachment style. This compares well with the average reported distribution, in normative samples, of secure attachment as representing at least 50% of the cases (Solomon & George, 1999).

The finding of higher incidences of dominant disorganized attachment (20%) in the non-clinical group compared to the clinical group (10%) was unexpected, given that disorganized attachment has been linked to psychopathology (Lyons-Ruth & Jacobvitz, 1999). Distributions of 14% to 24% of infants have been classified as disorganized in both middle class and low-socioeconomic non-clinical samples in North America (van IJzendoorn, Schengel, & Bakermans-Kranenberg, 1999, cited in Lyons-Ruth & Jacobvitz, 1999). This suggests that the 20% for the present non-clinical sample was consistent with previous research. However, the 10% incidence of disorganization in the clinical group seems low by comparison. The dominance of the avoidant attachment in the clinical group may in part be due to the higher incidence of avoidant coherence indicators in their responses. This may have moderated the disorganized indicators in the clinical group which had a higher incidence of a secondary coding of disorganized attachment (20%), compared to (10%) of participants in the non-clinical group.

High rates of avoidance have been related to aggression and early avoidance has been associated with later aggression (Greenberg, 1999). Participants in the clinical group had been placed in the Larmenier Child and Family Centre School

because of emotional and behavioural problems, many including aggressive behaviour in the classroom, and this may partly explain the high rate of dominant avoidant attachment style noted in this clinical group.

#### **7.2.2.4 Gender and age differences observed in the study**

No significant difference was revealed between the boys and girls of the non-clinical group when their scores for security of attachment were compared, where  $p > .10$ . Given the power for this small sample is quite low, there is a possibility that this finding could represent a Type II error, and so it is possible that there could be a real difference between males and females in the non-clinical group. Likewise, the frequency data explored in the findings with regard to patterns of attachment classifications observed in the samples, showed that girls in the non-clinical group were more likely to have a dominant secure attachment classification than the boys in the non-clinical group, and boys in the non-clinical group were more likely than the girls to have a dominant disorganized attachment classification. These findings hint that there may have been some differences on security of attachment between these two groups that might be detected in larger samples.

Simpson (1999) highlighted a paucity of reports of gender difference in attachment research in infants and young children. Likewise Mayseless, (2005) confirmed a lack of gender differences in early attachment research, but noted that several studies of children in middle childhood have reported girls as being more secure than boys, and boys as being more avoidant than girls (Granot & Mayseless, 2001; Kerns et al., 2000). Mayseless suggested that such findings may indicate that middle childhood is a time when gender differences in attachment begin to emerge.

Given the limited amount of attachment research in middle childhood, it is too early to conclude what underlies such differences. It is certainly possible that these findings reflect differing behaviour styles of boys and girls, related to development, or the impact of different cultural expectations of girls and boys or something else entirely. Given that gender differences in adult experience of attachment is also relatively little explored, further research is needed to clarify these factors at all stages of lifespan development.

Another possibility emerging in relation to the CEAT is that the trend toward a difference in security of attachment between the boys and girls in the non-clinical group is due to some aspect of the storytelling activity, entailed by the CEAT, which biases the outcome. Boys, as noted in Chapter 6, Section 6.8, consistently told shorter less detailed stories than the girls, and this may have contributed to some of the disparity. This brevity may in some cases have contributed to an elevation of the boy's avoidant coherence of narrative scores.

In the non-clinical Grade 1 sample, there was only one case of dominant secure attachment, compared with 4 cases in the Grade 3, and 6 cases in the Grade 5 samples. It is likely that this result may have been influenced by the coding of coherence and is discussed below in Section 7.2.2.6. Section 6.2 above indicated that younger participants told shorter stories and their avoidant coherence scores were higher. As the sample of children in this age group is comparatively small, further research would be needed to understand why so few participants in this group evidenced a dominant secure attachment score.

### 7.2.2.5 Findings related to patterning of attachment in the two groups

Unlike other assessment techniques, the CEAT aims to capture evidence of complex IWMs of attachment. The results clearly indicated co-existence of aspects of attachment such as security and avoidance that were not normally thought to coexist.

Of special interest were the two most frequently observed attachment patterns, the *Secure, Avoidant, Anxious, Disorganized* pattern and the *Avoidant, Secure, Anxious, Disorganized* pattern of attachment. In all but one case of the *Secure, Avoidant Anxious, Disorganized* pattern, participants' secure attachment style score was strikingly stronger than their avoidant attachment style score. Also, avoidant indicators coded in this group were most often related to indicators of self-reliance. It is possible that these indicators reflect developmentally appropriate autonomy that may be normally associated with the middle childhood experience of attachment, rather than indicating a high level of avoidant attachment. Clearly, coding in this area needs closer scrutiny.

The *Avoidant, Secure, Anxious, Disorganized* pattern of attachment, which was the next most common pattern of attachment identified, was represented equally in the clinical and non-clinical groups. In the clinical cases, there was a clear strong dominance of an avoidant IWM of attachment style, and the influence of the other attachment styles was quite a minimal influence on the pattern of attachment.

However in two of the non-clinical cases with an *Avoidant, Secure, Anxious, Disorganized* pattern of attachment, the influence of the avoidant and secure attachment styles was almost equal, while the anxious and disorganized attachment styles had a very minimal influence on the overall pattern of attachment. At present it

is unclear what this strong endorsement of two attachment styles means in terms of multiple IWMs, and warrants further investigation.

In both the non-clinical and clinical group, the coding of an *Avoidant, Secure, Anxious, Disorganized* pattern of attachment was associated with the peers, siblings or strangers rather than parental figures being identified as helpers in stories that included distress. This result is similar to Freeman's (1997, cited in Bretherton & Munholland, 1999) finding that dismissing (avoidantly attached) adolescents identified their principal support persons as self, friend, and siblings, rather than parents. Again, this suggests that the fine detail of indicators of avoidant attachment requires further study.

#### **7.2.2.6 Implications of inclusion of an assessment of coherence**

The CEAT included an assessment of coherence in order to give a more wide-ranging assessment of quality of attachment. The capacity to discuss past attachment experiences in a coherent and collaborative way is associated with adult attachment security and infant security, and the failure to give a coherent account of past attachment experience has been associated with insecure attachment in adults and infant insecurity (Hesse, 1999; Slade, 1999). As reported in Chapter 6, Section 6.6, this study revealed that a participant's ability to give a coherent story in response to CEAT stimulus cards correlated 100% with that participant also receiving a dominant secure proportional score for story content. This would seem to indicate that in this sample the coherence measure was indeed a good indicator of security of attachment.

Of the 11 Grade 1 participants in the combined non-clinical and clinical groups, only one had a dominant secure attachment pattern, while five participants

had dominant avoidant attachment patterns, with average avoidant coherence of narrative scores that were significantly higher than their average secure coherence of narrative scores. This finding is consistent with Green et al.'s (2000) report of a lack of secure narrative coherence, when assessing the coherence of the doll play of children under the age of 7 years. Several things may have contributed to this outcome. Firstly, in general the younger participants found it more challenging to remember to include all the parts of the story, they told shorter stories, they were more easily distracted in the process of the storytelling and some (especially in the clinical group) found it hard to sit still as the storytelling progressed. These behaviours may have contributed to their higher avoidant coherence of narrative scores. Secondly, the younger participants also told briefer stories and perhaps had had considerably less experience in telling stories than the older group. Green et al. noted that cognitive and neurological maturation may be implicated in the lower coherence scores found in children in younger age groups.

Higher average secure attachment coherence of narrative scores were observed in the stories of the Grade 3 and Grade 5 participants, which is consistent with the evidence presented by Steele and Steele (2005) that coherence improves with age especially towards the ages of 11 and 12 years.

The difficulties noted in relation to the use of the assessment of narrative coherence with the Grade 1 groups needs further investigation, and if found in a replication, may indicate a need to make adjustments to the coding of coherence in this younger age group.

### **7.2.2.7 Findings related to stimulus card 3 and peer interaction**

As noted earlier in Sections 6.2 and 6.8 above, regarding the internal consistency of the CEAT, both the non-clinical and clinical groups' responses to stimulus card 3 produced stories that differed in their dominant patterns of responses from those produced for the other 8 stimulus cards.

It is unclear why the children responded so differently to this drawing that depicts a peer interaction. Most interesting was the lack of stories coded as indicating a disorganized attachment style, as this suggests that interactions with peers may reflect more organized strategies than those involving parental figures. A number of explanations are possible.

Firstly, the different response could be related to some aspect of the stimulus drawing itself. For example, the outdoor setting may have helped to organize the children's projections in a less disorganized way due to positive associations with playing outdoors with a peer. Many of these stories did have to do with playing at a park or at school, however, they were not all portrayed as positive stories devoid of distress, as a number of the stories involved a child being bullied. It is possible that education campaigns in schools about dealing with bullying may have resulted in children projecting the expected scenario of asking for help from a friend or teacher in their stories.

Some stories included distress unrelated to bullying, and in these stories the distressed character also usually received help from friends, siblings or teachers. Considering that more secure responses came from both the non-clinical and clinical participants, it is possible and that because all the stories were collected in a school context they reflected something of the organizing effect of the school environment,

with its clear rules and requirement for appropriate interactions which might otherwise be missing in life outside school. Another possible explanation is that as Watson and Ecken (2003) maintain classroom interactions with peers and teachers in middle childhood stimulate the growth of alternative models of relationships which, while they are more consciously held and practiced, are enacted in peer interactions. In many of the stories, a distressed child was connected to help by the actions of a peer who got the teacher, or took the child to the sick bay. In middle childhood, when children are separated from parents for long periods, peers may serve attachment roles that connect a distressed child or friend or sibling to help.

What is clear is that the finding here involving peer interaction stories warrants further investigation, and appears to have important implications for attachment theory, especially concerning the ongoing development of attachment in relation to peer-age friends and, later, romantic figures.

### **7.3 Strengths and limitations of the technique**

As noted earlier, the study aimed to create a developmentally appropriate projective storytelling technique for the assessment of experience of attachment in middle childhood, which would not require laboratory conditions, expensive special equipment, or highly trained administrators and coders, and which would be suitable for use in research and clinical settings. The Pilot Phase enabled conclusions to be drawn concerning strengths related to practical aspects of the CEAT and the Coding Scheme, as well as limitations of the technique. These conclusions are now presented.

A clear strength of the CEAT technique was that it proved to be developmentally appropriate, as an overwhelming majority of the children enjoyed the

activity and participated eagerly. The youngest group of children (mean age 6.5 years) coped well with the activity although some found it quite challenging, they nevertheless all provided complete sets of stories. Even though their stories were briefer than those of the older participants, they were certainly adequate for coding. Older children also all produced complete sets of 9 stories which were adequate for coding. Although a few children in the clinical group suffered with hyperactivity, such that they found it a challenge to tell the number of stories required, and became quite restless toward the end of the activity, they nevertheless, provided complete sets of stories that were adequate for coding. Further, the technique proved to be a highly engaging activity for the children some of whom expressed a desire to do it again. This is a big advantage in middle childhood, where the skills and abilities of the children can vary quite markedly from the oldest to the youngest age groups.

A second strength of the CEAT was that, unlike laboratory and doll play techniques, it did not require expensive video equipment or audio-tape recorders but had the advantages of self report techniques, being quick to administer and easily transported from school to school for data collection. An added benefit was that, unlike the separation reunion procedures, the CEAT technique does not require the participation of a child's actual attachment figures.

Participants were clearly impressed with having the researcher write down their stories. Some asked if they could have a copy of their stories. Writing down the stories verbatim, which in the case of quite long stories was at first quite strenuous for the researcher, seemed to facilitate a growing sense of rapport between the participant and the researcher, and may have improved the quality of the data collected, as the children helped to ensure that everything they said was included. This was especially true of the older participants.

Another obvious strength of the CEAT technique involved aspects of the set of stimulus cards. With the exception of stimulus card 3, the ambiguous drawings stimulated a wide range of responses, while also proving capable of providing a basis for continuity in individual responses. Further, the participants identified easily with the drawings and found them engaging. After finishing the activity a number of children in both groups commented on the drawings in very positive ways, further emphasising their engagement with the technique. The use of multiple drawings strengthened the findings, as this provided participants with 9 opportunities to communicate something about their IWMs of attachment and the meaning and importance of these relationships in their lives. An additional strength of this technique is that, unlike forced choice techniques, the participants' responses do not have to conform to just one or two options, but are free to range across their IWMs of attachment relationships and still be coded in a meaningful way.

Several aspects of the Coding Scheme also seem to represent strengths of the technique. Firstly, the comprehensive investigation of attachment assessment techniques and research that undergirded the creation of the CEAT provided it with a strong grounding in attachment theory. This aspect of the technique is likely associated with the finding of the CEAT's ability to predict a difference in security of attachment between the clinical and non-clinical groups in the Pilot Phase of the study. However, it is also associated with the CEAT's unbinding of the various indicators of attachment from unitary attachment categories, allowing for a more complex and multifaceted perspective on attachment relationships. This, together with the proportional scoring component, allows for results that give an indication of the strength of influence of the various styles of attachment on the child's general attachment orientation, and reliance on multiple IWMs of attachment. This

information would be lost in a traditional application of a singular attachment category.

A further strength of the Coding Scheme is associated with the Summary Sheet, which not only facilitates an interval measurement of attachment styles revealing a pattern of attachment, but also preserves specifics about the various attachment interactions portrayed in the child's responses. This aspect may prove valuable in future investigations into relationship specific attachment information in middle childhood, where little is yet known about the development of attachment relationships. With this method, it is possible to note who was involved in an interaction, what it was about, and its outcome. The use of an exploratory approach to the trial data allowed it to influence and strengthen the design of the Coding Scheme by informing its structure, so that it is well suited to assessing the type of narratives produced in response to the CEAT.

A final strength of the Coding Scheme was the inclusion of an assessment of coherence of thinking, empathy and defences. The assessment of coherence particularly enhanced the coding of security of attachment, and so may have positively contributed to the predictive ability of the CEAT. The assessment of empathy and defences also offered opportunities to observe other aspects of attachment, and will likely provide valuable information and ideas for future research, as well as providing a rich source of information for use in the clinical setting.

Limitations of the technique found by the study entailed the use of the coherence assessment with children under the age of 7 years, and with three of the stimulus drawings. The higher rate of avoidant coherence scores identified in the Grade 1 sample, discussed above in Section 7.2.2.6, means that interpretation of the CEAT coherence measure should, until further research has clarified this issue, be

used with caution, especially with children under the age of approximately 7 years, in relation to scores associated with high levels of avoidant coherence markers.

The second limitation noted is associated with three of the drawings which have shadow figures in them. A number of children were troubled by these pictures and questioned the researcher about who or what they were, and it was observed that a number of children who scored highly on security of attachment nevertheless told stories that had disorganized aspects to one or more of these pictures. It may be that shadow figures present a level of ambiguity for participants in middle childhood which they are unable to integrate into more coherent storylines.

As the technique is still being refined, these two limitations are likely to be addressed in a future version of the CEAT. Until then, users of the technique need to take into account these limitations.

A final potential limitation is associated with the Coding Scheme. While the Coding Scheme does not require specific training to implement it, it does require a developed understanding of attachment theory and focused attention to learn its steps. This is true of all attachment assessment techniques, of course, as is evident in the summary of Key Research re Categories of Attachment presented as Appendix K.

#### **7.4 Usefulness of the technique in identifying IWM patterns of attachment**

Unlike other assessment techniques, the CEAT aims to elicit and capture evidence of various styles of attachment, and the results of the study indicated patterns of attachment that were not normally thought to coexist. Section 7.2.2.5 above discussed findings related to the CEAT's patterns of attachment. In general, the CEAT produced more complex multidimensional representations of attachment. Story

responses to the CEAT stimulus cards included a range of interactions with a number of different relationship partners. Analysis of this aspect of the responses could prove quite useful in exploring attachment in middle childhood and more specific examinations in clinical settings, but was beyond the scope of this study.

The patterns of attachment that resulted from coding are a melding of information about experience of various attachment relationships, and in all but a few cases represented the dominance of one attachment style, with lesser influence evident from the other attachment styles. It is possible that such patterns represent a more generalized IWM that dominated the individual's responses. However, in a few cases there was no clearly dominant attachment style identified, as the emphasis of two or more attachment styles were more equally coded. As noted earlier, it is possible that such patterns are evidence of two or more coexisting IWMs which may be more relationship or situation-specific.

Concerning the capacity to capture IWMs of security of attachment, given its demonstrated predictive ability, the CEAT is likely to prove a useful assessment tool. Further investigation is needed to determine more clearly the meaning of the various attachment patterns produced by the coding.

According to Kerns et al. (2005), attachment assessment tools must be conceptualized as assessing either a child's general attachment orientation or as assessing relationship-specific attachment. The CEAT's flexible Coding Scheme can be applied to focus on the child's general orientation to attachment relationships through the pattern of attachment coded, or alternatively, using a more qualitative approach to focus on interactions with specific attachment figures included in a child's stories.

## **7.5 Implications of the present research**

### **7.5.1 Implications for attachment theory**

So far, investigations into the period of middle childhood have been limited due to a lack of validated measures for the assessment of attachment in this age group. As a result, theories about the way attachment develops in middle childhood are scarce. In the history of the development of attachment theory, research and theory have progressed hand in hand, as new techniques of assessment have been developed. Given the rich data and elaborated attachment styles revealed by the CEAT coding, this technique may well be an effective tool for the generation of ideas related to attachment in middle childhood.

Although the present research, focused as it was upon devising and piloting a new assessment technique, was not aimed to refine theory, some interesting implications emerged that relate to the theory of the development of attachment IWMs across the lifespan.

