Attachment, self and autobiographical memory in middle childhood : a cross-cultural study of British and Saudi Arabian children

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Thesis Submitted to University of Durham

Department of Psychology

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Declaration

The research contained in this thesis was carried out by the author between October 2002 and September 2006 while a postgraduate student in the Department of Psychology at the University of Durham. None of the work contained in this thesis has been submitted in candidature for any other degree.

Statement of Copyright

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Abstract

The main purpose of investigations reported in this thesis was to explore inter-relations between children's autobiographical memory, self-evaluations, and attachment representations in the context of a cross-cultural study. Differences in the autobiographical memories of children in individualistic versus collectivistic cultures have been investigated previously, but the research reported in this thesis is the first to consider cultural differences in children's self-evaluations and attachment representations. This thesis also reports the first data on the relation between children's attachment representations and their autobiographical memories.

The thesis is organised around four main themes, which are outlined in Chapter One. The first theme concerns the nature of the relation between autobiographical recall and children's self-evaluations, focusing on the determining role of the emotional quality of the material being recalled. Unlike autobiographical memory research on adults, developmental studies have not addressed relations between self view and memories for positive and negative events, or for emotional versus non-emotional events. These issues are important because they will enable one to conclude whether any relation between self view and AM generalises across recall for all types of experience, or is more specific to recall for emotional events.

The study reported in Chapter Two addressed this first theme. The participating children (N = 160, 97 girls, 63 boys) were aged between 6 years 6 months and 9 years (mean age, 7 years, 4 months) and were drawn from two countries: Saudi Arabia and the UK. Autobiographical memory was measured using a battery of memory questions adapted from Han, Leichtman, and Wang (1998) in which children were asked to recall memories from the recent and more distant past: (a) what they did the previous evening and on waking up on the day of testing, (b) what they did last Eid (for the Saudi children) or last Christmas (for the British children), (c) something that they did recently that was special and fun, (d) a time when they were told off by they parents, and (e) their earliest memory. Children's autobiographical narratives were coded for total volume, orientation information, elaborations, evaluations, and markers of narrative cohesion (temporal markers and descriptives) using Fivush, Haden, and Adam's (1995) scheme.

Children's self-esteem was measured using Harter's (1985) Self Perception Profile for Children, which yields scores for six separate dimensions: scholastic competence, social acceptance, athletic competence, physical appearance, behavioural conduct, and global self-worth. As well as scores for the six dimensions, children took part in a related procedure to assess how they viewed themselves in areas that were personally important, from which a discrepancy score was calculated, indexing how favourably children evaluated themselves in those areas important to them.

Children's self-evaluations were found in both correlational and regression analyses to relate to their recall of both emotional and non-emotional material. However, this relation was only observed for children's global self-worth scores, and not for their discrepancy scores, and although significant, the observed relations between self-worth and recall of emotional material were modest. In addition, the direction of effect for the relation between self-worth and positive, negative, and non-emotional memories was the same: in all cases, higher self-worth was associated with recalling all of these experiences in less detail. The study reported in Chapter Two also replicated previous findings that the autobiographical memories of children from collectivistic societies are shorter and contain fewer personal opinions than those of children from individualistic societies. Finally, Saudi Arabian children were found to score more highly than their British counterparts on three of the six dimensions of self-esteem: scholastic competence, behavioural conduct, and global self-worth.

The second theme focuses on children's representations (or internal working models: IWMs) of attachment relationships and (a) their autobiographical recall, and (b) their self view. A related theme is the issue of the discriminant validity of IWMs of attachment relationships. The IWM construct is poorly defined, making it impossible to draw firm conclusions regarding how the IWM relates to other cognitive representational systems such as AM. The study reported in Chapter Three addressed these two themes. The same sample of children who participated in the study reported in Chapter Two took part in a story-completion task to assess the security of their attachment representations. Children's story completions were coded using the scheme developed by Green, Stanley, Smith, and Goldwyn (2000) which classifies children according to four categories: secure, insecure-avoidant, insecure-ambivalent, and disorganised. Chapter Three also provides details on a new coding scheme developed as part of this thesis to assess the *quality* of children's narratives about the different memories they recalled during the autobiographical memory assessment. The new scheme is based on the Gricean maxims used in the narrative coding system for the Adult Attachment Interview (George, Kaplan, & Main, 1985). This coding scheme for the quality of the autobiographical narratives classified children's recall for each memory into one of six categories: (a) lacking in detail, (b) overly elaborate, (c) incoherent, (d) appropriate, (e) coherent, and (f) detailed. Given the focus in attachment research on the quality of narrative, rather than the content of the material being recalled, investigating both of these aspects of children's autobiographical memories and their relations with attachment security was important.

The results of the study reported in Chapter Three highlight pervasive links between the security of children's IWMs of attachment relationships and their autobiographical narratives, although the direction of effect was dependent on whether one assesses autobiographical memory in terms of quality or quantity of recall. For total recall across all memories, as well as for volume of recall for all of the individual memories except the events of last night/this morning, children with disorganised attachment representations recalled the most information. The effect of security was significant for the Eid/Christmas and being told off memories, with disorganised children recalling more than their peers with avoidant representations, while no differences were seen between the disorganized and secure groups. However, when autobiographical memory was assessed in terms of quality of recall, this pattern was reversed. Compared with their counterparts in the insecure group, children with secure attachment representations appeared more likely to recall the Eid/Christmas, nice event and being told off in a coherent or detailed manner. Thus, while secure attachment representations do not appear to convey any advantage to the child in recalling autobiographical information, a secure IWM helps children present the information recalled in a more coherent and comprehensible fashion.

In contrast to the relations between attachment IWMs and autobiographical memory, the study reported in Chapter Three found no associations between security and children's self-evaluations. Finally, Chapter Three reports on cultural differences in children's attachment IWMs. Although there were no differences between the British and Saudi children as a whole with respect to the security of their attachment representations, when Saudi children were split on the basis of gender, differences emerged. Saudi girls were more likely to have secure attachment representations than their male compatriots. Moreover, when the attachment distributions of Saudi girls and boys were compared separately with that of the whole sample of British children, no difference was seen for Saudi girls, but Saudi boys were found to be more likely to have insecure IWMs than were British children as a whole. Specifically, Saudi boys appeared more likely to hold insecure-avoidant attachment representations, with 43% of Saudi boys falling into this category.

The study reported in Chapter Four addresses the final theme of the thesis: the reorganisation of IWMs of attachment relationships in light of changes in the quality of the caregiver–child relationship. A sub-sample of 14 of the 90 Saudi children who had participated in the studies reported in previous chapters took part in a pilot intervention study with their mothers. The intervention involved group sessions with the mothers and home-based activities that aimed to improve the quality of mother–child interaction. At the end of the 6 week intervention, the children participated again in the story-completion task to assess the security of their IWMs. The results of the study reported in Chapter Four suggest that the intervention had a marked positive impact on the quality of the mother–child relationship, and more importantly, influenced the quality of the children's IWMs of attachment. Of the 8 children with insecure attachment representations, all had become more secure at post-test, with half of the children being classified as secure. The attachment representations of the secure children who participated in the intervention as controls did not change.