Findings of this study have raised two particular theoretical issues of note. Firstly, the differences related to more secure attachment associated with the peer interactions projected for Stimulus card 3 present a possible insight into the use children this age make of peer relationships. The idea that peers might possibly serve as ‘facilitating attachment figures,’ that connect the child to other adults, who can provide help and comfort, is an interesting one and warrants further investigation. This role may be one that is unique to middle childhood. For a child who has an insecure attachment history such peer connections could be the beginning of an

experience related revision of an earlier insecure working model so that it comes to include more secure expectations in certain situations such as in a school environment. Similar subsequent experiences may then lead to an IWM transformation that becomes more generalized to other situations and relationships. Middle childhood may mark the beginning of peer attachments that flow on to become models for later more mature, deeper friendship and romantic attachments in adolescence and adulthood.

Another useful theoretical implication flows from the finding of less coherent IWMs of attachment associated with the stories of children in the Grade 1 sample. Green et al. (2000) also found difficulties associated with the assessment of coherence in this age group, with a higher incidence of disorganized coherence emerging. High coherence scores have been shown to be related to security of attachment using interview techniques similar to the Adult Attachment Interview with 10 and 11 year olds (Steele et al., 2005; Target et al., 2003). It is possible that the findings of a lack of this expected association in younger children indicates that coherence is influenced by maturity and that the period between infancy and 7 years of age is a critical time for its development, indicating interplay of cognitive and emotional development in internal life pertaining to attachment and relationships generally. This is not at all surprising in view of the cognitive control theory underpinnings proposed by Bowlby (1969) in his very first conceptualizations of attachment theory.

### **7.5.2 Implications for clinical mental health practice in middle childhood**

Attachment theory is making a substantial contribution to clinical practice with young children, helping both parents and children to internalize a secure base from

which to explore their difficulties (Greenberger, 1999; Slade, 1999). Validated attachment assessment tools for use in clinical settings have not been available to date for middle childhood, although presumably the drawing techniques of Kaplan and Main (1986) and Fury et al. (1997) might be adapted for such use. The present study aimed to design the CEAT as a clinically useful tool for use in mental health practice. The format and administration technique of the CEAT are familiar to clinicians through their use of the TAT (Thematic Apperception Test, Bellak & Abrams, 1997) and the coding technique is not overly complex.

The development of the CEAT has implications for clinical practice on several levels. It offers a tool for assessment of attachment in children aged 6-12 years of age that yield rich descriptive data associated with multifaceted patterns of attachment that can be used in a number of ways. Firstly, it can be used to understand the nature of the child's representations of attachment, thereby facilitating hypotheses that can then be explored in interviews with children and parents. Secondly, it can be used to stimulate discussion and reflection in therapy sessions and to inform the planning of therapeutic interventions that help a child find a secure base from which to explore the difficulties he or she is experiencing. Lastly, it could also be useful as a possible way of assessing the effectiveness of the interventions employed over a period of time.

Obviously the usefulness of this technique will need to be tested and refined in a clinical setting.

### **7.5.3 Implications for further research concerning attachment in middle childhood**

Kerns et al. (2005) noted that Crittenden (2000) presented a view of attachment that is contrary to that evident in most contemporary research, in that she expects that new attachment patterns will emerge from the four attachment classifications of infancy as children grow psychologically and develop more forms of security and insecurity in relationships. This view has not been held widely and the majority of assessment techniques, including those used in adulthood, still focus on the simple four-fold categorical classification that has been developed for infants. Kerns et al. (2005) questions how newly emerging attachment organizations such as those proposed by Crittenden will be able to be assessed if new techniques of assessment continue in this vein. It is suggested here that the CEAT, which has unbound the indicators of the various attachment categories, can offer a viable way of assessing attachment that captures and preserves information relevant to emerging IWMs of attachment.

Further validation of the CEAT seems warranted in the light of the findings of this study. As there are at present no commonly accepted valid measures of attachment in middle childhood, validation, as Liabe (2005) has pointed out this is likely to be complex. Due to the probable influence of cognitive development on coherence, a validation study should include, measures of cognitive competence, including Verbal IQ. Convergent validity could be more rigorously further assessed by including an assessment of known correlates of attachment security such as self-esteem (Verchueren & Marcoen, 1999; Verschueren, Marcoen, & Schoefs, 1996), social competence (Thompson, 1999) and mother's attachment status (Fonagy, Steele,

& Steele, 1991). It is also important to determine the inter-coder reliability and test-retest reliability of the CEAT.

Further, in accord with testing concurrent and convergent validity, an indication of the CEAT's relation to other attachment measures such as the Security Scale (Kerns et al., 2000) and the Separation Anxiety Test (Resnick, 1993, cited in Dwyer, 2005) would be useful. However, it would also be highly desirable to attempt to confirm the findings of the present study through behavioural observations (Laible, 2005).

As part of a more fine-grained study of content validity, research on the discriminant validity of the individual stimulus cards would be useful in determining whether shortened versions of the technique could be viable. This would be helpful in relation to assessment with clinical groups that are affected by attention deficit disorders and with younger children who also have a shorter attention span. Obviously, the inclusion of all stimulus cards, with nine stories resulting, would be associated with increased sensitivity of the findings, but it would be valuable to know what minimum number of stories can be acceptable on statistical grounds.

While the CEAT Coding Scheme captures and preserves information-rich data that can enhance clinical work, further development and validation of the measure may result in an indication that some of the cards are more likely than others to reveal a participant's dominant attachment style. As a result, the presentation of a four or five card set of stimulus drawings may be possible. Likewise, further analysis of the Coding Scheme may reveal that particular indicators are more likely than others to be indicative of particular attachment styles, leading to a simpler Coding Scheme. Such development would likely make the CEAT an even more useful technique for research and clinical use.

In addition, further refinement of other aspects of the technique are advisable, particularly refinement of the Coding Scheme at several levels. Establishment of inter-rater reliability is clearly essential. At a different level, while coding facilitates a description of attachment style that incorporates the four attachment styles, it remains to be seen whether listing the four styles is clinically useful. For example, there may not be substantial difference between a Secure Anxious Avoidant Disorganized code and a Secure Anxious Disorganized Avoidant code. It may be clinically more useful to focus on the two most dominant styles of attachment identified. This question would need to be addressed in future research examination of the CEAT.

Some further research work would be useful to demonstrate the convergence of the different cards with “known groups” expected to differ with respect to the different content of the cards. Such work as this could begin by using the large pool of data collected in the present study. As forty non-clinical protocols were collected, from which twenty could be matched with the clinical group in the present study, a solid array of non-clinical data is available for exploration.

Further, research is also advisable to test the discriminant validity of the CEAT, in order to demonstrate that it is truly a measurement of attachment in particular, rather than of other established personality variables.

## **7.6 Conclusion**

In the light of an acknowledged scarcity of techniques for assessing attachment in middle childhood (Dwyer, 2005; Laible, 2005; Solomon & George, 1999; Weinfield, 2005), the present study set out to address this gap through the creation of a projective technique for this purpose. This technique, known as the

CEAT, emerged from the Design Phase and was trialled in a preliminary way in the Pilot Phase of the study.

The aims of the Design Phase, involving the creation of the CEAT, its initial testing, the creation of a Coding Scheme and the refinement of the technique, were achieved. The technique proved to be engaging and developmentally appropriate for children aged 6-12 years of age. It provided them with multiple opportunities to communicate something of their IWMs of attachment, which were then elucidated by the Coding Scheme in a way that captured the complexity of these representations by revealing multifaceted patterns of attachment.

The Pilot Phase aimed to test in a preliminary way the CEAT's concurrent/convergent validity through a "known groups" method, and found it was successful in detecting a difference in security of attachment between non-clinical and clinical groups in the study, on the basis of a demonstrated satisfactory level of internal consistency. The strong positive correlation between security of attachment as it is assessed by the CEAT and the participants' ability to tell a coherent story in response to the stimulus drawings was consistent with past research in adults (Hesse, 1999) and children (Green et al., 2000), and further strengthens the content validity of the CEAT's. Not only does research to further validate the CEAT clearly need urgent attention, but the data collected in the present research could be explored in more depth by other analytic studies, utilizing in addition to the data reported here, the 20 non-clinical sets of stories that were not included in the present study.

Compared to existing techniques the CEAT has many advantages and shows promise for use in both research and clinical contexts. Even in this preliminary trial, implications for attachment theory have emerged, and it can be expected that further studies using the CEAT may well contribute to the generation of theories relevant to

attachment at this developmental stage, as well as extending knowledge of the continuity and developmental change in the experience of attachment across the lifespan.

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## Design Phase Letter to Principal

### VICTORIA UNIVERSITY DEPARTMENT OF PSYCHOLOGY INVITATION TO PARTICIPATE IN A RESEARCH STUDY ON CHILDREN'S PERCEPTIONS OF RELATIONSHIPS

Dear Principal.

My name is Liz Westphal, I am a probationary Psychologist undertaking postgraduate studies in Clinical Psychology at Victoria University. Dr. Suzanne Dean, Associate Professor of the Department of Psychology, Victoria University, at the St. Albans Campus, is supervising my research project. I have recently received approval from the Department of Education, Employment and Training to conduct my research in primary schools in the Western Suburbs of Melbourne. I am writing to you seeking your approval to undertake research in your school.

#### Nature and Benefit of the Research

This project is a pilot study of a new projective technique known as the Children' Experience of Attachment Technique (CEAT). This story telling activity for children uses line drawings of children in various social situations with both family figures and peer figures. Children are asked to tell a story about each picture and to give information about the thoughts and feelings of the various characters depicted. This task usually takes about 30-40 minutes. It is hoped that these stories will show me something of the ideas children aged 5-11 years have about family and peer relationships.

At the Victoria University Psychology Clinic we frequently work in consultation with schools in the Western suburbs to assess and address the difficulties students are experiencing in their participation in education. Learning difficulties and behavioural problems are frequent reasons for these referrals. Sometimes these difficulties are related to organic problems. But in other cases stress and anxiety that result in part from difficulties in family and peer relationships are related to a student's problems or are serving to exacerbate their organic difficulties.

Research has established links between security of attachment and stress and achievement in education. However at present for children of primary school age there are no reliable techniques aside from extensive interviewing of children, and their parents and teachers for assessing a child's state of mind in regard to attachment. The development of the CEAT of which this research is a first step has the potential to make a quicker and hopefully more accurate assessment possible. Early assessment could result in timely interventions that have the capacity to help troubled children to participate more fully in the educational opportunities schools such as yours can offer.

#### Safeguards for Participants

Generally children find story telling tasks such as the CEAT very enjoyable. However should the CEAT pictures stir up unhappy attachment memories for a child he/she may become anxious during the activity. As a probationary Psychologist I would be very sensitive to this eventuality and would end the activity at once and work to resolve the child's distress. In the event that a child had a severe reaction to the activity I would contact their parent/guardian and if necessary make an appropriate referral.

If you choose to let the children in grades one, three, and five in your school participate in this study be assured that participation is completely voluntary and the informed consent of children and parent's/guardian's will be sought before participation is allowed.

All research information will be treated as confidential. At no time will any personal details be attached to the stories told by the children. A letter of the alphabet only will identify the source of

data. The key that connects these letter codes back to the children will be kept securely locked in a filing cabinet in my supervisor's office. Any portions of the stories that need to be recounted in my thesis or any other publication will contain no names or identifying material.

Please also be assured that your schools participation in this research would be completely voluntary and deciding not to participate would not disadvantage you or your school in any way. Also if you do decide to participate and then change your mind you are free to withdraw your permission at any time.

I look forward to discussing this opportunity with you in the near future in order to offer you more details about the study and how it would impact on students and or teachers.

If you have any questions or complaints regarding this request please do not hesitate to contact my supervisor or me (details below).

Thank you for your consideration.

Sincerely,

Elizabeth Westphal,  
10 Sheringham Dr.  
Werribee, 3030

Any queries about your participation in this project may be directed to the researcher **Elizabeth Westphal (phone (03) 9742-7743, Fax (03) 9741-7131** or her supervisor Dr. Suzanne Dean (phone (03) 9365-2397). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne, 8001 (telephone no. 03-9688 4710).

**Design Phase Invitation to Participate****VICTORIA UNIVERSITY**  
DEPARTMENT OF PSYCHOLOGY  
INVITATION TO PARTICIPATE IN A RESEARCH STUDY  
ON CHILDREN'S PERCEPTIONS OF RELATIONSHIPS

Dear Parent.

My name is Liz Westphal, I am a probationary Psychologist undertaking postgraduate studies in Clinical Psychology at Victoria University. Dr. Suzanne Dean, Associate Professor of the Department of Psychology, Victoria University, at the St. Albans Campus, is supervising my research project.

As part of my Doctoral studies I am undertaking research into children's ideas about relationships. I have developed a story telling activity for children that uses nine line drawings of children in various social situations with both family figures and peer figures. Children are asked to tell a story about each picture and identify the thoughts and feelings of the various characters depicted. This task usually takes about 30-40 minutes. It is hoped that these stories will show me something of the general ideas children aged 5-11 years have about family and peer relationships. This is the kind of task that most children enjoy very much. Should a child show any sign of distress during the task it would be stopped immediately, and after a brief reassuring chat, an alternative game can be chosen by the child.

The Principal of your child's school has given me permission to invite your child's participation in this study. If you choose to let your child participate in the study be assured that all research information will be treated as confidential. At no time will any personal details be attached to the stories told by your child. A letter of the alphabet only will identify the source of the stories. The key that connects these letter codes back to your child will be kept securely locked in a filing cabinet in my supervisor's office. Any portions of the story that need to be recounted in my thesis or any other publication will contain no names or identifying material that would allow the story to be linked to you or your child.

Please also be assured that participation in this research is completely voluntary and neither you nor you child will be disadvantaged in any way should you choose not to participate. Also should you decide to participate and then change your mind you are free to withdraw at anytime.

If you feel that you could allow your child to participate, please fill in both copies of the attached Consent Form. Once this is done, place one copy of the Consent Form along with your contact details in the enclosed envelope and return it to your child's teacher. When I receive your consent form I will ring to make sure that you are happy for your child to participant and to ask you for some basic background information. The story telling task with your child will be conducted during school hours at their school.

If you have any questions or complaints regarding participation please do not hesitate to contact me or my supervisor (details below).

Thank you for your consideration

Elizabeth Westphal

Any queries about your participation in this project may be directed to the researcher Elizabeth Westphal (phone (03) 9742-7743, Fax (03) 9741-7131 or her supervisor Dr. Suzanne Dean (phone (03) 9365-2397). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne 8001 (telephone no. 03-9688 4710)

## Consent Form

### VICTORIA UNIVERSITY DEPARTMENT OF PSYCHOLOGY CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

**Title of Research Project:** *The Development of a Projective Technique to Assess Children's Experience of Attachment in Middle Childhood: A Pilot Study*

**Parent/Guardian's Name** .....

**Child's Name**.....**Date of Birth**.....

#### Researchers Statement

I Elizabeth Westphal have fully explained the nature of this research project to the participant named above and to his Parent/Guardian, in the plain language Invitation to Participate that stated the aims and procedures of the study and any risks to participants.

I undertake to the participating child and his or her parent/guardian that the confidentiality and anonymity of the participant and his or her records will be preserved at all times.

**Signed:**.....**Date:**.....

#### CONSENT OF PARTICIPANT/GUARDIAN

The nature and purpose of the above project has been fully explained to me as I have read the Invitation to Participate, which includes relevant details. I understand the aims and procedures of the study and any risks, which are involved and I am willing for my child to participate on the condition that I can withdraw my consent at any time. I have spoken with my child and explained the procedures and he/she is also willing to participate.

**Parent/Guardian:**

**Signed:**.....**Date**.....

**Child:**.....

**Signed:**..... **Date**.....

#### Parent/Guardian Contact Details

**Address**.....

**Phone number**.....

Any queries about your participation in this project may be directed to the researcher Elizabeth Westphal (phone (03) 9742-7743, Fax (03) 9741-7131 or her supervisor Dr. Suzanne Dean (phone (03) 9365-2397). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne, 8001 (telephone no. 03-9688 4710).

<b>Letter to Principals of Catholic Schools</b>
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**VICTORIA UNIVERSITY**  
**DEPARTMENT OF PSYCHOLOGY**  
**INVITATION TO PARTICIPATE IN A RESEARCH STUDY**  
**ON CHILDREN'S PERCEPTIONS OF RELATIONSHIPS**

Dear Principal.

My name is Liz Westphal, I am a probationary Psychologist undertaking postgraduate studies in Clinical Psychology at Victoria University. Dr. Suzanne Dean, Associate Professor of the Department of Psychology, Victoria University, at the St. Albans Campus, is supervising my research project. I have recently received approval from the Catholic Education Department to conduct my research in primary schools in the Western Suburbs of Melbourne. I am writing to you seeking your approval to undertake this research in your school.

**Nature and Benefit of the Research**

This project is a pilot study of a new projective technique known as the Children' Experience of Attachment Technique (CEAT). This story telling activity for children uses line drawings of children in various social situations with both family figures and peer figures. Children are asked to tell a story about each picture and to give information about the thoughts and feelings of the various characters depicted. This task usually takes about 30-40 minutes. It is hoped that these stories will show me something of the ideas children aged 5-11 years have about family and peer relationships.

At the Victoria University Psychology Clinic we frequently work in consultation with schools in the Western suburbs to assess and address the difficulties students are experiencing in their participation in education. Learning difficulties and behavioural problems are frequent reasons for these referrals. Sometimes these difficulties are related to organic problems. But in other cases stress and anxiety that result in part from difficulties in family and peer relationships are related to a student's problems or are serving to exacerbate their organic difficulties.

Research has established links between security of attachment and stress and achievement in education. However at present for children of primary school age there are no reliable techniques aside from extensive interviewing of children, and their parents and teachers for assessing a child's state of mind in regard to attachment. The development of the CEAT of which this research is a first step has the potential to make a quicker and hopefully more accurate assessment possible. Early assessment could result in timely interventions that have the capacity to help troubled children to participate more fully in the educational opportunities schools such as yours can offer.

**Safeguards for Participants**

Generally children find story telling tasks such as the CEAT very enjoyable. However should the CEAT pictures stir up unhappy attachment memories for a child he/she may become anxious during the activity. As a probationary Psychologist I would be very sensitive to this eventuality and would end the activity at once and work to resolve the child's distress. In the event that a child had a severe reaction to the activity I would contact their parent/guardian and if necessary make an appropriate referral.

If you choose to let the children in grades one, three, and five in your school participate in this study be assured that participation is completely voluntary and the informed consent of children and parent/guardian's will be sought before participation is allowed.

All research information will be treated as confidential. At no time will any personal details be attached to the stories told by the children. A letter of the alphabet only will identify the source of

data. The key that connects these letter codes back to the children will be kept securely locked in a filing cabinet in my supervisor's office. Any portions of the stories that need to be recounted in my thesis or any other publication will contain no names or identifying material.

Please also be assured that your schools participation in this research would be completely voluntary and deciding not to participate would not disadvantage you or your school in any way. Also if you do decide to participate and then change your mind you are free to withdraw your permission at any time.

I look forward to discussing this opportunity with you in the near future in order to offer you more details about the study and how it would impact on students and or teachers.

If you have any questions or complaints regarding this request please do not hesitate to contact my supervisor or me (details below).

Thank you for your consideration.

Sincerely,

Elizabeth Westphal,  
10 Sheringham Dr.  
Werribee, 3030

Any queries about your participation in this project may be directed to the researcher **Elizabeth Westphal (phone (03) 9742-7743**, Fax (03) 9741-7131 or her supervisor Dr. Suzanne Dean (phone (03) 9365-2397). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne, 8001 (telephone no. 03-9688 4710).

**Pilot Phase  
Invitation to Participant in Research: Non-Clinical Group**

**VICTORIA UNIVERSITY  
DEPARTMENT OF PSYCHOLOGY  
INVITATION TO PARTICIPATE IN A RESEARCH STUDY  
ON THE PERCEPTIONS OF RELATIONSHIPS OF CHILDREN WHO HAVE NOT EXPERIENCED  
DEVELOPMENTAL DIFFICULTIES**

Dear Parent.

My name is Liz Westphal, I am a probationary Psychologist undertaking postgraduate studies in Clinical Psychology at Victoria University. Dr. Suzanne Dean, Associate Professor of the Department of Psychology, Victoria University, at the St. Albans Campus, is supervising my research project.

As part of my Doctoral studies I am undertaking research into children's ideas about relationships. I have developed a story telling activity for children that uses nine line drawings of children in various social situations with both family figures and peer figures. Children are asked to tell a story about each picture and identify the thoughts and feelings of the various characters depicted. This task usually takes about 30-40 minutes. My study is focused on the stories of **children who have not so far experienced any developmental difficulties (e.g. learning difficulties or behavioural or emotional problems).**

It is hoped that these stories will show me something of the general ideas children aged 5-11 years have about family and peer relationships. This is the kind of task that most children enjoy very much. Should a child show any sign of distress during the task it would be stopped immediately, and after a brief reassuring chat, an alternative game can be chosen by the child.

The Principal of your child's school has given me permission to invite your child's participation in this study. If you choose to let your child participate in the study be assured that all research information will be treated as confidential. At no time will any personal details be attached to the stories told by your child. A letter of the alphabet only will identify the source of the stories. The key that connects these letter codes back to your child will be kept securely locked in a filing cabinet in my supervisor's office. Any portions of the story that need to be recounted in my thesis or any other publication will contain no names or identifying material that would allow the story to be linked to you or your child.

Please also be assured that participation in this research is completely voluntary and neither you nor you child will be disadvantaged in any way should you choose not to participate. Also should you decide to participate and then change your mind you are free to withdraw anytime.

If you feel that you could allow your child to participate, please fill in both copies of the attached Consent Form. Once this is done, place one copy of the Consent Form along with your contact details in the enclosed envelope and return it to your child's teacher. When I receive your consent form I will ring to make sure that you are happy for your child to participant and to ask you for some basic background information. The story telling task with your child will be conducted during school hours at their school.

If you have any questions or complaints regarding participation please do not hesitate to contact me or my supervisor (details below).

Thank you for your consideration

Elizabeth Westphal

Any queries about your participation in this project may be directed to the researcher Elizabeth Westphal (phone (03) 9742-7743, Fax (03) 9741-7131 or her supervisor Dr. Suzanne Dean (phone (03) 9365-2397). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne 8001 (telephone no. 03-9688 4710).

**CEAT PARENT INTERVIEW**

Name & Address

Child's Name

Date of Birth.....

Country of Birth (child)

(Mother)

(Father)

Language Spoken at Home

Religious Affiliation

**Family Structure**

Apart from yourself who else is living at home with (Child's name)

**Partner/Spouse?**

**Siblings: Names and ages?**

*Grandparents*

*Uncle/Aunt*

*Other*

Has your child had any significant experiences of loss or separation? (*Briefly describe*)

Has your child had any developmental difficulties? E.G.

*Learning difficulties?*

*Behavioural difficulties?*

*Emotional difficulties?*

**Parents Occupations:**      Mother

Father

**Can you tell me the approximate Family Income?**

Is it Less than \$10,000	\$61,000 to \$70,000
\$11,000 to \$20,000	\$71,000 to \$80,000
\$21,000 to \$30,00	\$81,000 to \$90,000
\$31,000 to \$40,000	\$91,000 to \$100,000
\$41,000 to \$50,000	\$110,000 to \$150,00
\$51,000 to \$60,000	\$151,000 to \$200,00
	More than \$200,000

**Pilot Phase**  
**Invitation to Participate in Research: Clinical Group**

**VICTORIA UNIVERSITY**  
 DEPARTMENT OF PSYCHOLOGY  
 INVITATION TO PARTICIPATE IN A RESEARCH STUDY  
 ON THE PERCEPTIONS OF RELATIONSHIPS OF CHILDREN

Dear Parent.

My name is Liz Westphal, I am a probationary Psychologist undertaking postgraduate studies in Clinical Psychology at Victoria University. Dr. Suzanne Dean Associate Professor of the Department of Psychology, Victoria University is supervising my research project.

As part of my studies I am undertaking research into children's experience of and ideas about family. As part of this work I have developed a story telling activity for children that uses line drawings of children alone and in various social situations with both family figures and peer figures. Children are asked to tell a story about each picture and to give information about the thoughts and feelings of the various characters depicted. This task usually takes about 30-40 minutes. The present study is focused on surveying the stories of children. It is hoped that these stories will show me something of the ideas children aged 5-11 years have about family and peer relationships. Most children enjoy this task very much however should a child show any sign of not enjoying the activity would be stopped immediately, and after a brief reassuring chat, and an alternative game chosen by the child would be provided.

The Principal of your child's school has given me permission to invite your child's participation in this study. If you choose to let your child participate in this study be assured that the research information will be treated as confidential. At no time will any personal details be attached to the stories told by your child. A letter of the alphabet only will identify the source of the stories. The key that connects these letter codes back to your child will be kept securely locked in a filing cabinet in my supervisor's office. Any portions of the story that need to be recounted in my thesis or any other publication will contain no names or identifying material that would allow the story to be linked to you or your child.

Please also be assured that participation in this research is completely voluntary and neither you nor your child will be disadvantaged in any way should you choose not to participate. Also should you decide to participate and then change your mind you are free to withdraw permission at any time.

If you feel that your child is in the target group and that you could allow your child to participate, please fill in both copies of the attached Consent Form. Once this is done, retain one copy of the Consent Form for your own records and place the other copy along with your contact details in the attached envelope and return it to your child's classroom teacher as soon as possible. When I receive your consent form I will ring to confirm your willingness to participate and to ask you for some basic background information. The story telling activity will be conducted at your child's school during class hours. If you have any questions or complaints regarding participation in this research please do not hesitate to contact me or my supervisor (details below).

Thank you for your consideration  
 Sincerely,

Elizabeth Westphal

Any queries about your participation in this project may be directed to the researcher Elizabeth Westphal (phone (03) 9742-7743, Fax (03) 9741-7131 or her supervisor Dr. Suzanne Dean (phone 9822-3610). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne, 8001 (telephone no. 03-9688 4710). VICTORIA UNIVERSITY

**CEAT Stimulus Drawings**









DRAFT  
March 2007

CHILDREN'S EXPERIENCE OF ATTACHMENT  
TECHNIQUE (CEAT):  
a projective technique for middle childhood

MANUAL FOR ADMINISTRATION, CODING  
AND INTERPRETATION

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## CHAPTER 1

# DEVELOPMENT OF THE CHILDREN'S EXPERIENCE OF ATTACHMENT TECHNIQUE (CEAT)

## 1 BACKGROUND TO THE DEVELOPMENT OF THE CEAT

The Children's Experience of Attachment Technique (CEAT) has been developed to provide a tool for assessment of experience of attachment in middle childhood, for use in both research and clinical contexts.

Concerning the research arena, considerable empirical investigation of attachment in infancy, adulthood, and more recently adolescence has been reported, but relatively little investigation of the nature and development of attachment and its correlates in middle childhood has been conducted. This has partly been due to the paucity of validated techniques available. However, research on the experience of attachment in this stage of the life is essential, in order to expand knowledge and theory about the overall development of attachment behaviour systems and internalised working models of attachment across the lifespan.

In the clinical practice arena, while numerous well established general personality assessment techniques refer to interpersonal relationship variables, none specifically focus upon the child's experience of attachment. Some attachment research instruments for middle childhood can be applied in the clinical setting, but these focus upon specific aspects of attachment.

In devising the CEAT, it was intended to take into account a particularly broad version of the attachment theory framework. It was also intended to allow for relatively versatile use of the technique, from a brief summary of quality of attachment to a relatively full description of the child's experience of internal working models of attachment.

The criteria the CEAT was designed to meet, then, were that it:

- involve a developmentally appropriate and potentially enjoyable activity for middle childhood;
- reflect the complexity of multiple internal working models of attachment, while still differentiating the four major styles of attachment recognised by the field, namely secure, avoidant, anxious and disorganised attachment;
- take account of the experience of attachment in actual engagement during interpersonal interactions, as well as in separation and reunion phases of interactions;
- provide the child with several opportunities to express experience of attachment;
- include assessment both of the nature or content of internal working models of attachment and of the way the child reflects on these experiences and expresses them in a narrative discourse; and
- be easy to understand and use;

Initial design of the CEAT followed a broad-ranging review and critique of relevant assessment techniques reported so far in the literature. A first version was administered to a non-clinical community sample of 5 boys and 5 girls, evenly spread between 6 and 12 years of age. A Coding Scheme was progressively devised, based on a comprehensive analysis of research on attachment across the lifespan, as well as on the responses of the community sample of children. This trial led to several revisions of the technique and the Coding Scheme, to better meet the criteria above, resulting in the final version of the CEAT, as described in this Manual.

## 2 GENERAL DESCRIPTION OF THE CEAT

The CEAT is a projective technique facilitating assessment of the experience of attachment, designed for use with children aged 6 to 12 years, in both research and clinical contexts.

Pencil drawings of a child in a variety of interpersonal situations are presented one by one on 9 stimulus cards, and the child is asked to tell a story with a beginning, a middle and an end in respect of each of the cards. The child is also asked to comment on the thoughts and feelings of the characters in the stories, and the Administrator can ask probing questions to seek clarification or more detail. The Administrator records verbatim in writing each of the child's stories and elaborations on a standard Story Recording Sheet.

The experience of attachment revealed in each story narrative is then coded by using a standard Coding Scheme. The Coding Scheme employs a Coding Guide to determine indicators of quality of attachment styles emerging in the stories, and a Summary Sheet to record and analyse the child's stories and responsiveness to the activity. Patterns of attachment style are discerned in terms of the relative predominance of secure, avoidant, anxious and disorganised attachment.

Interpretation of the child's experience of attachment is possible at several levels of detail and complexity, depending on the purpose of administering the technique. At one end of the spectrum, attachment style scores are available for quantitative analysis; for example, a score on security of attachment is obtained. At the other end of the spectrum, rich qualitative material is available from the Summary Sheet, permitting in-depth description of the child's experience of attachment within interpersonal relationships.

## 3 EMPIRICAL TRIAL OF THE CEAT

Once the CEAT was revised, as outlined above, and face validity was considered to be relatively good, it was piloted with a non-clinical sample of 10 boys and 10 girls, and a clinical sample of 10 boys (Westphal, 2007). The clinical sample comprised children attending a specialised school for children experiencing emotional and behavioural difficulties, and each child was receiving weekly psychotherapy at the school. Children in the non-clinical sample were reported by parents as not having been identified with emotional or behavioural difficulties. Each sample covered Grades 1, 3 and 5; each group included children across the 6 to 12 years age range.

This empirical trial first demonstrated that the CEAT was developmentally appropriate for middle childhood. All children produced nine stories that could be coded, although some, as expected, found it challenging to concentrate and elaborate on their stories. Also, some younger children produced less coherent stories. Most children responded positively to the activity and appeared to find it stimulating and enjoyable, even where insecure attachment was being expressed.

Internal consistency was found to be acceptable for all but one stimulus card, Stimulus Card 3. The data relating to Stimulus Card 3 was therefore not included in further analyses.

Predictive validity was evaluated by comparing the security of attachment scores of the 10 clinical boys, the 10 non-clinical boys and the 10 non-clinical girls. It was found, as expected, that security of attachment as assessed by the CEAT did not differ between non-clinical boys and girls, and that the clinical group of boys evidenced significantly less secure attachment than the combined non-clinical group ( $p < .01$ ). This trial was considered to demonstrate good predictive validity.

## CHAPTER 2

### ADMINISTRATION GUIDELINES FOR THE CHILDREN'S EXPERIENCE OF ATTACHMENT TECHNIQUE (CEAT)

#### 1 INTRODUCING THE CEAT ACTIVITY

Firstly, the room that is used should be as free from distractions as possible. Seating in the room should allow the Administrator to be sitting along side of or just behind the child, so that he or she will not be likely to observe the Administrator's face and react so readily to the Administrator's non-verbal body language.

Secondly, it is essential that a good rapport be established with the child. The Administrator should spend time putting the child at ease perhaps by asking a couple of questions about school, friends or their favourite games or pets. It is important to let the child know that they will not be graded or evaluated in anyway as a result of their participation. The child is then invited to engage in the CEAT activity. The CEAT should be presented as a game rather than as a test. Ideally the examiner should endeavour to create a situation where the child agrees to participate in the activity and has a positive attitude toward his or her participation. It is clearly undesirable for the child to be opposed to the story telling process, or to be feeling anxious and/or aggressive in relation to their participation because this will have a negative impact on the data collected.

Finally, specific instructions are given about the activity, and any questions the child has are answered before beginning the CEAT. It is important to check the child's understanding of the instructions at intervals during the explanation otherwise he or she may not completely understand what is required and then corrections will be necessary and more instruction that could make the child feel dumb or inadequate. It is best for the Administrator to keep his or her communication with the child to a minimum once the child begins the activity.

The following narrative is presented as the way for the Administrator to introduce the activity to the child. The content outlined here must be covered, but precise wording may be expanded, depending on responses made by the child, and on any questions the child asks during this introduction.

Now we are going to play a story telling game. I am going to show you nine pictures. Please look at each of these pictures, one at a time (*show the back of the stimulus cards*) and after you have had a look at the picture please tell me a story about it. I will write your story down as you tell it. Think you understand? (*If the child has questions these should be answered before going on*).

Sometimes I may not be able to write as fast as you speak, and I may ask you to repeat some bits of the story, or to slow down, so I can write your story just the way you told it.

This is a game and there are no right or wrong answers, whatever story comes to your mind when you see the picture is fine. Your story should have a *beginning*, telling what happened before the picture; a *middle*, telling what is going on in the picture; and an *end*, telling what happens next. Do you have any questions? (*If the child has questions these should be answered before going on*).

When telling your story, please say what the characters in your story are thinking and feeling, as well as what they are doing. If you forget one part of the story or forget to

say the characters thoughts and feelings, don't worry. I will ask you about it at the end of your story.

Do you think you understand what to do? Do you have any questions? (*If the child has questions these should be answered before going on*).

I will hand you the pictures one at a time and you can take your time to look at it and make up your story. Remember I will be writing your story down.

Let's begin.

## 2 RECORDING THE STORY

The Administrator listens carefully to the child as the story is told and writes it down verbatim on the **Story Recording Sheet (Appendix I)**. In the margin of the Story Recording Sheet are a number of behavioural comments that can be used to keep a record of the child's behaviour during the activity.

When a child leaves out some part of the story, or has not included the characters' feelings or thoughts, these are queried after the child has finished his or her story. It is best for the Administrator to avoid saying "you forgot", and instead to ask questions in a curious tone:

I wonder what might happen next?

I wonder what ....eg. The mother was feeling when.....,?  
..... is thinking?

What was ..... thinking or feeling when .....?

These queries need to be noted in the text before the child's reply, preferably using the following abbreviations:

?F = feelings, ?T = thinking, ?Bf = What happened before the picture,

?Pic = What's happening in the picture?,

?End = How does the story end? or What happens after the picture?

So that all prompts and their abbreviations appear on the Story Recording Sheets, anything the Administrator says, including all questions or comments made during the activity, should also be included in brackets in the text:

- Indicate pauses with a dash - Several dashes would indicate a longer pause.
- Record all side remarks and extraneous activities of the child in brackets.
- Behavioural observations should be noted by making ticks in the margin of the Story Recording Sheet next to appropriate descriptors or by noting them in brackets in the text or by drawing a line from the spot in the text to the behavioural descriptor on the side of the page. Facial expressions and affective observations can also be noted in the text using the following symbols:

∩ = Frown or scowl, ∪ = Smile, + = Positive affect,

^ = Confusion or puzzlement, \* = Excitement

After all 9 stories have been written down, the Administrator can review them and ask for elaboration, if time and the child's attention span allows for this. It is best to be curious about the child's story choices, but careful not to ask suggestive or leading questions when querying stories. Things that may be queried include:

- Do any of the people in this story remind you of people in real life?
- How are they alike?
- If you could change your story what would you change?
- What made you think X was thinking or feeling Y?
- The story ended with X ..... how did you choose that ending?