The final chapter discusses the results in light of the themes of the thesis and suggests avenues for future research.

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Chapter 1

1.1 *Determinants of Autobiographical Memory Development*

Autobiographical memory is of fundamental significance for the self, for emotions, and for the experience of personhood, that is for the experience of enduring as an individual, in culture, over time (Conway & Pleydell-Pearce, 2000, p. 261).

Tulving (1972/1983) famously distinguished between two types of memory – semantic and episodic – describing episodic memory as "unique, concrete, personal experiences dated in the rememberer's past" (1983, preface). Memory researchers have subsequently treated autobiographical memory (AM) as a subclass of episodic memory. A unique property of AMs is their connection with how individuals view themselves and create their life stories, resulting in AMs having a self-related property that distinguishes them from semantic and episodic memories in general. For example, although we can remember semantic information, such as that London is the capital of England, it is unlikely that we will remember the precise moment at which we learnt this fact, unless attaining this piece of knowledge was in some way important to ourselves or was relevant to our life story. Given this quality of AM, it is unsurprising that several researchers have argued for a close relation between AM and one's self concept. For example, Brewer (1986) stated that "the self is composed of an experiencing ego, a self-schema, and an associated set of personal memories and autobiographical facts" (p. 27), suggesting that AM actually forms part of one's self concept. In a similar vein, Conway (1996) argued that "a person without an autobiographical memory would have no self, no identity" (p. 295).

From its beginnings, psychological discussion of the self has been framed within the context of social interaction. Baldwin (1902) believed that one comes to know oneself as one comes to know others, and Cooley (1902) referred to the *looking glass self*, highlighting how the self consists of different reflections on oneself. The self is thus the internalisation of other people's viewpoints, and therefore depends on social interaction. These views were supported by studies on primates (e.g., Gallup, 1977) which showed that the development of the self concept depends upon social exposure to other members of the species. Gallup (1977) found that chimps reared in isolation seemed not to have developed a self-concept, since unlike socially-reared chimps, they did not show self-directed behaviour in the rouge test (Amsterdam, 1972). This reflective quality of one's self concept that is gained from interaction with others has also been incorporated into work on links between self and AM. From a very early age, children and parents begin to reminisce about their personal experiences (e.g., Hudson, 1990), with these stories playing an important social function. Indeed, several theorists regard social interaction as critical to the construction of AM. For example, Nelson (1993) argued that "the original functional significance of autobiographical memory is that of sharing memory with others" (p. 376), and Fivush, Haden, and Adam (1995) concluded that "only those memories which can be talked about with others will become part of the autobiographical life story" (p. 34). The type of information that an individual shares with others provides the listener with information on what kind of person that individual is or is trying to be (Brewer, 1986), and thus our AM in part determines how people will react to us, which in turn will impact on our self view.

Because of the links that have been drawn between AM and self, researchers have highlighted the importance of the emotional quality of the memory being recalled, since emotional memories are more likely to impact on one's self view. Indeed, Conway (1996) argued that AM is not only the driving force behind one's conception of self, but is the quality of human experience that makes it possible for one to respond emotionally to the world. According to both Barclay (1996) and Conway (1996), the normal and healthy adult self has the skill to search autobiographical knowledge and to build AMs in order to update progress toward working goals. Goals and emotions are thus considered by Conway and Pleydell-Pearce (2000) to be one of the major foundations of categorising and recollecting memories.

Conway (2001) argued that goals are represented in an individual's 'working self' model, which is involved in encoding experiences and takes a major role in the construction of specific memories during remembering. One's working self is based on AM about goals, whether they have been achieved, and one's emotional appraisal of progress towards them. AM also helps the working self formulate goals that are realistic, and therefore more likely to be attained, "so what goals the self has will be dependent on one's own memories on how useful and effective they are. From this point of view the working self makes available memories and knowledge that are congruent with the goal of the self" (Conway, 2001, p. 1367).

Similar arguments have been put forward by Markus and Nurius (1986) who proposed that autobiographical knowledge may help individuals formulate ideas about how they would like to develop and change in the future (so-called 'possible selves'), and by (Baddeley, 1987) who maintained that AM is essential in solving problems and forming opinions and approaches that direct people's goal-directed actions. Wilson and colleagues have provided empirical evidence to support theoretical notions of a link between AM and self identity. Wilson and Ross (2000) asked participants to describe themselves, focusing on either providing an accurate or a favourable evaluation. Wilson and Ross (2000) found that this manipulation of individuals' goals influenced their recollection and appraisal of former selves. Compared with those who had been given the accuracy goal, individuals with the self-enhancement goal were more likely to present their previous selves as inferior, thus boosting their current evaluation of self. Wilson and Ross (2003) argued that, "by derogating the past, individuals are able to create an illusion of improvement without greatly misrepresenting their present strengths and weaknesses" (p. 140).

The influence between self-identity and AM also appears to be bidirectional: not only do individuals' current self-views, beliefs and goals influence their recollection and appraisal of former selves, but AMs impact on one's current self view. Wilson (2000, cited in Wilson and Ross, 2003) varied university students' sense of closeness to past events of positive and negative valence by asking them to place events from high school on two different time lines: one that started at birth, and one that started at age 16. Wilson (2000) found that people represented these events as being much closer to present time if they were given a time line spanning their entire life than one that only spanned the last few years. Importantly, manipulating individuals' perception of distance to past events was related to how they appraised their current selves. If the manipulation resulted in students feeling closer to a negative event that occurred in the past, they were more likely to evaluate their present selves less favourably than those students whose perception had been manipulated to make them feel more distant from past negative events.

Naturalistic observations also support the notion that the valence of AMs impacts on one's current mood. For example, people report feeling happier and more satisfied after recalling a positive past experience, whereas a distressing memory results in a diminution of feelings of happiness and satisfaction (e.g., Martin, 1990; Salovey, 1992). But there are times when this matching in emotional valence between past memories and current views of self does not prevail, with, for example, positive memories depressing the rememberer (e.g., Nolen-Hoeksema, 1987). Clark, Collins, and Henry (1994) explained such counter-intuitive effects by arguing that memories will only cause matched reactions in emotional responses if the individual represents the past self who experienced these events as representative of one's current self.

1.2 *Developmental Accounts of Autobiographical Memory*

Early studies into children's AM concluded that children do not begin to recall past experiences until the third year of life, with their early recollections containing only generic information (Hudson, 1986; Nelson & Gruendel, 1981; Nelson & Ross, 1980). Similarly, older children and adults are unable to recall experiences before around age 3 (e.g., Pillemer & White, 1989), hence the label 'infantile amnesia' (Freud, 1905/1953). From age 2, children become able to provide accurate information about their experiences in response to questions from parents (Fivush, Gray, & Fromhoff, 1987; Hudson, 1990; Nelson & Fivush, 2000). By the time they reach their fourth year, children begin to take a more active role and to recount past experiences in a coherent manner, and age 4 sees the full emergence of the AM system, with 4-year-olds being able to organise their memories chronologically according to a systematic cognitive structure so that "they know that they have had a past and can expect the future" (Neisser, 1988, p. 178). There is thus some delay between the initial emergence of AM and a fully functioning elaborated system of encoding and retrieving past experiences.