Another technique that can be used is to ask the child what the sleepers shown in a couple of the pictures were dreaming about, for example:

- **I wonder what X might have been dreaming in this picture?**

When the child has completed the activity, the Administrator may let him or her know that the activity is finished, and ask for his or her reactions to the activity.

### **3 DEALING WITH DIFFICULTIES THAT MAY ARISE**

Children are likely to be at ease telling stories and to enjoy the CEAT activity, but some may find it difficult. Occasionally a child will endeavour to redirect the activity. Here, acknowledging the child's desired course of action and then once again encouraging him or her to participate may resolve the difficulty. The following examples demonstrate the kind of encouragement that may assist.

- If the child requests that the Administrator tells a story, the administrator can reply:  
**I know you want to hear me tell a story, but first I need to hear what you have to say about the pictures. After you finish, then I will tell you a story if you still want me to.**  
After the child's stories are told, if he or she still wants the Administrator to tell a story, this can be done.
- If the child tries to negotiate an alternative activity, the administrator can reply:  
**I know that you would rather play another game and we can do that but first we need to finish this one and then if you still want to we can play something else.**  
If the child still wants to do an alternative game when the CEAT is finished, the Administrator could initiate a drawing game, or let the child choose from some other alternatives.
- If the child tries to end the activity prematurely, the administrator can say:  
**I can hear that you are not too keen on doing this story telling activity. Can you please tell me about that?**  
Sometimes the child's reservations flow from worries about being negatively evaluated, especially when the administration of the CEAT is in a school context where story writing is regularly assessed. If this is the case, reassurance that there are no right or wrong answers and no grades given usually helps the child settle to the task.  
Sometimes administration may be eased to progress, by a suggestion like:  
**How about we try the first picture? Then we can talk about it again.**

Sometimes a child may be reserved and unable to tell the first story, and if adequate rapport has not developed before commencing the activity, the child may become distressed.

Where a child has had a difficult attachment history, the pictures could arouse painful memories that may distress the child. If the child wishes, he or she may share what is upsetting for him/her about the picture or story, and then see if he or she wants they can continue. If he/she does not wish to continue then the activity should be ceased. In such a case the child may be offered another age-appropriate activity that is not as emotionally arousing.

If a child becomes excessively anxious about the CEAT activity, administration should be terminated and the Administrator can give the child an opportunity to share his or her difficulties. If a child has a severe emotional reaction in response to the activity, the parent/guardian or another trusted person might wisely be involved, in order to help calm and/or comfort the child. In such a case the CEAT activity should not be resumed.

## CODING OF RESPONSES

### 1 OVERVIEW OF PROCEDURE

Once a set of stories has been collected using the **Story Recording Sheet (Appendix I)**, the responses contained in each story are ready to be coded.

Stories collected using audio or videotape need to be transcribed prior to coding. If the stories have been written down and are easily legible, transcription may not be necessary. However, an easily read copy of the story will facilitate the coding process, especially where protocols of a number of children are to be coded, as in a research study.

Each story is coded individually using the **Coding Guide (Appendix II)** and the **Summary Sheet (Appendix III)** in conjunction with each other.

The Coding Guide facilitates the coding of designated quality of attachment variables, comprising those relating to interpersonal dyadic interactions contained in a set of stories, and variables relating to the nature of the discourse of the child's story narratives. An individual's set of stories may vary greatly and are likely to contain different numbers and types of indicators of experience of attachment. All attachment indicators used for coding the CEAT are set out in the Coding Guide in separated columns for each of the four generally accepted categories or styles of attachment – Secure, Avoidant, Anxious and Disorganised attachment.

The Summary Sheet is used to record and collate the number and types of indicators of attachment that are identified in a story. It contains space for recording this information in a separate column for each of the nine stories in a set. The *Quantitative Coding Grid* on the last page of the Summary Sheet is used to summarize and quantify the attachment indicators for the whole set of stories. The Summary Sheet also facilitates interpretation of the material collected. This information is then used to determine a likely profile of a participant's *Pattern of Attachment*. The *Qualitative Comments* are a record of a participant's overall performance as well as unique observations about the participant's story content and delivery. The assessment of attachment facilitated by the CEAT finally yields an *Overall Pattern of Attachment*.

### 2 CODING THE QUALITY OF ATTACHMENT INDICATORS

The focus of coding is on the dyadic interactions represented in the story, the coherence of the stories and the emergent patterns of empathy, defences, as well as the themes in the narratives.

#### 2.1 Coding the Dyadic Interaction Variables

Using the **Coding Guide**, the coder first assesses each dyadic interaction in the story. This is accomplished by assessing the following six relationship variables:

- **Focus, Nature and Affective Tone of Interaction**
- **Nature of the Communication in Interaction**
- **Child's Role in Interaction**
- **Other's Role in Interaction**
- **Mode of Handling Problems and Conflict**
- **Child's Response to Distress and Mode of Assuagement**

In the Coding Guide each of these variables is defined in terms of each of the Secure, Avoidant, Anxious, and Disorganized Attachment styles, with the relevant indicators listed for each style. As the coder works through these variables for each story, indicators of the various attachment styles are identified and recorded in the appropriate corresponding row and column on the **Summary Sheet** by placing a tick in the appropriate cell.

Each story is different and there are no limitations on the number of dyadic relationships that can be included in a story, so the number of indicators discerned in one story can differ quite markedly from the number found in another story told by the same child.

If a story does not include an account of an interaction, this is noted in the story column. Also, if there is no distress or conflict present in the story, variables five and six are not assessed and this should be indicated on the Summary Sheet.

## 2.2 Coding Discourse Variables

Once all the dyadic relationship variables have been assessed the second step in coding the CEAT is to code the discourse variables of:

- **Coherence**
- **Empathy**
- **Defensive Processes**
- **Themes**

These four variables are discussed briefly below.

### *Coherence*

The coherence of the narrative is assessed by focusing on four aspects of a narrative, namely **Quality**, **Quantity**, **Relevance**, and **Delivery**. These aspects of coherence have previously been defined for each of the four attachment styles and the Coding Guide lists relevant indicators for each attachment style. As the coder assesses the coherence of each story, all indicators identified are recorded with ticks in the appropriate rows and columns on a participant's Summary Sheet.

### *Emergent Patterns of Empathy*

The emergent pattern of empathy is assessed by examining the thoughts and feelings of the characters as they are described in the story. Some children automatically include information about the thoughts and feelings of the characters in their story, while others need to be prompted to include it, and still others will try to avoid or ignore this request. Certain patterns of response are expected to indicate particular attachment styles and these are set out in the Coding Guide.

### *Defensive Processes*

Defensive processes suggested in a story are identified by reference to the relevant indicators listed in the Coding Guide as indicative of those that have been considered by the field to be associated with each of the four attachment styles.

### *Themes*

The coder records the theme of each story in the row labelled Themes on the Summary Sheet, in the column that corresponds to the number of the story being assessed. After all 9 stories are coded the themes across all the stories are assessed using the indicators shown in the Coding Guide for each of the four attachment styles. This is done by choosing the style of attachment that most closely accords with the type of themes found across all the stories. Where themes represent more than one attachment style, all styles are recorded in the themes section in the Qualitative Coding section on the third page of the Summary Sheet.

### 3 QUANTITATIVE CODING

#### 3.1 Raw Scores

When all indicators for the above variables have been determined for the whole set of 9 stories, and have been recorded on the Summary Sheet, Quantitative Coding can commence.

All indicators recorded for each attachment style are added up for each story, and entered in the appropriate cell on the **Quantitative Coding Grid** on the last page of the Summary Sheet. For example, if three Secure indicators are identified in story number one, the number 3 is entered in the **Secure** column in the row labelled **Story one**. This total constitutes the participant's **Raw Score** for Secure attachment on Story one. In most cases a story will contain indicators relating to more than one attachment style.

#### 3.2 Proportional Scores

The raw scores for each attachment style are then summed across all 9 stories, and entered in the Coding Grid. Each of these sums is then calculated as a proportion of the total number of raw scores across all attachment styles and all stories. This procedure results in a score for each attachment style that is a proportion of all indicators of attachment in the stories of the participating child.

In other words, where indicators of all four styles have emerged in the participants' stories, proportional scores are now available for Secure, Avoidant, Anxious and Disorganised attachment styles, indicating their relative predominance across the participant's 9 stories.

### 4 IDENTIFICATION OF EMERGENT PATTERN OF ATTACHMENT

The four styles of attachment can then be arranged in descending order of dominance in the CEAT stories, to reveal an emergent **Pattern of attachment styles**. The **Dominant style of attachment** is the attachment style listed first.

These are noted on the Summary Sheet.

### 5 QUALITATIVE COMMENTS

The section on the Summary Sheet headed **Qualitative Comments** relates to the set of 9 stories. Recorded here are observations gathered by reflecting on the information recorded on the rows with the same headings on the **Summary Sheet**. This analysis helps to provide some indication of the relationship of these elements to the assessment and can capture some of the situations and relationship interactions in which these were expressed in stories.

Under the heading of **Other Comments** the coder records additional information and observations about the participant's stories and the child's behaviour during the activity.

## CHAPTER 4

### INTERPRETATION OF RESPONSES

Once coding of the CEAT responses is complete, the results can be used to form an integrated picture of a respondent's experience of attachment, embracing views of self, other, and their expectations of the world, including sense of safety and personal efficacy in the world.

The purpose and context of administering the CEAT influences the level of interpretation of the material desired. In some research contexts, the designation of an overall pattern of attachment that allows participants to be grouped by quality of attachment categories may be all that is desired. In this case the overall pattern of attachment or the dominant model of attachment may be sufficient.

In clinical contexts, other layers of interpretation that give a richer description are likely to be desired. Clinically relevant material may include unconsciously held ideas about relationships, areas of weakness or strengths that can be built upon, the child's perception of the most significant persons in his or her life, and the child's expectations of the interpersonal world generally.

#### 1 INTERPRETATION OF THE EMERGENT PATTERN OF ATTACHMENT

The emergent pattern of attachment provides a basic indication of the quality of attachment prevailing within the internal working models within the experience of the child. Where more than one attachment style has emerged, it can be concluded that in this response to the CEAT, the child has demonstrated multiple models of attachment. The emergent pattern also reveals which style of attachment - whether secure, avoidant, anxious or disorganised – is dominant, and the order in which other styles have appeared to influence the child's CEAT stories.

However, how this pattern is experienced by the child can be discerned in further detail by interpretation of the more fine-grained information contained in the stories, as recorded on the Summary Sheet. Apart from taking account of particular stories that seemed to be unusual in some way among the whole set of stories, perhaps relating to particular relationships, it is possible to examine and interpret the story data according to the full range of variables appearing on the Summary Sheet.

#### 2 QUALITATIVE INTERPRETATION

The section of the Summary Sheet headed **Qualitative Comments** allows for images and information gleaned from various aspects of the story material to be drawn together under the following dimensions of experiences:

- Distress
- Conflict
- Coherence
- Empathy
- Defences

Comments entered here are the beginning of interpretation of the material and can yield valuable information in both a research and clinical situation. The coder can consider questions in relation to each of these dimensions of experience, as set out below.

## 2.1 Distress

Stories that include an account of distress (upset, crying, sadness, loneliness etc.) or that relate situations normally associated with distress are the focus here:

- Is a direct reference of distress made? How many of the 9 stories include reference to distressing situations or distressed affect?
- Who is distressed? What does the person who is distressed do? What would usually be expected in such a situation? Does this action or inaction relieve the distress or avoid the acknowledgement of the potential distress?
- What do these accounts of distress in interpersonal interactions reveal about the likely expectations the participant has about how distress is caused? Who can relieve distress?
- Do these accounts seem to be in touch with the known reality of the child?

## 2.3 Conflict

Conflict here refers to interpersonal conflict revealed rather than to internal conflicts. Considering the whole set of stories, note how often conflicts or potential conflicts appear in the content of the narratives.

- How did children in the story approach the conflict?
- Were avoidance, aggression, withdrawal, or submission evident? Was a pattern evident?
- Who were the parties in the conflict and who was the protagonist? Was a pattern evident?
- Was there a resolution and restoration of relationship? If so who promoted the resolution?
- Did the way the situation was resolved differ according to the characters involved?
- Do these accounts seem to accord with the known reality of the child?

## 2.4 Coherence

In research on attachment in adulthood, coherence of narrative concerning experience of attachment has been shown to be associated with an individual's quality of attachment. The following questions may help in the assessment of Coherence and aid in the interpretation of the participant's responses:

### *Quality*

- Is the story clear and does it contain all the information requested?
- How easy is it to follow the story and does it have any originality?
- Is there a plot or story line? Are there multiple or contradictory story lines?
- Do the characters seem flat or have they got some individuality? Are they over described giving lots of details that do not add anything to the story?

### *Quantity*

- Is the story of an adequate length and elaboration? Or is it over or under elaborated?
- Does the story seem to expand as it is told?
- Does it seem to ramble, stumble or seem chopped off?

### *Relevance*

- Does the story told seem to go with the picture or is it irrelevant?
- Are any characters or aspects of the pictured situation avoided?
- Does the participant include reference to any personal experience? If so is this brief? Did the participant include such personal experience in more than one story?

### *Delivery*

- Was the participant cooperative, resistant, or unresponsive in responding to the task?
- Did the participant stay within the bounds of the task? Or did he/she try to change the subject or sequence of the?
- Was the participant able to give the story a clear ending, without skipping the middle or telling a second story?

## 2.4 Empathy

The psychological capacity for empathy allows the individual to understand the thoughts and feelings of others, by reflecting on the other person's situation and imagining themselves in that person's shoes. By the age of two or three years most children have developed a growing ability to recognize and understand the other person's feelings and thoughts. Without this ability a person's social competence and moral skills are quite limited. In responding to the CEAT drawings the child is asked to include the characters feelings and thoughts in their story, the way they do this and their accuracy in doing so reveals a lot about their developmental status of social empathy. The following questions will help determine the significance of the participant's responses:

- Was the child willing and able to identify the characters thoughts and feelings?
- Were the feelings and or thoughts provided congruent with the situation described?
- If the participant forgot or resisted providing this information was an excuse given? Was the information finally provided?
- Did the thoughts and feelings seem to go together or were they incongruent or unlikely?
- Were all the characters said to have the same thoughts and feelings?
- Did a request for the information seem to throw the participant into confusion?

## 2.5 Defences

It has been suggested that a child's core anxieties may be defensively resolved in a pattern of relating that can be associated with each of the attachment style categories. Seen this way the style of attachment adopted by a child represents a kind of defensive process, which allows the child to cope with internal and external, fears, conflicts, anxieties and uncertainty within a particular relationship. The CEAT Coding Guide outlines defensive processes that have been typically associated with each attachment category. The following questions may be useful in discerning the defensive patterns revealed in a child's CEAT responses:

- Is the response one that represents a way of openly coping with a disturbing situation?
- Does the response seem congruent with the pictured situation?
- Have aspects of the stimulus card been avoided?
- Do any of the characters in the story seem too good to be true?
- Is there a character in the story that seems to be to blame for things or characters that could be seen as polar opposites?
- Does the story seem emotionally flat even though it describes an exciting or intense interaction or situation? Or does the participant seem in a world of his own and not in touch with the task at hand?

## 3 GENERAL THEMES EMERGING IN THE STORIES

Reviewing the themes of all the stories produced by the child reveals the recurring or common themes and those that are less common. The following questions may assist in interpreting this pattern of themes:

- Are the themes across the set of stories indicative of preoccupation with a constricted number of ideas explored, or are a variety of different ideas and possibilities contemplated in relation to the everyday interactions portrayed in the stimulus cards?
- What do the themes reveal about the individual's unconscious needs, motivations, internal conflicts and wishes in relation to attachment figures and others?
- Do the themes reflect realistic notions about the pictured situations? If not, what does this seem to indicate?

## 4 CONCLUSION

Use of the CEAT, particularly in a clinical context where qualitative interpretation of the material produced by the individual child is of greatest interest, will demonstrate that the technique has more to offer than has been articulated in this Manual. While the CEAT is certainly at a point at which it can be usefully employed for both research and clinical purposes, it remains in a developmental state. A number of issues remain to be researched before guidelines for its interpretation can be said to be finalised. Important examples of such issues are (a) the minimum number of stories required for valid coding and interpretation, (b) questions about coherence relating to the stories of children under approximately 7 years of age (as cognitive maturation appears to significantly influence coherence), and (c) the distinctiveness of peer relationships in the child's experience of attachment.

As can also be said of well established instruments, it is anticipated that the development of the CEAT can continue to progress.

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March , 2007

## REFERENCE

Westphal, E. (2007). *Development of a projective technique to assess experience of attachment in middle childhood: A pilot study*. Doctor of Psychology dissertation under examination, School of Psychology, Victoria University, Melbourne.



## GUIDE FOR CODING CEAT

### Assessment of Content of Dyadic Interactions Including Interactions Resulting from Distress or Conflict

*Every Dyadic interaction included in a story is assessed*

	Secure	Avoidant	Anxious	Disorganized
<b>Focus, Affective Tone and Aura of Interaction</b> <i>Three marks</i>	Focus balanced between realistic, trusting, reciprocal interaction and activity or situation Warm, caring accepting, tolerant of negative feelings Has an aura of genuineness	Strong focus on situation, activity or achievement rather than on interaction which may be described as a stereotypical social script Bland, restrained, vague tone and/or devoid of strong negative feelings Has an aura of superficiality	Strong focus on relationships and especially relationship problems Prevalence of exaggerated emotions or affect-swings Has an aura of enmeshment or unrequited longing	Focus on inconsistent, or unrealistic strange interaction with a nonentity Prevalence of anxious, sad or uncertain feelings Has an aura of loneliness, isolation, confusion and/or cruelty
<b>Child's Role</b>	Child connecting easily with Other or cooperating adaptively Controlling self in relation to the Other	Child independent, self-focused and self-contained relation to Other distant or vague Bossy or bullying with peers	Child dependent clinging to Other, or seeking attention and/or seen as victim or submissive in relation to Other Resisting Other's demands	Child is alone, frozen, frightened or alert to danger Controlling Parent Other by either punishing, distracting or acting as Other's caregiver
<b>Other's Role</b>	Other caring, responsive, sensitive, appreciative and containing in relation to Child Willing and able to help, seen as capable, wise and/or trustworthy Fosters autonomy by sensitively offering advice or support to Child	Other's role vague, implied, or assumed or seen as ignoring, or rejecting of Child or giving things with no sense of closeness Other represented as perfect when situation would indicate otherwise Fosters independence by leaving Child to cope alone	Other anxious, unreliable, unpredictable, intrusive, critical, angry, demanding or punishing Multiple Others reflect a split Fosters dependence by restricting autonomy and/or rewards Child's clinging or developmentally immature behaviour	Other frightening or frightened Un responsive, preoccupied with own distress and/or needs Fosters a fear of dependence by making dramatic, traumatic responses to the Child's dependency needs
<b>Verbal &amp; Non-Verbal Communication</b>	Direct, open and mutually satisfying including touching and physical affection	Restricted, superficial or implied, but generally satisfying for Child	Protracted or insensitive discourse that is directed by Other generally unsatisfying for Child	Disrupted, vacillating, directed by Child and generally mutually unsatisfying
<b>Assessment of Safe Haven</b>				
<i>Only assessed when a narrative contains and account of conflict or distress</i>				
<b>Child's Response to Distress &amp; Mode of Assuagement</b> <i>Two marks</i>	Capacity to assess need for and act to access help, comfort, or protection from Other or to Distress assuaged by contact with a caring Other or by accessing internalized representation of Other	Capacity to deny need for protection, comfort or contact with Other Distress assuaged by Child acting in a self-reliant way and/or focusing on the environment action or	Capacity to identify distress and need for help or comfort, but only limited capacity to use Other Distress may seem amplified by contact with Other, may not be completely assuaged or may magically be reversed	No capacity to act to assuage distress, because seems helpless, or trapped Distress unassuaged as Child ineffective in making contact with Other, or Other is the source of the distress and/or is physically or emotionally unavailable
<b>Mode of Handling Anger &amp; Conflict</b> <i>Two marks</i>	Child and Other able to consider each other's point of view eg. sharing their needs and ideas Anger and conflict is resolved satisfactorily	Potential disagreements are left unaired as conflict is avoided and/or unacknowledged Anger and conflict satisfactorily resolved by Child imposing a solution	Conflict is drawn out and/or intense Anger and conflict unsatisfactorily resolved for Child as Other imposes a solution which Child accepts or resists	Conflict leads to extreme fight or flight behaviours by Child or Other Anger and conflicts left unresolved

## Assessment of Discourse

*Each narrative is assessed for coherence, emergent patterns of empathy and defensive processes*

### COHERENCE OF NARRATIVE

*One mark is given for each of the four aspects of coherence unless more than one applies*

	<b>Secure</b>	<b>Avoidant</b>	<b>Anxious</b>	<b>Disorganized</b>
<b>Quality</b>	Story is clear including a sense of plot or sequence of related events and has realistic characters, includes all 3 parts and has some originality	Story is mainly a description of the picture, with little plot, flat characters and/or missing the beginning or end	Story has alternate events or competing storylines, polarized all good or all bad characters, and/or some part missing	Story has poor flow, inconsistencies and numerous breaks that make it confusing or hard to follow and/or middle of story may be missing
<b>Quantity</b>	Story is succinct with adequate length and elaboration	Story brief and thinly elaborated	Story long and/or rambling and overly elaborate	Story very brief and unevenly elaborated or lacking sufficient elaboration
<b>Relevance</b>	Story congruent with the pictured situation with only brief inclusion of personal experience	Story avoids some character or aspect of the pictured situation and no inclusion of personal experience	Story expands as the narrative is related or in response to probes or it is told in the first person and may include significant personal experience	Story is unrelated to or misinterprets the pictured situation, is fixated on one aspect of the pictured or repeats aspects of a previous story plot or theme
<b>Delivery</b>	Participant is cooperative and keeps within the boundaries of the task although may reflect upon the task, few questions required to complete the task	Participant resists task, gives 'I don't know' responses, includes grim humor, quick topic changes or distracts from the task or requires a number of probes to complete the task	Participant unable or unwilling to end the narrative which drags on and/or skips to a happy ending, or story includes nonsense words or flippant language	Participant struggles with or rejects the task, seems in a 'world of his own' or seems debilitated by the task, or the response includes evidence of a lapse of reasoning

### EMERGENT PATTERNS OF EMPATHY & DEFENSES

	<b>Secure</b>	<b>Avoidant</b>	<b>Anxious</b>	<b>Disorganized</b>
<b>Empathy</b>	Participant projects individual feelings and thoughts onto Child and/Other in story that seem congruent with the situation described	Participant avoids projecting individual feelings and thoughts onto Child and/Other in story or supplies positive feelings when negative ones seem more congruent or projects feelings that are really thoughts	Participant projects feelings and thoughts on Child and/Other that are the same, seem exaggerated, are expressed as somatic responses, or are ambivalent	Participant projects feelings and thoughts for the Child and/Other that seem confused, puzzling and/or overwhelming, or indicates painful negative affects for the Child when situation may not suggest it
<b>Defences</b>	Evidence of sublimation or use of a minimal use of a variety of defenses	Evidence of a strong use of denial including idealization of objects or negative situations	Evidence of a strong use of splitting and putting positive and negative aspects onto different objects	Evidence of strong use of isolation of affect and/or difficulty connecting emotionally with the stimulus

### THEMES

*The themes of each story are identified and recorded and then the whole set of stories are coded*

	<b>Secure</b>	<b>Avoidant</b>	<b>Anxious</b>	<b>Disorganized</b>
<b>Themes</b>	A wide range of themes including distressing ones which are always resolved by the end of the story	Constricted range of themes, predominantly activities or innocuous interactions	Interpersonal themes predominantly of conflict or exaggerated intimacy and responses that include two stories with conflicting themes	Themes predominantly of unresolved violence, danger, loss, isolation, helplessness or catastrophe

CEAT SUMMARY SHEET

Participant ..... Date ..... Coder.....

	Story 1				Story 2				Story 3				Story 4				Story 5			
<b>Number of Interactions</b>																				
<b>Attachment Category</b>	S	AV	Anx	Dis																
<b>Nature, Focus and Affective Tone of Interaction</b>																				
<b>Child's Role</b>																				
<b>Other's Role</b>																				
<b>Nature of Communication</b>																				
<b>Child's Response to Distress</b>																				
<b>Mode of Handling Problems and Conflict</b>																				
<b>Coherence</b>																				
<i>Quality</i>																				
<i>Quantity</i>																				
<i>Relevance</i>																				
<i>Delivery</i>																				
<b>Empathy</b>																				
<b>Defence</b>																				
<b>Theme</b>																				
<b>Totals</b>																				

	Story 6				Story 7				Story 8				Story 9			
Number Interactions																
Attach. Category	S	AV	Anx	Dis												
Nature, Focus and Affective Tone of Interaction																
Child's Role																
Other's Role																
Nature of Communication																
Child's Response to Distress																
Mode of Handling Problems and Conflict																
Coherence																
Quality																
Quantity																
Relevance																
Delivery																
Empathy																
Defence																
Theme of Story																
Totals																

### CODING TIPS

- It is important to remember that where there are multiple interactions in one story each interaction is coded separately. This will result in multiple entries in the six aspects of relationship. When multiple interactions are noted they will not necessarily result in a code given for each aspect of relationship because some interactions will not be adequately described to indicate all six aspects so only aspects that are included are scored.
- If there is no inclusion of distress and/or conflict in a story then these aspects of relationship are left blank. The exception to this is when the story situation is one that would be expected to result in distress or conflict but none is reported. In such a case the story would be coded Avoidant.
- If the response seems not to fit into any of the categories then it is not

Notes

### Quantitative Coding Grid

Story	Secure	Avoid	Anx	Dis	Unc	Story pattern
1						
2						
3						
4						
5						
6						
7						
8						
9						
Totals						
%						

### Profile of Styles of Attachment

1. Overall pattern of attachment
2. Dominant style of attachment
3. Subsidiary styles of attachment

### Qualitative Coding

<b>Distress</b>
<b>Conflict</b>
<b>Coherence</b>
<b>Empathy</b>
<b>Defences</b>
<b>Themes</b>

**Overall Interpretation:**

**Other Comment**

**SUMMARY OF KEY RESEARCH RE CATEGORIES OF ATTACHMENT**

**1. Strange Situation Procedure: Coding of infants' and toddlers' attachment behaviour (Ainsworth, Blehar, Waters, & Wall, 1978)**

Three categorical patterns of attachment behaviour and associated maternal caregiving outlined.

	<b>Secure (B)</b>	<b>Avoidant (A)</b>	<b>Ambivalent (C)</b>
<b>Infant's Behavior</b> (Observed in Strange Situation episodes)	Explores room and toys with interest in pre-separation episodes. Shows signs of missing parent during separation, often crying by the second separation. Obvious preference for parent over stranger. Greets parent actively, usually initiating physical contact. Usually some contact-maintaining by second reunion, but then settles and returns to play.	Fails to cry on separation from parent. Actively avoids and ignores parent on reunion by moving away, turning away, or leaning out of arms when picked up. Little or no proximity or contact-seeking, no distress, and no anger. Response to parent appears unemotional. Focuses on toys or environment throughout procedure.	May be wary or distressed even prior to separation, with little exploration. Preoccupied with parent throughout procedure and may seem angry or passive. Fails to settle and take comfort from parent on reunion, and usually continues to focus on parent and cry. Fails to return to exploration after reunion.
<b>Mother's Complementary Behavior</b> (Observed in Strange Situation episodes and in home situation)	Accepting, responsive and warmly and caring of the child.	Rejecting of the child's expression of attachment needs, rejecting of physical contact. Frequently angry or irritated by the child's tending to be rigid and compulsive, not liking own activities to be interrupted by the infant.	Not rejecting or averse to physical contact, but frequently non-responsive to the child's distress signals. Can be said to behave in an intrusive and/or enmeshed manner.

**2. Adult Attachment Interview (AAI): Coding of adult narratives of attachment history (Main & Goldwyn, 1984, cited in Hesse, 1999)**

AAI assesses attachment state of mind of adults using data collected from an autobiographical interview. AAI classifications correspond to Ainsworth's et al. (1978) patterns of attachment, with a fourth category added.

<b>Secure/Autonomous (F)</b>	<b>Dismissing (D)</b>	<b>Preoccupied (E)</b>	<b>Unresolved/Disorganized (U)</b>
Coherent, collaborative discourse. Valuing of attachment but seems objective regarding any particular event/relationship. Description and evaluation of attachment-related experiences is consistent, whether experiences are favourable or unfavourable.	Not coherent. Dismissing of attachment-related experiences and relationships. Normalizing ("excellent, very normal mother"), with generalized representations of history unsupported or actively contradicted by episodes recounted. Accounts tend to be excessively brief,.	Not coherent. Preoccupied with or by past attachment relationships/experiences, recounted in angry, passive, or fearful way. Sentences often long, grammatically entangled, or filled with vague usages ('dadadada,' "and that"). Accounts often excessively long.	During discussions of loss or abuse, individual shows striking lapse in the monitoring of reasoning or discourse. May lapse into prolonged silence or eulogistic speech. A second best fitting category of attachment is also assigned.

### 3. Attachment Q Sort: Assesses attachment quality in children 12 months to 4 years old (Bretherton & Waters, 1985)

One hundred statements about behaviour, written on small cards, are sorted by parents or observers to describe a child's behaviour at home with his/her caregiver. Cards can be sorted on different criteria. For the attachment construct four criteria are used, Security, Dependency, Sociability and Social Desirability. Cluster analysis is used to identify clusters of subjects and make quantitative comparisons. The article does not detail indicators of quality of attachment or categories or patterns of attachment style.

### 4. Separation Anxiety Interview; Response to Family Photo; Family Drawing; Discourse Patterns on reunion with parent; and Parent Adult Attachment Interview (Main, Kaplan, & Cassidy, 1985)

The Separation Anxiety Interview coded 6-year-old children's responses to a picture set involving separation scenes. The study also assessed children's responses to a family photo presented during an actual separation, a family drawing, parent-child conversation after a one-hour separation, and the parent's responses to the Adult Attachment Interview (AAI).

Secure	Avoidant	Ambivalent	A Fourth Group Identified
<b>Separation Anxiety Interview</b> Gave a coherent, elaborated, and open response to the separation pictures, occasionally included personal experiences., suggested things the separated child could do to cope with the separation	<b>Separation Anxiety Interview</b> Described the children in the more severe separation pictures as sad and claimed to have no idea how the child could respond to the separation.	<b>Separation Anxiety Interview</b> <i>Only 2 children in the study classified as ambivalent, so no coding of these children's Ambivalent Attachment was included in the study.</i>	<b>Separation Anxiety Interview</b> Stayed silent or gave irrational bizarre responses, such as "The parents will die and the child will kill himself."
<b>Response to Family Photo:</b> Looked at photo smiled and commented on it.	<b>Response to Family Photo:</b> Turned away from photo, dropped it, or handed it back to the examiner.	<b>Response to Family Photo:</b>	<b>Response to Family Photo:</b> Showed depressed affect or became disorganized in response to the photo.
<b>Family Drawing:</b> Depicted family members as, close but not overly close, individuated figures, with embracing arms.	<b>Family Drawing:</b> An aura of falseness about the drawing with all family members smiling but left more distant between the figures who tended to be armless.	<b>Family Drawing:</b>	<b>Family Drawing:</b> Bizarre in a number of ways eg included, unfinished objects or figures with scratched out parts. Included unintegrated over-bright elements eg. rainbows and hearts
<b>Mother-Child Discourse Patterns on Reunion:</b> Dialogue, fluent, discussing a wide range of topics and Demonstrating emotional openness in discourse.	<b>Mother and Child Discourse Patterns on Reunion:</b> Dialogue restricted and impersonal focus on activities or objects, little/ no elaboration, including closed or rhetorical questions.	<b>Mother and Child Discourse Patterns on Reunion:</b>	<b>Mother and Child Discourse Patterns on Reunion:</b> Dialogue stumbling with false starts, focus on relationship topics, and steered by child.
<b>Parent AAI:</b> Parents, of securely attached child, valued attachment and autonomy, were at ease discussing the influence of attachment related issues on their own development.	<b>Parent AAI:</b> Parents of children assessed as avoidantly attached, devalued attachment felt early experiences had little effect on their development. Few Memories supplied but specific memories supplied contradicted assertions of idealized parents	<b>Parent AAI:</b> Preoccupied with earlier family attachments remembered many often conflict ridden incidents but could not integrate them into and overall picture	<b>Parent AAI:</b> Parents of children assessed as disorganized struggled with unresolved issues of loss and grief.

### 5. Separation Reunion Procedure: Coding of 6-year-old children's responses to reunion with mother after one-hour separation (Main & Cassidy, 1988)

Children in this study had previously been assessed at 12 months using the Strange Situation Procedure. None of the children in the study were insecure ambivalent as infants because of insufficient numbers. Classification was developed using a judge knowledgeable in respect to Strange Situation classification, which provided the conceptualization for this separation reunion procedure. Classification was made on a case by case study of the child's behaviour using an inductive method, to discover 6-year-old equivalents to the child's previous infant classification. A fourth pattern was identified and labelled Controlling. As the Disorganized Attachment category had not yet been defined, it is not included in this study.

Secure	Avoidant	Ambivalent	Controlling	Unclassified
<b>Secure B6</b> Child relaxed throughout the reunion with parent, showing some pleasure being with parent. Child initiates positive interaction, proximity, or contact with parent. Child shares about what he/she did during separation	<b>Insecure Avoidant (A6)</b> Child maintains or increases physical or communicative distance from the parent on reunion is non-confrontational, ignores the parent's presence and utterances, or any combination of these actions. Child's focus is on the environment.	<b>Insecure-Ambivalent (C6)</b> Child exaggerates intimacy with and dependency on the parent, and appears immature. May show some hostility and/or fear or sadness. Evidence of ambivalence in the child's seeking of proximity or contact with parent eg. Child may lean affectionately against the parent and the jerk away	<b>Insecure-Controlling (D6)</b> Child seems to attempt to actively control or direct the parent's attention and behaviour and may assume a parental role in relation to the parent.	<b>Insecure – Unclassified (U6)</b> Children whose behaviour does not fit in the other categories.
<b>Secure-reserved (B1 &amp; B2/6)</b> On parent's entrance child shows reserve and may attend to toys for a moment or be slow to reply but clearly warm in his/her behaviour toward the parent	<b>Highly Avoidant (A1/6)</b> Child either moves away from the parent or stays physically oriented away from and ignores parent.	<b>Ambivalent-hostile (C1/6)</b> Child shows open hostility toward the parent but does not appear to be controlling the parent. May make a hurtful remark to parent but also shows evidence of warmth to parent.	<b>Controlling Punitive (D1/6)</b> Child acts to humiliate, embarrass, or reject the parent	
<b>Very Secure (B3/6)</b> The child initiates contact of an unambivalent and affectionate nature or initiates warm personal conversation. Child seems neither dependent nor avoidant and is strikingly relaxed.	<b>Avoidant through neutral ignoring (A2/6)</b> Child may orient to the parent at times, but is busy with activities that remain foremost for him/her. Child may slightly warm to parent before the end of session.	<b>Ambivalent-passive (C2/6)</b> Child acts immaturely in his/her approach to the parent or by using a fussy, baby-like voice, but no hostility or physical ambivalence evident.	<b>Controlling-overbright/care giving (D2/6)</b> Child may be solicitous and protective toward the parent, showing concern or care in a way that makes the parent seem dependent on the child, eg. "Want to play mommy?" Or child may show extreme, anxious cheerfulness.	
<b>Secure Dependent: Immature or slightly disorganized (B4/6)</b> Child may act immature but there is no fear or hostility. Or child may appear slightly disorganized but then recovers to and show a secure response pattern				

**6. Adult Attachment Interview (AAI) used to explore adolescents' working models of attachment, affect regulation and representation of self and others (Kobak & Sceery, 1988)**

Secure	Avoidant	Ambivalent
Reported little distress and high levels of social support.	Reported more distant relationships, more loneliness and low levels of social support.	Reported high levels of personal distress and viewed their family as more supportive than the avoidant group.