Numerous theoretical accounts have been proposed to explain infantile amnesia and AM development (see Reese, 2002, for a review). Like the theoretical work in the adult literature discussed above, developmental accounts have focused on (a) relations between self and AM, (b) how social interaction shapes children's autobiographical recall, and (c) how the emotional content of events impacts on how well they are recalled. Theories which centre on how interpersonal interaction determines AM have considered the effects of both the family and the broader cultural environment.

1.3 *Developmental Accounts of Relations between Self and Autobiographical Memory*

Some researchers have proposed that aspects of children's self development determine AM, with a focus on basic self-recognition (Howe & Courage, 1993, 1997), or the more sophisticated understanding that self is stable and endures over time (e.g., Neisser, 1988; Povinelli, 1995).

Howe and Courage (1993, 1997) argued that self-recognition is the essential attribute that facilitates AM. Children first begin to pass tests of self-recognition such as the rouge test (Amsterdam, 1972) at around 15 months, with the majority of 24-month-olds recognising that the image they see in a mirror is a reflection of themselves. According to Howe and Courage (1993, 1997), children who do not have this conception of 'cognitive self' are incapable of encoding memories as self-relevant because they have no 'me' to which they can attach the memory. Viewing self-recognition as a prerequisite for AM thus explains why older children and adults are unable to recall any experiences from the first 2 years of life. In contrast, Povinelli (1995) proposed that AM is dependent upon a more sophisticated conception of self, arguing that children cannot recall AMs until they are capable of understanding the relation between past and present selves. Povinelli assessed this understanding of self using a delayed self-recognition task (Povinelli, Landau, & Perilloux, 1996) in which children were shown a video of themselves in which a sticker was surreptiously placed on their backs. Povinelli et al. (1996) reported that none of the 2-year-olds who watched this video reached to remove the sticker, in contrast to 25% of 3-year-olds and 75% of 4-year-olds, leading them to argue that an enduring sense of self is not achieved until age 4. Thus, according to Povinelli's (1995) view, full AM emerges at age 4 because of the advances in children's self-understanding that occur at this age.

Welch-Ross (1995) also argued for children's self-concept playing an important role in AM development, although she maintained that it was an organised, psychological concept of self, rather than the more basic forms of self-concept discussed above, that was instrumental in AM development. Drawing on work by Eder and colleagues (Eder, 1990; Eder, Gerlach, & Perlmutter, 1987), Welch-Ross (1995) argued that children begin to form an organised, psychological concept of themselves at around age 3, thus coinciding with the earliest age at which memories are recalled. However, for Welch-Ross (1995), even this more sophisticated representation of self is not sufficient for AM development; in addition, children's metacognitive capacities determine AM. Specifically, Welch-Ross (1995) highlighted two metacognitive abilities required for recall of one's own past experiences: (a) recognition that knowledge of an event is dependent upon personal experience of it, and (b) an understanding that remembering is a mental state. In children who possess these abilities, episodic memories will only become AMs if they are relevant to the child's conception of self.

In focusing on the role played by metacognitive abilities, Welch-Ross (1995) drew on the work of Perner (1990, 1991) who highlighted how AM depends upon children's capacity to understand how they have acquired a piece of knowledge. In support of this argument, Perner (1992, cited in Welch-Ross, 1995) reported positive associations between children's AM and their performance on tasks that assessed their understanding of the origins of their knowledge. Welch-Ross (1995) proposed that these metacognitive abilities are prerequisites for the elaboration and refinement of AM, rather than for its initial emergence.

In later work, Welch-Ross (1997) focused more explicitly on the role played by children's theory of mind abilities, rather than their more general metacognitive understanding, in children's developing AM. In addition to understanding the origins of one's knowledge, possessing a theory of mind entails the ability simultaneously to represent different perspectives on the world. Without this ability, children would be unable to pass the classic tasks designed to assess theory of mind understanding, such as the unexpected transfer (Wimmer & Perner, 1983) or appearance-reality (Flavell, Green, & Flavell, 1983) tasks. Welch-Ross (1997) argued that theory of mind may be crucial for AM because it enables the individual to entertain the possibility that past events may be remembered differently by different people.

At present, however, there is little empirical support for any of these theories of AM development. For example, studies investigating the link between AM and children's theory of mind (Perner & Ruffman, 1995) or more general metacognitive abilities (Perner, 1990, 1991, 1992) have considered only children's recall for stimuli presented in structured laboratory-based tasks, so links with children's broader and naturalistic AM have not been addressed. Moreover, since these studies have only addressed concurrent relations with AM, they cannot speak to the issue of whether the acquisition of metacognitive or theory of mind skills is causally related to advances in children's AM.

With respect to relations between AM and self, the results of studies in this area are complicated by the fact that AM has typically been assessed from the autobiographical narratives children have produced in collaboration with their mothers. For example, Harley and Reese (1999) addressed whether children's basic self-recognition predicts how they recall memories with their mothers between 24 and 30 months. Although Harley and Reese (1999) reported an association between early self recognition and children's subsequent volume of memory, follow-up analyses on the same data (Reese, 2003) suggested that this link was not direct. Reese (2003) reported that mothers' reminiscing style during the AM task mediated the link between self-recognition and children's AM recall. Children who showed early self-recognition had mothers who later engaged in more elaborate conversations about past experiences. Thus, it may be that the cognitive advances associated with self-recognition prompt mothers to talk to their infants about the past in more sophisticated ways, and it is this maternal talk, and not children's self-recognition, that is directly related to children's AM.

One could make similar arguments relating to the debatable direction of cause and effect for relations between children's theory of mind abilities and AM recall. Indeed, Reese (2002) highlighted the fact that theories that focus exclusively on child-centred attributes are unlikely to provide satisfying accounts of AM development because such attributes "cannot be considered a solely endogenous characteristic of the child" (p. 130). This inability to assign attributes exclusively to the child is problematic for accounts of children's AM development for a number of reasons.

First, the child-centred attributes identified as being important for AM development, self and theory of mind are themselves dependent on interaction with others. As discussed above, psychological discussion of the self is invariably framed within the context of social interaction. Similarly, theory of mind is now known to be influenced by a wide range of social factors, such as the quality of family interaction both during infancy (Meins et al., 2002, 2003) and the preschool years (Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991), frequent contact with extended kin (Lewis, Freeman, Kyriakidou, Maridaki-Kassotaki, & Berridge, 1996), and participation in communicative exchange with others from birth (Woolfe, Want, & Siegal, 2002). Because both self and theory of mind appear to be determined by social interaction, this raises the possibility that these factors are not *directly* linked with AM, and that those aspects of social interaction that predict the development of self and theory of mind also determine AM.

Second, one could argue that developmental researchers have not focused on those aspects of self most salient for AM development. Recall that the adult literature highlighted relations between individuals' *evaluations* of current selves with regard to their previous experiences. It would therefore seem reasonable to hypothesise that children's recall of past experiences develops in relation to their ability to evaluate their conception of self, rather than being determined by their more basic understanding of self. Given that there is considerable variation in AM at ages beyond the point at which children attain a self concept and a representational theory of mind, it is clear that these factors cannot account for individual differences in AM in older children. No study has yet investigated the link between children's evaluations of themselves and their personally-generated AMs, although one study has addressed how mother–child conversations about the past relate to whether children have an organised conception of self.