**7. Attachment Story Completion Task: Attachment coding of 6-year-old children's story completions using doll play (Cassidy, 1988)**

Assessment previously used by Main & Cassidy, (1988) reflects the child's attachment state of mind in relation to an attachment figure. The child completes 6 stories using a doll family. Children participating in the study had previously been assessed for quality of attachment in the 1988 study. Each of the 6 stories is rated on a 5-point scale designed for the particular story, with 5 representing secure relationship with the attachment figure. Each story also placed in one of the 3 attachment classification groups, Secure/confident, Avoidant, or Hostile/negative.

**Coding:**

Secure/Confident	Avoidant	Hostile/Negative
Described, child as someone valuable and worthy, and relationship with the mother as important, special and warm. Child able to tolerate stress in the story and believed that they would be accepted despite their flaws. In stressful situations open negotiation was used and there was a sense of fair play. The child could turn to mother for safety and protection in stressful external situations, usually with a positive outcome. Stories related to peer dolls showed the child was accepted and valued, and affection was expressed.	Described child as isolated and/or rejected, and importance of the relationship with mother was denied. Conflict was denied in stressful situations both inside and outside the family. The need for help was denied or successfully resolved by the child.	Described child as involved in violent, hostile, negative or bizarre behaviour and relationship with mother as disorganized or controlling.

**8. Strange Situation Procedure: Coding of disorganized attachment infant/toddler behaviour (Main & Solomon, 1990) using data recorded by Ainsworth et al. (1978)**

Secure	Disorganized
Fluid attentional pattern	Conflicted behaviour, eg. rocking on hands and knees Face averted after an aborted approach Freezing Arms in the air Trance like expression. Moving away from parent to lean on wall when frightened. Rising to greet parent then falling prone. Mother's complimentary behaviour seen as insensitive.

## 9. Story Completion Task: Assessment of Internal Working Models of Attachment 3-year-old children's doll play facilitated by story stems (Bretherton, Ridgeway, & Cassidy, 1990)

This study used doll play to define secure and insecure attachment rather than the four-category attachment classification.

### Analysis of Story Completion

1. Content analysis: Examined child's ability to understand story issue and create a story resolution.
2. Child's protocol examined as a whole in order to classify the presentations as reflecting secure or insecure attachment patterns. Consideration given to: structure and content, including the fluency of presentation, coherency, and benign story resolutions indicated secure attachment.
3. When child's protocol difficult to classify then reunion stories were more heavily weighted.

Criteria for Security <i>required no more than one prompt for each story</i>	Criteria for Insecurity
<ol style="list-style-type: none"> <li>1. Spilled juice – juice cleaned up - parental discipline or anger not severe.</li> <li>2. Hurt knee – parent or older sibling comfort or administer bandaid has positive ending.</li> <li>3. Monster – parents approached and they successfully deal with child's fear.</li> <li>4. Departure – child displays coping behaviours</li> <li>5. Reunion – family figures face each other, hug, talk, undertake family activity.</li> </ol>	<ol style="list-style-type: none"> <li>1. Avoidance of story issue.</li> <li>2. Incoherent or odd responses</li> </ol>

Secure	Insecure
<p><b>Very Secure</b> = Child resolved story issue fluently without much prompting for all five stories</p> <p><b>Fairly Secure</b> = Slight avoidance in one or two stories</p>	<p>Child displayed strong defensive responses (“Don’t know”) over three or more stories. Classified avoidant even if they showed some disorganized aspects. Violent throwing of figures, car wreck after reunion, incoherent responses.</p>

## 10. Reflective-Self Scale (Fonagy, Steele, Steele, Moran, & Higgitt, 1991)

A nine-point scale identifies levels of reflective-self function. One extreme indicates high reflective-self functioning, which Fonagy et al. (1991) found to be associated with secure attachment. Dimensions of reflective-self function measured:

- *No reflective-self functioning*: No evidence in the person's responses that they think about motives for their own or others actions and responses.
- *Poor reflective-self functioning*: Reference may be made to others' motives but these are grounded in external situation or culture, reference to own motivations are rare.
- *Generalized or inaccurate reflective-self functioning* Subject indicates a general understanding of human motives but fails to apply this to his/her own experience or draws implausible or superficial self-serving conclusions.
- *Accurate but incomplete reflective-self functioning* shows an ability to contemplate multiple beliefs and desires and is able to let this knowledge influence their conclusions but may give evidence of gaps or omissions eg. Understanding one parent's motivation but not the other or imposing a restriction on one category of mental states such as ignoring unconscious influences.
- *Complete reflective-self functioning* Subject is able to give an organized and consistent understanding of the motivations guiding the behaviour of themselves and others.

### 11. Synchrony of infant-mother attachment (Isabella & Belsky, 1991)

This study found that mothers interacted in different ways with their children and that these differences were related to the child's attachment security. Mother's behaviours associated with each attachment category were noted as below:

Secure	Avoidant	Resistant
Well-timed, reciprocal and mutually rewarding interaction.	Intrusive and over stimulating.	Poorly coordinated interactions. Mother under involved and inconsistent.

### 12. Toddlers quality of friendships (Youngblade & Belsky, 1992)

Secure	Avoidant	Ambivalent
Toddler cooperative, friendly and outgoing with other adults and children. Skilful and effective with peers, not easily frustrated, able to cope with interpersonal conflict.	Toddler distant and negative toward peers, likely to elicit aggression and rejection.	Toddler makes more frequent attempts at social participation than avoidant and secure toddlers, but lacked skills. Impulsive, over-assertive and ineffective appearing helpless, and dependent. Lack of success with peers therefore oriented toward the teacher.

### 13. Separation Anxiety Test: Coding of four and a half year-old children's responses to how a pictured child might deal with a separation from parent (Shouldice, & Stevenson-Hinde, 1992)

For each of 6 pictures, the child is presented with a story stem and asked to say how they think the pictured child will respond and feel about the separation portrayed. Stories rated on following 8 scales relating to emotional expression and the type of emotion expressed.

<i>Appropriate negative:</i>	A negative feeling to separation from parents
<i>Avoidant response:</i>	Child avoids expressing feelings about separation saying, "I don't know" how the pictured child would feel
<i>Initial denial</i>	Child denies negative feeling about separation by giving a positive response
<i>Persistent denial:</i>	Child continues to deny negative feeling when specifically prompted for them on the three 'strong' pictures
<i>Over-positive:</i>	A positive feeling given in an over-expressive way
<i>Over-sad/crying:</i>	A negative feeling response given in an over-expressive way
<i>Separation anxiety:</i>	Child asks after own mother during the test
<i>Anger:</i>	May be expressed either directly or indirectly

Also coded are the following scales:

<i>Interruption:</i>	Child draws attention away from test, refuses to go on, or interrupts the tester's questions.
<i>Somatic response:</i>	Response referring to body
<i>Passive solutions:</i>	Response that seems to reflect a hopelessness about being able to cope with separation
<i>Incoherence:</i>	Speech shows confusion in feeling or in identification with pictured child; or includes garbled, repetitive or illogical elements; or odd comments unrelated to the normal flow of ideas from the test pictures; or disturbing or fearful comments

### 13. Separation Anxiety Test (Continued)

Ratings used to determine categorical groupings below:

Secure	Avoidant	Ambivalent	Controlling/Disorganized
Moderate expression of security distress, with active solution found. Unlikely to deny security distress or express self in an over-positive way. Did not interrupt the test. High incidence of coherence.	A high number of “Don’t Know” responses. No expression of separation anxiety or anger, and only one expression of over-expressive sadness. Some evidence of distortion of negative feelings into positive feelings.	Likely to express anger, expression of over-sad/crying responses, and also expression of separation anxiety. Tended to interrupt the test, and gave more somatic responses than the others. Passive responses when asked what the child would do.	A high level of incoherence was typical of the disorganized responses.

### 14. Separation Anxiety Test (SAT): Coding of semi-projective interview of 10 – 14 year-old children in response to six pictures of separations situations. (Resnick (1993), cited in Kerns, Tomich, Aspelmeier, & Contreras (2000))

A computerized six picture version of the SAT (developed by Kaplan, 1985; Klagsbrun, & Bowlby, 1976) adapted by Resnick (1993, cited in Kerns, Tomich, Aspelmeier, & Contreras (2000)) Participants are asked: How is the child feeling? What will the child do next?

Responses are rated on a 9-point scale for:

1. Emotional openness
2. Expression of vulnerable feelings.
3. Dismissing/devaluing of attachment relationships.
4. Coherence of discourse across the interview.
5. Preoccupying anger.
6. Pessimism or optimism regarding outcome of the separation.
7. Resistance to the interview or withholding the expression of feelings.
8. Displacement of feelings
9. Blaming self or other for separation.
10. Constructiveness of the proposed solution.

Secure	Dismissing	Preoccupied
High scores on emotional openness, coherence and optimism.	Low scores on emotional openness, coherence and optimism, and high scores on dismissing, resistance and displacement.	Low scores on emotional openness, coherence and optimism and high scores on self-blame, preoccupying anger and low constructive solutions scores.

### 15. Review of attachment studies (Main, 1995)

<b>Disorganized</b>
Stories associated with catastrophic fantasies

### 16. Classification of controlling attachment study of 6-year-old' aggression (Solomon, George, & De Jong, 1995)

<b>Disorganized</b>
Gave frightened responses

### 17. Children's coping strategies as they relate to avoidant and ambivalent attachment (Finnegan, Hodges, & Perry, 1996)

The Preoccupied and Avoidant Coping Scale assesses children's coping in times of stress in middle childhood. Only avoidant and preoccupied coping are assessed.

<b>Avoidant</b>	<b>Preoccupied</b>
Avoidant attachment predicted externalising problems in girls and boys	Preoccupied attachment predicted internalising problems in girls and boys associated with victimization by peers in boys.

### 18. Review of research on correlates of attachment. (Main, 1996)

<b>Secure</b>	<b>Avoidant</b>	<b>Ambivalent</b>
Ego resilience Social competence Exploratory competence	Victimize others	Are victims

### 19. Family Drawings: Coding of children's drawing of the family (Fury, Carlson, & Sroufe, 1997)

This measure was developed using the drawings of 171, 8 year-old children. As a warm up procedure children were asked to draw a person following which they were asked to draw a picture of his/her family. Drawings were then classified using three attachment categories using some general criteria outlined by Kaplan and Main (1986, cited in Fury et al., 1997). Overall insecure categories were associated with neutral and negative affect.

<b>Secure</b>	<b>Avoidant</b>	<b>Ambivalent</b>	<b>Disorganized</b>
Family pride and vitality	Child and mother far apart on the page. Omission of the mother. Focus on the head. Disguised family members. Emotional distress and tension or anger	Crowded overlapping figures Figures separated by barriers. Unusually small figures. Figures on corner of page. Exaggerated facial features. Exaggerated hands/arms. Vulnerability	False starts. Scrunched figures Unusual signs, symbols or scenes. Bizarreness. Bizarreness and dissociation

## 20. Manchester Child Attachment Story Task (MCAST): Coding doll play stories of children aged 5-7 years old (Green, Stanley, Smith, & Goldwyn, 2000)

**Assessment** involves presentation of six story vignettes, played out by the child using dolls. In introducing the vignettes, the administrator amplifies the child dolls' distress to involve the participant in a sympathetic way.

- Child having breakfast
- Child having a nightmare
- Child falls while playing and hurts a knee
- Child does a beautiful drawing and is praised by the teacher before taking it home
- Child has an argument with a friend and is left rejected
- Child finds itself lost while shopping with a parent

Probes are used to clarify the meaning of the child's play, the degree of assuagement, and to elicit attributions of mental state.

**Coding** is complex. For each vignette, 33 ratings use nine-point continuous scales. Ratings fall into four broad groups:

1. *Attachment related behaviour*: These include the pattern of proximity, details of caregiving behaviour, self-care and displacement behaviours, conflict, reversal behaviours, and degree of assuagement.
2. *Narrative coherence*: Adapted from the Adult Attachment Interview to include the largely non-verbal material of the play narrative.
3. *Disorganized phenomena*: Derived conceptually from the disorganized and disoriented attachment behaviours.
4. *Bizarreness of narrative content, predominant affect, and mentalizing ability* (awareness of the states of mind and psychological motivations of characters in the story), and *meta-cognition* (child's ability to reflect on the story and its significance).

From the above coding an overall 'strategy of assuagement' and quality of attachment is identified for each vignette. Finally an overall quality of attachment is made across all the vignettes.

**Narrative Coherence** ratings are on four attributes of effective discourse:

1. *Quality*: rating here deals with the development of a clear and believable story with descriptive depth and detail, as well as congruity between the content of the story the child presents and associated behaviours. Evidence is gained from doll behaviour, doll state of mind, child behaviour and speaking.
2. *Quantity*: here the narrative line is rated for how clear and vivid, thin and indistinct, over-elaborated, repetitious and unclear it is and whether there are gaps or missing information that renders it incomprehensible?
3. *Relevance*: here is rating the child's success in keeping to the task of assuaging the distress represented. Self-care that address the attachment issue will score highly on relevance, where as doll displacement that avoids the task of the interview will code low.
4. *Manner*: rates clarity and orderliness of narrative production as it is embedded within other aspects of the child's functioning e.g., the ability to keep to the boundaries of the task will code high. Jumping in, not finishing, appearing distracted, lapses into jargon or meta-speech (parental phraseology), or the introduction of odd material will code low. As will the loss of boundary between the child and the child doll with in the narrative; speaking as if the *child herself* is in the narrative and not the *child doll*.

When rating is completed a quality of attachment is assigned across all the vignettes. Four main categories of quality of attachment are used but there is considerable variability within each group with a number of different sub classifications available, outlined in the chart below.

## 20. MCAST (Continued)

### MCAST Quality of Attachment Categories and Sub-Categories

Secure strategy of assuagement	Avoidant strategy of assuagement	Ambivalent strategy of assuagement	Forms of Attachment Disorganization
<p><b>Interpersonal (secure) strategy</b> Clear interpersonal transaction that assuages distress.</p> <p><b>Four sub-classifications:</b></p> <p>1.1 Interpersonal strategy but with elements of avoidance or restriction. Less proximity and less parental warmth than 1.3 below. There may be initial avoidance but ‘warming’ through the vignette to more contact.</p> <p>1.2 Patterns of interpersonal strategy that do not easily code into other secure sub-categories. Parental reaction less optimal and the child may show significant independence (e.g. child may gain very swift assuagement and run out of narrative).</p> <p>1.3 Optimal interpersonal strategy where child represents a warm, concerned appropriate and well-timed parental reaction. The child responds to care, and shows high scores on assuagement and exploratory play.</p> <p>1.4 Characteristically an interpersonal strategy of assuagement that <i>depends on</i> continuing contact with the caregiver, e.g. child stays in maternal bed after nightmare. This ‘contact maintenance’ will lower scores for assuagement and exploratory play.</p>	<p><b>Non-interpersonal (avoidant) Strategy</b> Predominantly non-interpersonal means used to assuage distress, focusing on self-care or displacement strategies. Original distress may be restricted or denied. Lack of proximity seeking: child leaves the parent out of the assuagement strategy.</p> <p><b>Two sub-classifications:</b></p> <p>2.1 Highly avoidant. Complete and organized form of the avoidant strategy, there may be high levels of restriction of attachment themes, or predominant use of self-care. This may be successful in assuaging distress, thus high scores on assuagement scales are possible.</p> <p>2.2 Weakly avoidant. Less well organized and complete. The child may need a ‘top-up’ of interpersonal contact with the parent (e.g. a meal) but this is minimally represented and not around assuagement. No effective interpersonal contact.</p>	<p><b>Ambivalent interpersonal strategy</b> Interpersonal contact but the strategy will promote as much as assuage distress and often involve contradictory behaviours.</p> <p><b>Two sub-classifications:</b></p> <p>3.1 Initial distress evolves into dispute and anger between the child and caregiver. Child may introduce new focus for ongoing distress or anger. (To code here anger must be dyadic between caregiver and child rather than some more diffuse anger/aggression in the vignette.) Vignettes tend to be long.</p> <p>3.2 Passive. Weak signalling of distress but clear use of the other. Assuagement is poor, e.g. child asks for help and then hides.</p>	<p><b>Pervasive disorganization (chaos)</b></p> <p>4.1 Narratives lack overarching strategy, goal or show incapacity to mount a strategy at all, or contain massive internal contradictions.</p> <p>4.2 <i>Multiple strategies</i> Narrative includes multiple or incompatible strategies of, none of which has predominance or effective in assuaging distress.</p> <p>5 <i>Control of the caregiver</i> The main strategy is active control of the caregiver instead of expression of distress or need.</p> <p>5.1 ‘Coercive/angry’ control by the child of the parent.</p> <p>5.2 ‘Solicitous’ control by child of parent including a reversal of care to focus completely on the welfare of the caregiver</p> <p>6 <i>Episodic D – disorganized or disoriented</i> Breakdowns within an organized strategy. Transient disorganized or disoriented behaviour emerges in the narrative. Is most significant, if it occurs at critical points in the narrative.</p> <p><b>In the child behaviour:</b> Failure to complete a sentence or sudden stopping in the middle; a lapse into silence or stillness; episodes of dissociation or ‘spacing out’.</p>

## 21. Adult Attachment Projective (AAP): Coding of adults' stories told in response to line drawings (George & West, 2001)

This is a projective technique for the assessment of adults. Eight drawings, seven of which depict attachment-related scenes, are presented. The first drawing is of a neutral scene and serves as a warm-up picture. Scenes used are:

1. Two children playing ball
2. Child at a window
3. Adult man and woman standing facing each other with suitcases pictured nearby
4. Young person sitting alone on a bench
5. Child and a woman sitting facing each other at opposite ends of the child's bed
6. Woman and a child watching someone put onto an ambulance stretcher
7. Man standing by a gravesite headstone
8. Child standing in a corner with hand and arm extended outward

### Transcripts of a participant's stories are coded for quality of attachment by assessing Discourse Features, Story Content, and Defensive Processes: Discourse:

Two features of Discourse Quality are evaluated

1. **Personal Experience** – Participants are not asked to give personal or autobiographical information, inclusion of such material is taken as an indication that the individual is overwhelmed by attachment stressing related to the AAP stimulus.
2. **Coherency** – violations of quality, quantity, relation and manner are rated on a 3 point rating scale yielding a global coherency score for each story
  - **Quality:** violations include vagueness associated with character identification or presentation of two or more alternative story lines.
  - **Quantity:** violations include the individual giving far more info than is necessary or can failing to give much beyond a description of the stimulus.
  - **Relation:** violations include the individual making personal references, critiquing the drawings, or giving a response that is not relevant to the picture.
  - **Manner:** violations include problems in constructing a narrative such as using jargon, nonsense word, or entangled run-on sentences.