In a study involving 3- and 4-year-olds and their mothers, Welch-Ross, Fasig, and Farrar (1999) assessed mother–child conversations about four emotional events in the child's past, and the children completed Eder's (1990) Children's Self-View Questionnaire (CSVQ). In the CSVQ, children endorse one of two opposing viewpoints (e.g., *I like to tease people* versus *I don't like to tease people, I never do things that I am not supposed to do* versus *I sometimes do things that I am not supposed to do*) to give a picture of their evaluations of themselves. Eder (1990) presented 3 factors from children's responses to the CSVQ: self-control, self-acceptance via achievement, and self-acceptance via affiliation. Welch-Ross et al. (1999) assessed their participants' organisation of self-knowledge with reference to these three factors, arguing that a child who has an organised conception of self will endorse statements in a non-random fashion, indicating that they perceive their behaviour across a range of different contexts to be organised around the same fundamental characteristics. Welch-Ross et al. (1999) reported that children's organisation of self-knowledge was predicted by mother–child emotional talk; specifically, children's exposure to talk that explicitly involved their emotional appraisal of a situation (e.g., *you had fun at that party*) was positively associated with organised self-knowledge. However, although these findings are suggestive of a link between children's evaluations of self and their AM, because this study assessed children's AM in the context of mother–child talk, it is impossible to establish whether children's self-evaluations relate to individually recalled and constructed AMs.

The fact that research has tended to assess children's AMs from mother–child conversations about the past is particularly problematic since individual differences in how caregivers talk to their children about the past are known to relate to children's AM.

1.4 *Interpersonal Interaction as a Determinant of Autobiographical Memory*

A considerable body of evidence exists to support the contention that differences in parents' style of talking about past events with their children make a significant contribution to children's own AM abilities. Researchers adopting the *social interaction perspective* on AM (e.g., Fivush, 1991; Nelson, 1993) regard parent–child conversation about the past as essential for children's AM development because such conversations help the child to recognise which events are important in terms of their self-concept and provide a framework for organising their memories and how to recall them. Thus, all parent–child past conversations are important, but certain ways parents talk with their children about the past have been found to be particularly effective in facilitating children's AM.

Two separate parental styles of reminiscing about the past have been described: *elaborative* or *topic extending*, and *repetitive* or *topic switching* (Engel, 1986; Fivush & Fromhoff, 1988; Haden, Haine, & Fivush, 1997). Elaborative style involves long conversations about each past event, containing many elaborations (e.g., moving to different aspects of the event or providing new information) and evaluations of the child's contribution to recalling the event. Repetitive style involves many repetitions of questions or remarks, 'fill-in-the-blank' comments (e.g., "we flew to Italy in a ...") and memory prompts whereby the child is requested to remember without any additional cues being given to aid recall. Parental style has been found to be stable over time (Reese, Haden, & Fivush, 1993), across children in the family (Haden, 1998), and across events that are either shared or not shared with the child (Reese & Brown, 2000). Child gender has, however, been found to influence parental reminiscing style. Parents are more likely to adopt an elaborative style when reminiscing with their daughters than with their sons, which may partly explain why girls tend to recall more autobiographical information than boys (Reese & Fivush, 1993; Reese, Haden, & Fivush, 1996). Child gender effects on parental elaboration are most pronounced when parents are talking about emotional events; in these contexts mothers are even more elaborative with their daughters than with their sons (Adams, Kuebli, Boyle, & Fivush, 1995; Fivush, Berlin, McDermott Sales, Mennuti-Washburn, & Cassidy, 2003; Fivush, Brotman, Buckner, & Goodman, 2000).

Children whose parents adopt an elaborative style have been found in several studies to have superior AM. For example, Reese, Haden, and Fivush (1993) investigated longitudinal relations between parental reminiscing style when children were 40 months of age, and their AM at 59 and 70 months. Children with elaborative mothers subsequently recalled more past memories. The causal relation between parental style and children's AM has also been demonstrated using an experimental intervention. In Peterson, Jesso, and McCabe's (1999) study, mothers were trained to use an elaborative style when reminiscing with their 3-year-olds. When children were followed-up at age 5, children from the training group were found to produce more complex autobiographical narratives than their peers in the control group. Elaborative style thus relates not only to the amount that children can recall but also to how well organised their AMs are. Indeed, researchers have found that children's autobiographical narrative structure closely mirrors their mothers' reminiscing style.

For example, Haden et al. (1997) reported that children who recalled past experiences in such a way that it was clear to the listener when and where events had happened, who was present, and so on, had mothers who emphasised similar types of orienting information in talking about past events. Similarly, children whose mothers tended to focus on emotional reactions to events or provided numerous evaluative comments subsequently organised their autobiographical narratives around similar themes. Mothers' style of reminiscing with their children thus appears to have specific causal influences on how much children remember of their past experiences and how they organise their memories into a narrative account.

The impact of different parental reminiscing styles on children's AM has been investigated between cultures as well as within cultures. Specifically, researchers have investigated whether children being raised in collectivistic versus individualistic cultures differ in their AM. This cultural difference was hypothesised to impact on children's AM because of cultural variations in how parents in collectivistic and individualistic societies talk to their children about the past, and the more general extent to which children are encouraged to express their own feelings and be actively involved in conversations with their parents (Han, Leichtman, & Wang, 1998; Ji, Schwartz, & Nisbett, 2000; Wang, Leichtman, & Davies, 2000).

Cultures in Asian countries and the Arabic-speaking world are described as collectivistic since they discourage individuals from talking about themselves and personally experienced events (Barakat, 1993; Dwairy, 2004; Markus & Kitayama, 1991; Mikulincer, Weller, & Florian, 1993; Mullen, 1994; Scharf & Hertz-Lazarowitz, 2003).

Uleman, Lee, and Roman (1995) argued that people in collectivistic cultures do describe personal attributes, such as abilities, opinions, judgements, and personality characteristics, but these attributes are understood as situation specific, as sometimes elusive and unreliable, and not particularly diagnostic. According to Triandis (1989), people from non-Western cultures are more likely to possess a collective self because their child rearing practices emphasise the in-group.

This contrasts with the way in which parents in Western societies typically encourage their children to participate actively in conversations with themselves and other adults, to express their own views, and to talk about their past experiences. In a study comparing Korean and American mothers, Mullen and Yi (1995) reported that American mothers talked to their children much more frequently than their Korean counterparts, and were also more likely to focus their conversations on their children's preferences and interests. In contrast, Korean mothers were much more likely to talk to their children about morals and social discipline. Similar differences were reported between Chinese and American parents by Wang et al. (2000), who found American mothers to adopt an elaborative reminiscing style in which children were required to participate, and mothers provided evaluative feedback on the child's judgements, opinions, and preferences. Conversely, Chinese mothers adopted a repetitive style, and any evaluative feedback tended to be about behavioural standards and moral issues. Mullen and Yi (1995) and Miller, Wiley, Fung, and Liang (1997) argued that such differences in parent–child conversations reflect broader cultural differences in socialisation goals to ensure that Korean and Chinese children are appropriately respectful of elders, show obedience to authority, and demonstrate a sense of shame.

Critically for the social interaction perspective of AM development, these cultural differences in parent–child conversations about the past appear to be systematically related to cultural differences in children's AM. Han et al. (1998)

reported that the autobiographical narratives of Chinese and Korean children were significantly shorter and contained fewer references to themselves and their own opinions than those of their American peers. Wang and Leichtman (2000) found that Chinese mothers' focus on morals and suitable behaviour was reflected in their children's accounts of past experiences. There is thus general acceptance that culture impacts on the volume and organisation of children's AM.

1.4.1 The Emotional Quality of the Recalled Experiences

"When we talk about the past, we talk about emotions" (Fivush et al., 2003). Research on how the affective nature of the event being recalled relates to how well the child can remember the experience has focused almost exclusively on memories for emotionally negative events.

In their review of the literature on children's memory for stressful events, Alexander, Quas, and Goodman (2002) highlighted the lack of any consistent pattern between the stressful nature of the event and its subsequent recall. Drawing on work involving memory for naturally-occurring stressful events.

Alexander et al. (2002a) discussed how some studies have found superior recall for stressful events (Alexander et al., 2002b; Goodman, Bottoms, Schwartz-Kenney, & Rudy, 1991), others have found mixed relations between stress and recall (Quas et al., 1999), while others still have reported negative associations between stress and recall (Merritt, Ornstein, & Spicker, 1994). For example, investigating children's memory for the same invasive medical procedure, Merritt et al. (1994) reported a negative relation between overt stress during the procedure and 3- to 7-year-olds' recall of their experiences 6 weeks later, but Quas et al. (1999) found both positive and negative associations between recall and overt distress depending on the time during the procedure that the distress occurred. Investigating links between recall and memory for the more commonplace procedure of inoculations, children who demonstrated the most distress had the best memory for the event (Alexander et al., 2002b; Goodman et al., 1991).

Due to the mixed pattern of findings, Alexander et al. (2002a) argued that individual differences in children's coping strategies might be systematically related to their quality of autobiographical recall, and thus help to explain the divergent pattern of findings. These authors identified two main ways in which coping strategies could influence subsequent recall: different strategies will (a) impact on the extent to which the child focuses on the stressful event, and (b) influence their ability or willingness to think about the event and talk about it with others. Both of these factors are likely to influence subsequent recall of the event because of their impact on how the event is encoded, stored, and retrieved. With regard to (a), some children may cope with the stressful event by directing their attention away from what is happening to them (e.g., Compas, 1988; Quas, Goodman, & Jones, 2003), some may seek information from, for example, medical staff during the procedure in order to help them understand what is going on, while others might turn to caregivers for support or comfort (Katz, Kellerman, & Siegel, 1980; Quas, Hong, Alkon, & Boyce, 2000). In terms of the likelihood of children discussing the stressful event with others, as discussed above, there are individual differences in the extent to which caregivers elaborate on emotional memories, with mothers tending to elaborate more on emotional events with their daughter than with their sons (Adams et al., 1995; Fivush et al., 2000, 2003).

Because young children are only beginning to learn how to construct autobiographical accounts of their past experiences, it has been argued that caregivers play an important role in helping them to organise and evaluate events in ways that inform their developing self concept (Fivush, 2001; Haden, Haine, & Fivush, 1997). Fivush (4004) proposed that emotional reminiscing helps children to develop an 'emotional self-concept' which consists of three interrelated components: (a) self-defining (defining the kind of emotional person the individual is), (b) self-in-relation (defining how the individual shares emotional experiences with others), and (c) coping (defining how the individual copes with and attempts to resolves negative emotional experiences).

The parents' willingness or ability to become involved in talk about emotional events and reactions is likely to lead to differences in how children construct autobiographical narratives on emotional themes and in their emotional self-concept. For example, if caregivers favour talk about certain emotions over others, then children may begin to focus their emotional experiences with reference to their caregivers' points of reference, and thus begin to think differently about their emotional experiences and define themselves according to certain emotional qualities but not others. Although Fivush (2004) concentrated exclusively on different negative emotions (fear, anger, sadness), it is possible that some caregivers may seek to reframe their child's negative experiences in a more positive light, or alternatively point out negative aspects of a positive experience. Although such reframing can be regarded as useful at times in helping the child cope with a bad experience or see an event in a more well-rounded fashion, having a caregiver who constantly reframes the child's emotional experiences, and thus to some extent denies the validity of the child's own feelings, is likely to have a negative influence on the child's ability to deal with the full emotional range and construct meaningful autobiographical narratives of emotional events of any valence.

The way in which caregivers collaborate in constructing narratives on their children's emotional experiences will thus impact on the self-defining and coping functions of the child's emotional self-concept, but Fivush maintained that caregivers also have a role in developing the third component of the emotional self-concept: self-in-relation. For example, in reminiscing about past emotional events, caregivers may choose to focus on how social relationships can help the child to resolve and regulate their emotions (Buckner & Fivush, 2000). These ideas are highly reminiscent of principles that form the corner stone of one of the most influential perspectives in developmental psychology: attachment theory. Indeed, some researchers (e.g., Alexander et al., 2002a ;Conway & Pleydell-Pearce, 2000; Reese, 2002) have recently begun to theorise about the potential role of attachment in children's AM, and we now turn to considering the links between these areas.

1.5 *The Role of Attachment*

The conclusion that others play a fundamental role in shaping how one evaluates oneself and constructs an account of one's past experiences is a major underlying principle of attachment theory. Bowlby (1969, 1973, 1980) proposed that the child builds an internal working model (IWM) of self and self in relationships with others on the basis of past experiences with caregivers. IWMs may be either positive or negative depending on the type of care that one has experienced. Children who have had sensitive and receptive caregivers will form an IWM of the self as worthy of love, care, and attention, and an IWM of relationships with others as being worthwhile, positive, and satisfying. Conversely, if children have experienced rejection or inconsistently sensitive care, they will form an IWM of self as being unworthy of love and attention, and an IWM of relationships as being unfulfilling. Bowlby (1980) argued that IWMs are initially quite flexible, but maintained that they become more fixed by around 5 years of age. However, individuals have the capacity to reorganise their IWMs throughout the life course if they experience interpersonal relations over a sustained period of time that are qualitatively different from their early experiences with caregivers. For example, an individual who had experienced rejection as a child and thus formed negative IWMs would be able to change and form positive representations of self and relationships if they established a satisfying close relationship in later childhood or as an adult. One's IWMs are thus determined not only by early experiences with caregivers but by one's current circumstances. Bowlby (1973) therefore argued that ontogenetic development "turns at each and every stage of the journey on an interaction between the organism as it has developed up to the moment and the environment in which it then finds itself" (p. 364).