### Content:

Actions in each story are evaluated using 3 variables associated with attachment theory: Agency of self, Connectedness and Synchrony.

**Agency of self:** Agency of self is coded for pictures where the character is pictured alone, by considering:

- **Internalized Secure Base** – Can the character faced with solitude draw on internal resources and be content instead of being lonely, bored or dissatisfied. Also can the character engage in self-reflection, if so is there a “personal or situational transformation” as a result. Another feature is the characters ability to actively explore their working model of attachment.
- **External Secure Base** – Here Bowlby's concept of *haven of safety* is used to assess the character's actively seeking support or help in the face of distress.
- **Capacity to Act** – Does the character engage in behaviour that produces change such as removing themselves from the distressing situation by going someplace or getting involved in an activity

**Connectedness** assesses the character's desire to be connected with others and is coded for pictures with a lone character. This concept is related to general relatedness not attachment figures..

**Synchrony** assesses how attuned and interactive the characters depicted are when a dyad is portrayed and the character is described as distressed, it looks for evidence of a 'goal-directed partnership' In a non-stressful story *synchrony* evaluates the quality of the dyad's engagement.

## Defensive processes:

Of particular interest in the AAP coding is evidence of forms of *Defensive exclusion* in which feelings and experiences are transformation so that they are not attended to by a character.

**Defensive exclusion:** Three forms are assessed in all stories:

- **Deactivation** a character diminishes, dismisses, devalues, or minimizes importance or influence of distress. Characteristic of an avoidant attachment, this is coded when story lines avoid themes of distress, emphasise relationships and interactions that are guided by stereotypical social roles, materialism, authority, or personal achievement; or when themes of distress are included it is accompanied by negative evaluations of the relationship or character.
- **Cognitive Disconnection** refers to the splitting of attachment into opposing images or story lines and is characteristic of ambivalent attachment, this is coded when the story theme takes two opposing directions, where one is good and the other bad; when characters are described in as positive and negative, or when a participant has trouble making a decision about the story line or events.
- **Segregated systems** refers to walling off of feelings associated with overwhelming attachment trauma in order to keep these painful emotions out of consciousness. This is indicative of disorganized attachment and is indicated in stories including helplessness, fear, failed protection or abandonment as well as dangerous or catastrophic events such as death, assault, or severe isolation, or when imagery in the story is eerie, or has a magical quality, or the participant's traumatic experience invades their story. In some cases the individual's response is severely constricted and they are unable or unwilling to tell a story indicating that he or she fears breakdown of the segregated system resulting in a flooding of pain, sadness, fear, or anger.

## AAP Definition of Quality of Attachment

The AAP utilizes a set of rules to analyse the coded sets of stories and assign quality of attachment to participants.

- If a set of stories contains unresolved segregated systems markers, the participant is judged as **Unresolved**.
- If a set of stories contains resolved Segregated Systems markers and it has high coherency, and high Agency, Connectedness and Synchrony Scores, the participant is judged to be **Secure**.
- If a set of stories contains Deactivation Markers in three or more stories and if present, Segregated Systems Markers are resolved, the participant is judged to be **Dismissing**.
- If a set of stories contains Cognitive Disconnection Markers and all Segregated Systems Markers are resolved, the participant is judged to be **Preoccupied**.

## 22. Review of categories of attachment used in previous doll play assessments of attachment (Gloger-Tippelt, Gomille, Koenig, & Vetter, 2002)

A summary of different Doll Play Attachment techniques Quality of Attachment Categories

Secure	Avoidant	Ambivalent	Disorganized
<p>Stories have a clear end. Adults successful in eliminating danger, pain and anxiety. Parents happily welcomed back after separation. Family members finally safe and unified.</p>	<p>Stereotypic (distracting) narratives that read like conventional daily scripts. Stories avoid any need for protection, comfort, and attachment. Minimize emotions relevant to attachment distress. Neglect or ignore reunion.</p>	<p>Very long meandering narratives and passive speech. Prevailing negative emotions –current anger. High level of vulnerability of characters, with no clear resolution of the attachment. Inclusion of irrelevant elements, or maximizing of the attachment-related emotions.</p>	<p>Stories chaotic and often bizarre. Often include violent actions with the injury, illness or death of characters. Dangerous events left unresolved.</p>

### 23. Attachment and Reflexive Function (Fonagy, Gergely, Jurist, & Target, 2002)

Findings re Reflexive Function associated with various Attachment categories:

Secure	Avoidant	Resistant	Disorganized
Child feels safe in making attributions of mental states to account for other's behaviour, and can conceive of alternative desire, beliefs related to different behaviours. Empathetic Talk is fluent, covering a wide range of topics.	Child shuns to some extent the mental state of the other.	Child focuses on own state of distress to the exclusion of close intersubjective exchanges.	Child is hyper vigilant re caregiver's behaviour using all cues available. Acutely sensitised to intentional states and so is more ready to construct a mentalized account of the behaviour of the caregiver. May perceive the mental state of the other as threatening to self. Intolerant of aloneness and abandonment.
Caregiver shares talk about emotions and thoughts			Caregiver provides contradictory information regarding infant's directed mental attitudes.

### 24. Current Relationships Interview (ACRI) for children (Reported in Grossmann, Grossmann, Fremmer-Bombik, Kindler, Scheuerer-Englisch, & Zimmermann, 2002)

ACRI asks children about daily experiences and thoughts about how available their parents and close others are. Children are also asked to describe their usual way of dealing with challenges, disappointments, and negative feelings. Transcribed interviews are rated for the child's reported attachment behaviour strategies in distressing situations.

Uses a 3-point rating scale to rate security of attachment:

- A score of 3 indicating that the majority of strategies were relationship oriented.
- A score of 2 indicating that most of the answers were ambiguous or that there was no dominant strategy.
- A score of 1 indicating most of the strategies used were avoidant.

Secure	Insecure
Classified secure if distress was expressed openly toward and attachment figure and if comfort or help was sought and accepted.	Classified insecure if the child avoided help for close others or could not think of any way of dealing with distressing emotions.

### 25. Attachment in middle childhood and adolescence an experience of parenting style (Karavasilis, Doyle, & Markiewicz, 2003)

Associations were found as stated below.

Secure	Avoidant	Preoccupied
Association with authoritative parenting that promotes the child's individuality and provides loving support and responsiveness.	Association with negligent unsupportive parenting.	Association with a parenting style that was warm and engaged, but that discouraged psychological autonomy and/or provided less supervision and limit setting.

## 26. Adult Attachment Interview and experience of limit setting (Steele, Steele, Woolgar, Yabsley, Fonagy, Johnson, & Croft, 2003)

Secure Autonomous	Dismissing	Preoccupied
Flexible adherence to limits	Controlled self-imposed limits on expression of feelings, occasionally punctuated with burst of cool derogation of disliked attachment figures	Difficulty in setting limits on feelings concerning attachment, with ongoing anger, and sometimes fear concerning childhood experiences.

## 27. The Child Attachment Interview for use with 7-12 year olds (CAI) (Target, Fonagy, & Shmueli-Goetz, 2003)

This interview protocol is conceptually based on the Adult Attachment Interview (George et al., 1985), but instead of reflecting on past experiences of attachment (as the AAI does) its focus is on recent and current experiences. The protocol uses 14 questions and a number of probes. Coding of videotaped interviews yields a secure classification and four insecure sub-classifications. Quality of attachment is calculated for both Mother and Father. In coding the video data, Relationship Episodes (REs) are isolated and assessed on six scales that are each scored on a 9-point rating scale, with 1 denoting a low score, and 9 denoting a high score.

Scales are:

- Emotional Openness – Ability to express and label emotions and ground them in examples
- Preoccupied Anger – Involving anger as well as evidence of denigration and contempt
- Idealization –Description of parents as ideal can be supported by examples
- Dismissal –Active denial of attachment and the description of parents as unimportant
- Self-organization - Internal representation of self-efficacy, based on self-initiated and constructive conflict resolution
- Balance of positive/negative references to attachment figures

Also considered is the overall coherence of the child’s responses and their nonverbal expressions.

### Attachment classification:

Secure classification is assigned when ratings of five or above on all the Emotional Openness, Self-organization, and Balance of positive/negative portrayal scales are received, and scores of three or less are received for the Idealization, Dismissal and Preoccupied Anger Scales.

### Levels of Secure/Very Secure/Insecure/Very Insecure are calculated using specific algorithms.

Classifications very similar to those used in the AAI can also be assigned but no details were included in the article.

## 28. The Caregiving Behaviour Classification System for use in conjunction with Strange Situation assessment (Britner, Marvin, & Pianta, 2005)

This classification system was developed to assess caregivers behaviour in Preschool Strange Situation assessments. This system uses 10 rating scales and also categorical classifications. Five classifications of behaviour are used and each is associated with specific patterns of: Gaze, Proximity and contact, Discourse, Affect regulation, Discipline, General attitude in relation to child, Leave taking, and finally Reunion behaviour.

Ordered-Secure (Beta)	Ordered-Insecure (Alpha)	Ordered-Insecure (Gamma)	Disordered-Insecure (Delta)	Disordered-Insecure (Iota)
Parent displays easy, relaxed, intimate pattern of behaviour with child, are equally comfortable with monitoring child’s autonomous play and welcoming child back if he/she needs comfort or reassurance.	Parent is avoidant or dismisses intimate attachment with child restrict interactions or give minimum of care, or restrict interaction to exploration and/or discipline.	Parent is overly encouraging of attachment behaviour, intimacy and dependency, while also seeming to resent the burden this puts on them.	Parent is somewhat disorganized and abdicating of their care giving role and don’t take an ‘executive’ role in relation to the child.	Parent does not show a related and intimate pattern of behaviour but displays behaviour not included in the other patterns or uses a combination of alpha, gamma or delta behaviours.

## Example of Coded Story

### Coding of Mary's Story

*Mary's response to the Seated Child picture*

Ok. It's gonna be at the dentist. This boy's been eating too many lollies so he has to go to the dentist. He's really scared about going. His mum says he has to go or he will be banned from lollies for a year. Finally he went and he had to wait in the waiting room, looking at all the people. Then someone came out and the dentist called his name. He was so scared. He went in. -----(pause)-----He had a great time. The dentist had a few jokes. He put on some really cool glasses and it was really no big deal. In the end he got 11 stickers for being so good. From that day onwards he was never scared of going to the dentist again. The end

Probe: "What was he thinking?" Response: He was feeling like really scared and like he was the only person in the world that had this problem and he was like really sad.

Coding begins with the **Assessment of Dyadic Interactions**. Each dyadic interaction included in the story is coded. In Mary's story there are two different interactions, the boy and his mum and the boy and the dentist. Four specific elements of these two interactions are examined: 1. The *Nature, Focus and Affective Tone of the Interaction*, 2. the *Child's Role* 3. The *Other's Role* and 4. The *Nature of Communication* portrayed. If a story contains no Dyadic Interaction then none is coded and the Coder moves on to an assessment of **Safe Haven** behaviour. The securely attached child's ability to use an attachment figure as a **Safe Haven** when distressed has been a hallmark of secure attachment and according to attachment theory each of the insecure styles of attachment is associated with unique responses to distress. Safe Haven behaviour is only assessed when a narrative contains and account in which a child character is distressed or encounters a situation that would be expected to cause distress or when the character is involved in a relational conflict (internal conflicts are not the focus here) or is in a situation that would normally be associated with relational conflict. In coding Safe Haven firstly the *Child's response to Distress and Mode of Assuagement* is considered. Here the child character's *Capacity to Act* to acknowledge and communicate their distress and; the *Mode of Assuagement* if any that the child chooses to address their distress as well as the effectiveness of the *Resolution* of their distress are evaluated, according to patterns of behaviour associated with the various attachment styles. In Mary's story the boy is distressed about going to the dentist and so his response to this distress is assessed for Safe Haven behaviour. Where a story does not include and account of distress or conflict then Safe Haven is not coded and the Coder moves on to coding aspect of the **Assessment of Discourse**.

An assessment of Coherence is the first part of the CEAT's Assessment of Discourse. Main's (1995) work with the Adult Attachment Interview demonstrated that the **Coherence** of a participant's biographical narrative was associated in particular ways to each of the four categories of attachment security. Recent Doll Play attachment assessment techniques also include an assessment of Coherence. In each case the assessment of four aspects of the

narratives **Coherence** is examined. These aspects of coherence are based on the work of Grice's (1986) who identified four maxims related to the production of a coherent narrative:

- **Quality**, how clear and believable the plot, characters are, in the above example there is no confusion about the story which is pretty straight forward and so according to the Coding guide would be scored secure;
- **Quantity**, how long and elaborated the narrative is, In Mary's story the story is complete and adequately elaborated so it is scored secure;
- **Relevance**, how the story given fits with the picture, As Mary's story is a plausible explanation of what is represented in the picture it is judged secure;
- **Manner**, how integrated the story is and how well it stays within the boundaries of the task. In this case Mary was cooperative and kept within the boundaries of the task so here too she was scored secure.

NB Coherence is always coded even when a story does not include a dyadic interaction.

The next task for the Coder is to consider the **Emergent Patterns of Empathy and Defence**. Here **Empathy** focuses on the feelings and thoughts projected by the participant onto his characters and how congruent these are with the situation the character faces. In Mary's story the feelings and thoughts she gave her child character were quite plausible given his situation so Empathy is coded Secure. **Defence** here refers to evidence of denial, idealization, splitting or isolation of affect associated with the story content or the participant's behaviour. If as in Mary's story no defensive processes are evident then none is coded. Finally the Coder considers the **Theme** of the story and whether it is adequately resolved. In Mary's story the theme is, Boy conquers his fear of the Dentist. This theme is reality based and the boy's distress is resolved by the end of the story, Theme is coded secure.

CEAT SUMMARY SHEET

	Story 1			
# Interactions	1. Boy and Mum		2. Boy and Dentist	
Attach. Style	S	AV	A/AM	Dis
Nature, Focus and Affective Tone of Interaction	1 ✓ ✓ ✓	2 ✓ ✓ ✓		
Child's Role	1 ✓ 2 ✓			
Other's Role	1 ✓ 2 ✓			
Nature of Communication		1 ✓ 2 ✓		
Child's Response to Distress	✓	✓		
Mode of Handling Conflict	X			
Coherence	✓			
Quality	✓			
Quantity	✓			
Relevance	✓			
Delivery	✓			
Empathy	✓			
Defence	X			
Theme	✓			
	<i>Boy conquers his fear of the dentist. It is satisfactorily resolved.</i>			
Totals	17	3	0	0

**Number of Interactions**

Mary's Story contains two interactions, which are listed.

**The Nature, Focus and Affective Tone first Interaction**

Mary's story describes two interactions that are realistic and genuine. In the interaction with the mother the affect tone is tolerant of negative feelings and while the interaction with the dentist is a bit tense there is also an accepting playful side to it. This is indicated on the score sheet by three ticks under the numeral one and three ticks under the numeral two.

**Child's Role**

The Child in this story is cooperative and controls himself in relation to the mother and the Dentist this is indicative of Secure Attachment so two ticks are placed in the Secure column

**Other's Role**

The mother is represented as caring about the child's teeth and is assertive in her requirements without being threatening which indicates security. The dentist is sensitive to the child's fear and makes a few jokes and gives a reward, which also indicates security.

**Nature of Communication**

The communication between the child and parent figure is inferred but not directly reported and the communication between the child and the dentist is assumed this is more indicative of Avoidant and so two ticks are placed in the Avoidant column.

**Child's Response to Distress**

While the child in the story is reported to be distressed he does not seek help (this would indicate Avoidant attachment as he seems to handle it in a self-reliant way so one tick is placed in the Avoidant column). The boy's contact with the Dentist, a helpful other assuages his distress, so a tick is placed in the Secure column) allayed his fears. Because the distress is

No **Conflict** is reported so no score is given

**Coherence**

The **Quality** of the story is rated Secure because it has a clear sequence of related events and characters and includes all three parts and there is some originality. The **Quantity** is adequate and so is the elaboration so again Security is indicated. The Relevance is also rated as indicating Security. Mary's **Delivery** which was cooperative and within the boundaries of the task also indicates Security

**Empathy**

The feelings projected by Mary for the boy in the story are congruent with the situation that she describes so a tick for Secure is given.

**Theme**

The theme is boy conquers his fear of the dentist, does not avoid the fear and meets it fear head on and it is satisfactorily resolved. This would seem to indicate a Secure theme so the tick is placed in the secure column.