Alexander et al. (2002a) argued that children's IWMs of attachment relationships may play a crucial role in determining how well they recall negative events from their past, stating that children's IWMs "may affect the type and extent of information children encode about a stressful event, as well as children's understanding of, coping with, storage of, and later ability to retrieve and recount that event" (p. 500). In elaborating their argument, Alexander et al. proposed a number of potential mechanisms that might explain any relation between attachment and AM for stressful events: (a) attachment security may influence the way in which children cope with the event, and thus impact on the way in which it is encoded; (b) individual differences in security will relate to children's tendency to discuss (and thus rehearse or reinstate) their experiences, which will affect storage of their memories; and (c) retrieval might be affected by security-related differences in children's ability or willingness to communicate about personal emotional experiences. Finally, Alexander et al. claimed that attachment security is likely to be related only to events that evoke attachment issues, such as the child's experience of pain or distress, separation, and so on. However, although a small number of studies have considered links between attachment security and AM (as discussed in detail in Chapter Three), all of these studies have assessed attachment security at the level of behaviour; no study has yet investigated how representational IWMs of attachment relationships relate to children's AM. Thus, while theoretical accounts of the determinants of AM both in the developmental and adult literatures have implicated attachment IWMs as an important influence on autobiographical recall, no empirical data exist to test the hypothesised relations.

1.6 . *Themes of this Thesis*

The first theme of the research undertaken for this thesis concerns the relation between the emotional quality of the recalled material and children's self view. Although research on adults has documented how the valence of the emotional material impacts on how positively one views oneself (e.g., Martin, 1990; Salovey, 1992), the developmental literature has not considered relations between self view and memories for positive and negative events, or for emotional versus non-emotional events. These issues are important because they will enable one to conclude whether any relation between self view and AM generalises across recall for all types of experience, or is more specific to recall for emotional events. If more specific relations are observed between self view and autobiographical recall, these findings will have implications for the hypothesised role of attachment IWMs in children's recall of emotional material.

The second theme thus focuses on children's IWMs of attachment relationships and (a) their autobiographical recall, and (b) their self view. In investigating these links, the possibility that IWMs might help account for any observed relations between children's self view and their AM is explored. If children's IWMs of attachment relationships are found to relate both to their self view and to their AM, then individual differences in IWMs might account for the relation between self and AM. The IWM may thus help to clarify theoretical accounts of the role played by the self construct in the development of children's AM. For example, the fact that children's IWMs become more fixed in the late preschool years might explain (a) why AM does not appear to emerge fully until around age 4, and (b) what aspects of children's self-construct relate to AM, and why more sophisticated representations of self (rather than basic self-recognition) are deemed to be more strongly related to AM.

A related theme is the issue of the discriminant validity of IWMs of attachment relationships. Although the IWM has become very influential in explaining any effects of early attachment security on children's subsequent development, the IWM construct is poorly defined. Consequently, it is impossible to make firm conclusions regarding how the IWM relates to other cognitive representational systems such as AM. For example, if IWMs are based primarily on one's constructions of past experiences, how are they different from one's AM? The research reported here provides the first empirical data on the relation between children's IWMs of attachment relationships and their AM in order to address this issue.

The final theme concerns the reorganisation of IWMs of attachment relationships in light of changes in the quality of the caregiver–child relationship. As discussed above, Bowlby suggested that such reorganisation is possible after sustained change in one's interpersonal interactions with attachment figures, but research has not yet investigated change in IWMs over a period of time when there are accompanying changes in caregiver sensitivity. Although van den Boom's (1994) intervention study showed how an increase in maternal sensitivity in the first year of life improves the infant's chances of forming a secure attachment relationship, there are no data on whether improvements in maternal sensitivity have a similar positive impact on attachment security when it is measured at the representational level. Neither do we know precisely what constitutes sustained change.

Chapter 2

2.1 *Relations between Children's Self-Evaluations and Autobiographical Memory: A Cross-Cultural Study*

Despite the wealth of theoretical perspectives on the relation between self and AM (see Chapter One), no study has investigated links between children's self construct and their self-generated AM. This was the aim of the study reported in this chapter.

As discussed in the previous chapter, a considerable amount of research has been carried out on how children's self concept relates to their AM, but work in this area has been conducted within a narrow timeframe. The vast majority of studies have focused only on the very beginnings of AM, and cannot speak to questions relating to how children's AMs are constructed in later years. Developmental theories that have focused on self as a driving force for children's AM acquisition have conceptualised the complex construct of self in limited ways, focusing almost exclusively on children's basic self recognition skills or understanding of constancy of self over time. We therefore know very little about how the more sophisticated AMs of older children relate to their more complex conceptions of self. In contrast, the literature on adults has focused on how AM helps form and constrain goals, and how the working self evaluates past experience in formulating future goals. Thus, one would predict that AM will relate to children's more complex understanding of self, perhaps particularly their *evaluations* of self, rather than merely their basic representations of self.

In terms of self-evaluation, whether one views oneself positively or negatively depends ultimately on James' (1892) notion of the duality of self. According to James (1892), the self is made up of two aspects: the *subjective self* (the I) and the *objective self* (the me). The I is the self-as-knower, giving us our own self identity, whereas the me is the self-as-known. The me depends on one's awareness of other people's views about oneself, and may thus change depending on others' opinions, differing contexts, and so on. James defined self esteem as the ratio of one's successes to one's pretensions. More modern research has framed self-esteem in terms of the difference between one's real self-evaluation and one's ideal self (e.g., Harter, 1982).

Harter's (e.g., 1982 ,1985) ground-breaking work on self-esteem in children assessed children's self-evaluations across different behavioural contexts as well as obtaining a measure of children's more general sense of self-worth. The original 1982 instrument included scales for cognitive competence (e.g., perceiving oneself to be good at schoolwork, liking school), social competence (e.g., having lots of friends, perceiving oneself to be popular), and physical competence (e.g., perceiving oneself to do well at sports, being the first chosen for games), as well as general self-worth (e.g., being happy with oneself, perceiving oneself to be a good person). In a refinement, Harter (1985) added additional scales on physical appearance (e.g., perceiving oneself to be attractive, being happy with one's height and weight) and behavioural conduct (e.g., perceiving oneself as being kind to others, not getting into trouble). This later version also included an assessment of how children evaluated themselves in areas that they deemed to be important, allowing one to judge how favourably children evaluated themselves in areas that were personally important. These so-called discrepancy scores were found to be negatively related to children's global self-worth scores (Harter, 1985).

The adult and developmental literatures on relations between self-evaluations and AM also highlight the importance of the emotional nature of the event being recalled. However, previous research has almost exclusively focused on children's recall of emotionally negative events, and we therefore do not know whether children recall positive versus negative events in different ways. Distinguishing between emotional and non-emotional memories, and between memories of different emotional valence, would appear to be particularly important in framing hypotheses for how children's self-evaluations might relate to their AM. It seems reasonable to predict that children's self-evaluations might not be related to their memories for everyday events, but that self-evaluations will relate to how children recall emotional information. Predicting the direction of relation between self-evaluation and recall of positive or negative events is, however, more difficult. Having a positive evaluation of self may mean that the child is biased towards recalling positive versus negative events, and that children with more negative self-evaluations demonstrate the opposite bias. Alternatively, children who view themselves positively may be more willing or able to recall and explore negative events by virtue of the fact that they already have a high regard for themselves.

Exploring relations between children' self-evaluations and their AM in the context of a cross-cultural study would appear to be uniquely suited to answering questions on the relations between these factors given that cultural practices have been found to influence children's AM (e.g., Han et al., 1998). Identifying a relation between children's self-evaluations and their AM will have important implications for theoretical accounts of the development of AM and the role of the self construct in how children represent their past experiences, so any such relation would need to be demonstrated to be independent of cultural differences.

The cross-cultural study undertaken for this thesis investigated relations between children's self-evaluations and AM in two countries: the United Kingdom (UK) and Saudi Arabia. As discussed in Chapter One, AM research in collectivistic cultures has focused on children from the Far East. Children from Arabic cultures have been under-researched despite the fact that their culture is perhaps even more collectivistic than those in Asia. For example, people in Arabic cultures do not even celebrate their birthdays. In addition, parenting practices in Saudi Arabia are typically adult-centred and authoritarian (Al-Banyan, 1980; Al-Garni, 2000; Al-Sudairi, 2002), and the restrictive nature of typical Saudi Arabian parenting practices has been found to impact negatively on children's creativity during a standard task to assess creative thinking (Mohammed, 1996). One could argue that such approaches to parenting give Saudi children comparatively fewer opportunities for the types of reciprocal social exchange known to be important for facilitating AM (see Chapter One).

Differences in societies with respect to collectivism also appear to impact on how individuals represent themselves and other people in their autobiographical narratives. As discussed in Chapter One, previous research has shown that the autobiographical narratives of children from collectivistic cultures contain fewer mentions of themselves and their own opinions (Han et al., 1998). The collectivistic nature of Saudi society was also predicted to influence Saudi children's tendency to include others in their memories of past events. It was therefore predicted that the autobiographical narratives of Saudi children would include fewer personal opinions and more references to other people than those of their British peers.

Given the striking difference between the autobiographical narratives of children from individualistic versus collectivistic cultures in the extent to which they mention themselves and their opinions, it is surprising that researchers have thus far paid so little attention to cultural differences in children's self conceptions. Clearly, one would not predict differences between collectivistic and individualistic cultures in children's acquisition of basic self-recognition or an understanding that self endures over time, but culture may well impact on children's more complex representations and evaluations of themselves.

Continued development in children's representations of self has been outlined in a model proposed by Damon and Hart (1982), in which children's representations move from physical to psychological conceptions of self via active and social representations. Although all four aspects are present from the outset, different representations become dominant at different ages. In middle childhood, children tend to represent themselves in terms of active attributes (what they like and dislike doing) and social attributes (identifications with family or peer relationships) before moving to conceptualise self predominantly in terms of psychological attributes in adolescence and adulthood (Damon & Hart, 1982). In later work, Damon and Hart (1988) noted that their earlier model is culturally specific, and may not be applicable to non-Western cultures. For example, Damon and Hart (1982) described the self concept as providing the individual "with an understanding of one's differentiation from others in society [establishing] the cognitive basis for one's identity as a unique individual and for one's special position, status and role within the social network" (p. 843). Clearly this definition is at odds with the way in which individuals in collectivistic societies conceptualise themselves and their social role. Van den Heuvel, Tellegen, and Koomen (1992) provided an alternative definition that would be appropriate for collectivistic cultures: "the concept of self provides one with an understanding of one's interdependence on others [establishing] the cognitive basis for one's position, status and role within society" (p. 355).

Van den Heuvel et al. (1992) investigated cultural differences in children's more complex representations of self, predicting that children in collectivistic cultures would be less likely to refer to psychological attributes than their individualistic counterparts, but would be more likely to focus on social attributes. The study compared the self descriptions of Dutch 10- and 11-year-olds with those of Moroccan and Turkish children of the same age who were living in the Netherlands. In support of their hypotheses, they found that the Moroccan and Turkish children referred less to psychological attributes and more to social attributes than did their Dutch counterparts. No cultural differences were found for physical or active attributes. The way in which one's culture promotes individual or interdependent social practices and views thus appears to influence whether children describe themselves in terms of their own individual psychological traits or their social interactions with others.

Research has not yet addressed how children's cultural background relates to their self-evaluations. Since they are discouraged from talking about themselves and expressing their opinions, one could argue that children in collectivistic cultures will have a lower opinion of themselves than their individualistic counterparts. Conversely, the opposite might be expected, because collectivistic cultural practices require the child to recognise the inappropriateness of talking about personal opinions and experiences, and to see the self as an integral and important part of the whole societal framework. Addressing cultural differences in children's self-evaluations was an aim of the study reported in this chapter. Due to the lack of previous research on this topic and the complexities of predicting a specific direction of effect, no directional hypotheses were therefore made regarding cultural differences in children's self-evaluations.

Given that gender has been found to relate to children's AM (Reese & Fivush, 1993; Reese et al., 1996), particularly elaboration of emotional memories (Adams et al., 1995; Fivush et al., 2000, 2003), it was important to consider whether gender influenced any observed findings. In addition, Saudi society is strongly gender-segregated, both in terms of education and in the home, and Arab culture is patriarchal (Barakat, 1993). It was therefore essential to take potential gender-related differences between Saudi and British children's socialisation into account.

In summary, the study reported in this chapter tested the following hypotheses: compared with the autobiographical narratives of British children, those of Saudi children (a) will be shorter; (b) will be less complex, containing fewer elaborations and details; (c) will contain fewer personal opinions; and (d) will include more references to other people. No directional hypotheses were made regarding the link between nationality and self-evaluations. In both countries, children's self-evaluations were predicted to relate only to emotional memories, although no directional hypotheses were made for relations between self-evaluations and the valence of the memory.

2.2 *Method*

2.2.1Participants

Participants were 160 children drawn from two countries: Saudi Arabia and the UK. The Saudi Arabian sample consisted of 90 children (59 girls, 31 boys), with 60% attending a private school and 40% attending a state school in a major city. All of the children were Saudi Arabian and spoke Arabic as their native language; they ranged in age from 6,6 to 9,0 years ($M = 7.34$, $SD = 0.74$). Around 50% of parents approached gave consent for their children to participate. The British sample consisted of 70 children (38 girls, 32 boys) attending a state primary school in a city in the North-East of England. All of the children were White and spoke English as their native language; they ranged in age from 6,6 to 9,0 years (*M* = 7.53, *SD* = 0.79). Of those parents approached about the project, 16% refused consent for their children to participate.

2.2.2 Overview of Testing Procedures

The testing schedule was identical for both the British and Saudi Arabian children. Each child was seen on two separate occasions, and was tested on a one-to-one basis by the author. In the first testing session, children's autobiographical memory was assessed first, followed by an assessment of children's attachment relationships (see Chapter Three). In the second testing session, children took part in the self esteem assessment. The first testing session lasted around 30 minutes, the second session was around 20 minutes, and there was approximately a 2-day gap between the two testing sessions. Testing for the Saudi children took place in an empty classroom, and the British children were tested in the school library.