**Totals**

Once all the ticks have been placed they are totalled down all the four attachment style columns and these numbers are entered into the **Coding Grid**

### **Coding Grid Mary's CEAT Scores**

<b>Story</b>	<b>Sec</b>	<b>Avoid</b>	<b>Amb</b>	<b>Dis</b>	<b>Story pattern</b>
<b>1</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>S, Av</b>
<b>2</b>					
<b>3</b>					
<b>4</b>					
<b>5</b>					
<b>6</b>					
<b>7</b>					
<b>8</b>					
<b>9</b>					
<b>Totals</b>					<b>=</b>
<b>%</b>					<b>Overall Pattern</b>

#### **5.3.8.8 Scoring the CEAT and Mary's Story**

Given the creative nature of storytelling it is not possible to expect every story to contain a set number of indicators. It was obvious from the stories collected in the design phase of the project that a single story could well contain indicators of a hierarchy of different attachment styles, which was information we wished to capture. Therefore, a process of scoring that included all the indicators identified was devised and a **Summary Sheet** (Table 2) was designed to facilitate the collating of all the attachment indicators coded in a set of nine stories. Table 13 shows an abbreviated portion of a Summary Sheet with the coding of attachment markers identified in Mary's story.

Once all indicators in a set of stories have been identified a total number of markers for each of the attachment styles is calculated for each story these are then transferred to the appropriate place on the Coding Grid (Mary's shown in the continuation of Table 13 ) These are the raw scores for each of the attachment styles. After all the story totals for each attachment style have been entered then the attachment style columns are tallied and the total is recorded at the bottom of each column in the row marked Totals. Column totals are then summed across the row and the sum is recorded in the last column in the space with the equals sign in it. This total is then divided into each of the attachment style totals and the resulting decimal number is recorded in the appropriate attachment style column in the last row of the Coding Grid marked with the percent sign (%). These are overall proportional

scores for each of the attachment styles and they indicate the influence of each of the attachment styles in the set of stories. At the very right of the Coding Grid is the Story Pattern column in it is recorded, using abbreviations the attachment styles that received a score in that story. These abbreviations are listed from greatest to least influence. This allows the Coder to see at a glance the patterns of attachment revealed in each of the stories. Once the proportions have all been calculated the overall pattern of attachment is recorded, from greatest to the least, at the bottom of the Story Pattern Column. The coder then proceeds to the **Profile of Models of Attachment** Section, which facilitates interpretation of the scores, see Summary Sheet Table 2. Here space is provided space for the coder's comments about the strength of the overall pattern of attachment reflected by the proportional Attachment Style totals as well the **Dominant model of attachment** and any **Secondary models of attachment** can be highlighted. The **Qualitative Comments** section is especially useful in the clinical use of the CEAT as it focuses on the participant's responses related to the handling of Distress and Conflict. Reflection on Coherence, Empathy, Defense, and Themes can also help to get a fuller picture of the participant's ideas about attachment, and how indicative they are of a participant's experience. The overall interpretation is meant to be a summary of the findings about the participant's likely attachment orientation with particular attention paid to strengths and weaknesses and areas of growth that can inform therapeutic work.

## Sample Stories Coded for Each of the Four Attachment Styles

### Sample Stories Coded as Secure, Avoidant, Anxious and Disorganized

In practice a set of eight stories are required to assess a participant's dominant attachment style however space limitations prohibit including four full sets of CEAT responses. Instead included below are responses of four participants to three of the CEAT stimulus card pictures, their stories will give the reader a flavor of the four different attachment styles as they are represented in actual stories. It is hoped this will provide an indication of the range and type of responses elicited by the CEAT and a flavour of the different attachment styles. Responses are arranged in sets according to the dominant attachment style that was coded.

The three pictures used are Picture one the **Seated Child** shows a child in profile seated on a bench outside of a closed door with a window directly behind him. Picture two **Child in Bed** shows a child in bed in a dark room with bed covers pulled up so that only his/her eyes are peering out. Picture three **Departure** a standing child is shown from behind with his arm sort of raised in front of his face and he is looking outside at a shaded figure that has one arm raised.

### Secure Responses

*Responses of Mary a grade 3 girl (Real names are not used)*

#### Picture One

Ok. It's gonna be at the dentist. This boy's been eating too many lollies so he has to go to the dentist. He's really scared about going. His mum says he has to go or he will be banned from lollies for a year. Finally he went and he had to wait in the waiting room, looking at all the people. Then someone came out and the dentist called his name. He was so scared. He went in. -----(pause)-----He had a great time. The dentist had a few jokes. He put on some really cool glasses and it was really no big deal. In the end he got 11 stickers for being so good. From that day onwards he was never scared of going to the dentist again. The end

**Probe:** "What was he Thinking?" Response: He was feeling like really scared and like he was the only person in the world that had this problem and he was like really sad.

#### Picture Two

This boy was very, very scared of the dark. His mother was at a special dinner party and his dad is asleep. He knows that when his dad is asleep he's not supposed to disturb him, but he can hear scraping against the window and he thinks monsters are going to come out and grab him. His favourite book is under the bed but he is afraid to get it because he's afraid monsters are under there and that they will pull him under. Then he heard a banging on the wall and he gets up to go tell his dad and he finds out it is just his dad dreaming and kicking on the wall. My dad does that sometime. And then he heard someone knocking at the door and it was his mum. He said to her about the scraping on the window. She said, "That was me. I wanted to get you to come to let me in because Dad had locked the door." He was happy and went back to bed-----he looked under it and made funny faces and he cuddled his favourite toy and he know now that when he hears noises he can go and find out where it comes from.

### Picture Three

Oh---Ok----What's that? (*she points to the shadow figure* the administrator answers, "Whatever you want it to be) ----There was a boy who was three years old. Whenever he sees his shadow he thinks he is afraid. Because, he doesn't have many friends, he is always trying to make friends at kindy, but no one will talk to a boy who thinks that his shadow is a person. He's very, very, very lonely and he prays that the next day he'll have a new friend but it never works. He told his Mum and she felt so angry she went up to the kindy lady and said, "Lady please find my little boy a friend." And she did. He like his friend. His Mum like his friend. And they played all the time, before school, after school and during school --- No kindy. That's how he learned about friendship. Now he knew a lot about friendship. Now he ignores his shadow and makes new friends. In prep he has the whole grade as friends. If you meet him you'll like him.

**Probe:** What happened before? **Response:** He had no friends and he used to ignore it but then he thought his shadow was a close friend because it always stayed with him. He used to ask it, "Why are you always black?"

### Avoidant Responses

#### *Responses of Jack a Grade Three boy*

#### Picture One

------(Long Pause)-----He looks sad a bit on his face see (He points to the face of the child) and he sits on the chair by his self and he can't see no one. That's it.

**Probe:** "What happened before?" **Response:** Looking for someone-----

**Probe:** 'Is that all?' **Response:** He didn't find them. Where do you live? **Answer:** "What do you think?"

**Response:** "I live in Laverton do you know where that is?" **Reply:** "Yes, but right now we need to finish this ok?"

(He nods his head yes.) **Probe:** So what happened after this picture?

**Response**------(Pause)-----Ah-----He might feel sick when he gets home and-----ah ---I can't think of anymore.

**Probe:** What is he thinking? **Response:** Don't know.

#### Picture Two

-----He's in bed sleeping and-----he might-----It might be late or early -----and-----ah-----

**Probe:** "Anything Else?" **Response:** And he might have school tomorrow-----and I don't know-----

**Probe:** What might he be thinking? **Response:** He----- ( He drops the picture on the floor and administrator ask s him to pick it up)----- Ah-----Um-----I don't know.

**Probe:** "How might he feel?" **Response:** Happy.

**Probe:** "Can you tell me about that?" **Response:** I don't know.

**Probe:** What happened before this picture? **Response:** He might been watching TV before he went to bed-----

**Probe:** "What happened after this picture?" **Response:** I don't know

### Picture 3

How much more pictures? **Reply:** There are two more after this one------(Yawn)-----  
------(looks at the picture again-----There's a shadow on it and the shadows putting its hand up and the shadow is dark and the other bit is light. -----The boy's light. -----

**Probe:** Anything else? **Response:** I don't know-----

**Probe:** What happened before this picture? **Response:** He could be playing play station and got bored-----

**Probe:** What happened after this picture? **Response:** He went away-----he went to his friends place-----I mean and it's finished.

**Probe:** What is he feeling? **Response:** Happy-----I don't know.

**Probe:** What is he thinking? **Response:** (*He sits with his feet up on the table and one hand in his sock*) -----About his friend he might go to the park with his friend. He might think to go to the park with him and I'm finished.

### Anxious Responses

#### *Responses of Sue a Grade One girl*

##### Picture One

-----He's sitting down and watching something-----He might be going out in a minute to play basketball or he might be listening to the teacher. -----

**Probe:** Anything else? **Response:** No.

**Probe:** What happened before? **Response:** -----He might be having his lunch or his breakfast-----or-----

**Probe:** What happened after this picture? **Response:** He might be going to school or he might be watching some one do happy things. **Probe:** What is he feeling?

**Response:** First he might have been sad-----

**Probe:** What is he thinking? **Response:**-----Uh-----about what he's going to do when the bell goes, or when he goes out, or when he goes inside.

**Probe:** Anything else? **Response:** No. -Thank you.

##### Picture Two

He's in bed. Might have had a bad dream. He's a bit frightened because he thinks there's a big tree outside and he thinks it might blow over onto his house and he feels a bit scared. Or he might be waiting for his pet, his pet cat to come in and give him a cuddle.

**Probe:** Anything else? **Response:** He might have had a bad dream ore the good one in the bad a bit-----and he might have brown hair and blue eyes and he had lots of friends. I had a bad dream last night. Maybe his brother was mean to him. My brother is mean sometimes and he still gets to go to buy lollies. He might of dreamed the tree fell down on his house and he was a bit scared and he woke up and he wanted to go back to sleep but he couldn't it kept on coming back into his head, I hate it when that happens. He had a good dream too. He was playing with his friends happily and one of the pretty girls came up with a flower and he had a flower and she might have had red or black hair.

**Probe:** What happened after this picture? **Response:** He called his mum because he was scared but she said he was too old to be scared of the dark but finally she got in bed with him.

### Picture Three

(She stacks and re stacks the pictures) I wish I could draw this good.-----Um-----He might be making shadows and he might be having fun or he-----it might be night, before bed and I'm---he's making shadows to scare his mum or maybe he is making faces at his mum and he's naughty a bit.

**Probe:** Anything else? **Response:** No.

**Probe:** What happened before? **Response:** I was watching, he was watching TV in the lounge room on the pink lounge ---- his mum likes pink or he might of discovered a shadow on the book he was reading. I wish we had a pink lounge. Pink is my favourite colour. I would sit on it all day. Don't you like pink?

**Probe:** What happened after this picture? **Response:** He might of had to be sitting down to have his tea but he didn't want to stop watching his shadows when his mum called him so he didn't go, or she might of got cross and then he went.

**Probe:** How is he feeling? **Response:** A bit happy, a bit between happy and sad.

**Probe:** What is he thinking? **Response:** Should I be going to have tea or should I still make shadows and faces. He has red hair and so does his mum. My brother has red hair.

### Disorganized Responses

#### *Responses of Tom a Grade Five boy*

#### Picture one

I think he's waiting or something-----Uh-----I'm not sure-----  
He might be sad-----because his dog has got to be put down-----  
-----I'm not sure-----He might of gone home crying-----

**Probe:** What happened before this picture?

**Response:** Sad. **Probe:** What was the boy thinking? **Response:** (*Stares into space like he did not hear the question so the probe was repeated*) **Response:** Wishing.

#### Picture Two

It might be a boy's bed time and it might be late because it's dark out there-----  
-----He's thinking he doesn't want to go to bed----- (blank stare)-----  
-----He can hear something-----like zombies jabbering-----  
doesn't want to get out of bed because it's cold-----the zombies might get him-----

**Probe:** What happened before?" **Response:** Um-----He might of said to his mum and dad that he didn't want to go to bed they said he if he didn't he'd be sorry.

**Probe:** How is he feeling? **Response:** Really warm.

**Probe:** Anything else? **Response:** -----*(long pause he seems distant)*-----  
---can't say-----

**Probe:** How did the story end? **Response** -----*(long pause)* -----  
can't think-----

#### Picture Three

The boy might have opened the door-----he might have got out of bed-----the Mum shouts, "Get back in bed." He tries to say, "I-----

**Probe:** Anything else? **Response:** That--- the Zombie coming for him-----

**Probe:** How did the story end?

**Response:** -----*(Long pause)*-----*(hits his forehead)*-----  
Can't think-----

## Themes of Stories Typically Told in Response to CEAT Stimulus Picture Cards

This section explores the most common themes that children in the non-clinical and clinical groups who participated in the Pilot Phase of the study projected in response to each of the nine CEAT pictures.

### **Common Themes for Stimulus Picture One**

The most common themes for stimulus picture one focused on a boy waiting outside a Doctor's office, or in a hospital, or else at the dentist, or outside the Principal's office. In most cases the boy was to see the Doctor or was waiting for his sick mother or pet that was in the office. The clinical and non-clinical groups chose similar themes for this picture, however Clinical participants were much more likely to leave the story hanging and unresolved, and/or to include bizarre details e.g. "He thinks there was death on the chair". They were often disturbed by the door and focused on something menacing and unstoppable behind it. Twenty-five of the 30 stories told for this stimulus picture included accounts of distress.

### **Common Themes for Stimulus Picture Two**

The most common theme for this picture was that the little boy holding his teddy has had a bad dream or has woken up and comes downstairs to find his parents talking. A frequent interpretation of the parent's discussion was that they wanted the boy to go to school and he did not want to go, or they were planning to discipline the boy. Alternatively the parent figures were seen as arguing and likely to get divorced. Clinical participants rarely thought the parents were talking about something good (only one story in the 10). Also they most often portrayed the boy as being ignored, and longing for his parent's attention.

### **Common Themes for Stimulus Picture Three**

Stimulus picture three is the only picture that depicted a peer interaction. The majority of the participants in both groups identified these characters as friends; or siblings (eg. brothers or a brother and sister). Themes of these stories varied quite a bit, from two boys playing at the park or at school and included stories about bullies and fighting. In most cases these interactions were realistic, everyday experiences common to most children. Stories in a school context often revolved around one of the children being the target of a bully. Another common context was that the boys were interacting in a situation that had meaning only for to them eg. Telling secrets, planning to build a cubby or deciding how to spend the day. In stories involving a bully the two characters were frequently seen as helping each other, to get help or to refrain from retaliation, thus keeping the targeted child safe. In both groups when distress was included in the story it was most often resolved in a secure way. This was especially so when the distress was in a school context.

### **Common Themes for Stimulus Picture Four**

The most common theme for this picture of a child sitting on the ground by a slide was that he/she is at the playground at the park or at school and has hurt himself coming down the slide. Most of the stories describe the consequences that flow from this. Twenty-seven of the thirty stories included accounts of distress or injury. Children in the Clinical group were more likely to tell stories in which the child does not receive help or is left to cope alone for long periods or has to struggle to crawl home after being deserted by friends. As was the case with stories told to picture three, stories to this picture that were set in a school context usually included an account of the child getting help. Older children in both groups spent more time depicting the ramifications of the child's injury than the younger children did.

### **Common Themes for Stimulus Picture Five**

Picture five is of a child being held by a person (shaded in) seen from the back. A common theme was that the child was greeting a parent, relative or friend either on their return or to say goodbye. Sometimes in the context was a distressing situation, eg. parent going to hospital or carrying an injured child. Children in both groups seemed to find the shaded figure disturbing. Seven out of the 10 clinical participants, and 8 of the 20 non-clinical participants identified this character as a shadow, a statue or another non-entity, one saw it as a ghost and another as a kidnaper. Most frequently this shadowy person was seen as a consolation to the child who was very lonely. Thirty percent of the Clinical participants and 20% of the non-clinical participants did not acknowledge the physical contact of the child and the adult figure in the story.

### **Common Themes for Stimulus Picture Six**

In both the clinical and non-clinical groups the most common themes for the boy in bed picture were that he was either unable to sleep because he was afraid of the dark, monsters, Zombies or a storm, or he has had a bad nightmare and wakes up scared. Only one child told a story that did not include an account of fear or distress. Stories told by the Clinical participants were more likely than the non-clinical group to leave the story hanging or unresolved or to resolve it in a self-reliant way.

### **Common Themes for Stimulus Picture Seven**

The most common themes for this picture were that the boy in the picture has just discovered his shadow who is his only friend, and he is playing with it or he is making shadow figures on the wall. Another theme was of a boy who looks out of the window and sees a friend or parent who at first he does not recognize or perceives to be threatening. This picture seems to have presented some difficulties for most of the children perhaps associated with reality testing related to the shadow figure. Even though the two figures have different hand and arm postures the majority of the children perceived them to be copying each other and so told stories that were confused and often unrealistic. It is possible that vague shadowy figures such as this one and the one in picture five present difficulties for children in the target age group because they trigger early childhood fears of the unknown and represent a potential threat.

### **Common Themes for Stimulus Picture Eight**

The most common themes for this picture of a man and a woman looking at a baby in a cot were that they were new parents who have just brought their baby home from hospital and are trying to put it to sleep, or alternatively the baby had wakened in the night and his or her parents or siblings are trying to put him or her back to sleep. Some evidence of sibling rivalry surfaced in several of these stories older children were said to want more of the parent's attention after the baby came. The majority of these stories were typical of the kinds of situations that arise in a family with a new baby. Both groups often attributed developmentally impossible abilities to the baby. In the clinical group these abilities had to do with self care while in the non-clinical group they were most often associated with the parents desire to see the baby grow up quickly. Participant's who were coded with a dominant Avoidant attachment pattern often identified the parent figures as older siblings who were charged with the babies care and who were punished if they disturbed the baby.

### **Common Themes for Picture Nine**

The child looking at the fish in the bowl is most often said to have been bored and so he asked his parents to buy him a fish, or he has been given a fish as a present. In many of the stories the fish dies, is lost or is stolen, as a result many include accounts of distress. The

only difference between the clinical and non-clinical stories was that the clinical stories were more likely to include unrealistic incidents like the fish being stolen and sent into outer space or dying and then coming back to life or being throw out and getting back in the bowl when the child leaves it outside. Seven of the 30 participants identified this child as the same one who had been hurt on the slide and included this detail in their story.