2.2.3 Autobiographical Memory Battery

Children's AM was assessed using a battery of memory questions adapted from Han et al. (1998). The child was asked six questions about events in the recent and more distant past. Han et al. (1998) asked the child about the events on their last birthday, but in the procedure adopted here, children were asked about last Christmas (British) or last Eid (Saudi Arabian). This change was made in order to ensure that the time that had elapsed since the event was approximately equal for all children in the same cultural group, and due to the fact that birthdays are not celebrated in Arabic cultures. Since Han et al. (1998) used this battery to assess autobiographical memory in children from collectivistic cultures (Korea and China), it was deemed to be suitable for children in Saudi Arabia. The questions were as follows:

1. Can you tell me about all the things you did at bedtime last night? Tell me everything you did after you ate dinner until right before you went to sleep.
2. Now, can you tell me everything you did when you woke up this morning?
3. What did you do last Eid / last Christmas?
4. Now, I'd like you to tell me one thing you did recently that was really special and fun.
5. Now, can you tell me about a time recently when your mum or dad told you off for something?
6. You know, some kids can remember things that happened to them when they were very little. Can you tell me the first thing that ever happened to you, that you could remember, in your whole life?

The interview took the form of a conversation between the child and the researcher. Following Han et al.'s (1998) procedure, children were encouraged to say more by the use of general prompts, such as "Tell me more", "Try to remember", or "Anything else?"

Children's responses to the questions were recorded and later transcribed verbatim. Following Han et al. (1998), the Saudi children's narratives were translated into natural-sounding English by a bilingual speaker, and all coding was done from the translated transcripts to ensure that differences between the Arabic and English languages had minimal effect on the coding procedure. Children's AM transcripts were coded using Fivush, Haden, and Adam's (1995) scheme. This well established coding system assesses the structure and cohesion of children's autobiographical narratives. First, children's narratives were broken down into subject–verb constructions, each of which was then coded for narrative structure.

Each construction was placed into one of the following exclusive categories for narrative structure:

I *Orientation information*: comments that provided contextual information to help the listener understand the event. Orientations consisted of four sub-categories:

1. *Time*: comments placing the event in a specific timeframe (e.g., "two weeks ago", "it was the summer holidays")
2. *Character introduction*: comments detailing people involved in the event (e.g., "My brother Mohammed opened the door")
3. *Background information*: explanations or comments which served to put the event in context (e.g., "we live next to my uncle", "my mum's from Mansoora")
4. *Place*: comments detailing where events occurred (e.g., " I went to my auntie's", "we went to Metroland")

II *Referential information*: comments concerning actions occurring during the event. Referentials consisted of:

1. *Simple actions*: statements about actions that occurred (e.g., " I brushed my teeth")
2. *Complex actions*: statement specifying conditions for other actions to occur (e.g., "at Ramadan because I was fasting", "I opened the TV when I was supposed to be going to school")

III *Elaborations*: comments that elaborated on previously mentioned orientation or referential information.

IV *Evaluations*: comments providing affective or evaluative commentary on events or actions. Evaluations consisted of:

1. *Intensifiers*: narrative devices that add emphasis or intensity (e.g., "it was really, really big")
2. *Suspense*: narrative devices that maintain the listener's interest or create tension (e.g., "and you know what?")
3. *Qualifiers*: narrative devices that convey the narrator's opinion (e.g., " I wasn't naughty as far as I can see", "I played a nice game")
4. *Internal responses*: comments on the mental and emotional states of the narrator or others involved in the event (e.g., "she was mad at that", " I remember my mum opening the presents"). Note that "I don't know", "I've forgotten", and "I can't remember" in answer to any of the questions were not coded as internal responses, but were classified as *No memory* (see below).
5. *Dialogue*: verbatim quotes of people's speech involved in the event.

All transcripts were coded for narrative structure by the author who was blind to all measures except the nationality of the child (since it was impossible to mask children's nationality due to the very different subject matter of their memories). These narratives were the first data coded so the author was unaware of children's attachment status or performance on the self-esteem assessment. A randomly selected 20% was coded for a second time by Dr. Elizabeth Meins who was similarly blind to all measures. Inter-rater reliability was $\kappa = 0.83$.

The scheme for narrative cohesion involved identifying three types of word that served to aid the listener's comprehension of the events:

1. *Simple temporal markers*: any word referencing chronological order or time: *then, first, second, next, last, before, after.*
2. *Complex temporal markers*: any word referencing complex temporal relations: *because, so, in order to, sometimes, usually, always, probably.*

3. *Descriptives*: all adjectives, adverbs and modifiers.

In addition, children's autobiographical narratives were coded for the extent to which they mentioned other people. Since Arabic involves compound pronoun-verb construction, it was not possible to compare the Saudi and British children's narratives with respect to mentions of self. The extent to which children's narratives involved self-related material was therefore investigated using the *qualifier* category from the narrative structure scheme described above.

Finally, the number of questions for which children could not recall a memory was noted for each child, giving each child a *No memory* score.

Children received a frequency score for each category. In addition, children were given a score for total volume of narrative. To control for differences in verbosity, children's scores for the narrative structure, narrative cohesion, and inclusion of others were calculated as a proportion of overall narrative volume. These scores were expressed as percentages.

2.2.4Self Perception Assessment

Children's self perception was assessed using Harter's (1985) well-respected procedure, which is suitable for use with children between 7 and 13 years (see Appendix 1 for the full Self-Perception Profile for Children). Each child was presented with a questionnaire containing 36 statements, each of which included two alternative points of view (e.g., "Some kids find it ***hard*** to make friends **BUT** other kids find it's pretty ***easy*** to make friends"). The researcher also read out each statement to the child to ensure that they understood the question and how to respond. The child first had to decide which of the alternative points of view applied most to him or her, and then decided whether that alternative was "really true for me" or "sort of true for me". Children received a score between 1 and 4 for each item, with higher scores indicating a more favourable perception of self. For example, in the statement given above, the child would have scored 4 if he or she had said that the second alternative ("other kids find it's pretty *easy* to make friends) was more applicable, and then indicated that this alternative was "really true for me".

The precise instructions given to each child were as follows (adapted from Harter's [1985] manual): *We have some sentences here and, as you can see from the top of your sheet where it says "What I am like", we are interested in what kind of person you are. This is not a test. There are no right or wrong answers because kids are very different from one another. First let me explain how these questions work. There is a practice question at the top marked (a). I'll read it out loud and you follow along with me.* (Researcher reads question.) *This question talks about two kinds of kids, and we want to know which kids are most like you. So, what I want you to decide first is whether you are more like the kids on the left side who would rather play outdoors, or more like the kids on the right side who would rather watch TV. Don't write anything yet, just decide which kids are most like you, and go to that side of the sentence. Now, the second thing I want you to think about now that you have decided which kids are most like you, is to decide whether that is only sort of true for you, or really true for you. If it's only sort of true, then put a cross in this box under sort of true; if it's really true for you, put a cross in that box under really true. For each sentence, put a cross in only ONE box. Sometimes it will be on this side of the page, other times it will be on that side of the page, but you can only mark one box for each sentence. You don't put a cross on both sides, just on the ONE side that is most like you. OK, that one was just a practice. Now we have some more sentences that I'm* *going to read out loud. For each one, put a cross in one box – the one that goes with what is true for you, what you are most like.*

The items on the Self-Perception Profile assess six specific domains: scholastic competence, social acceptance, athletic competence, physical appearance, behavioural conduct, and global self-worth. There are six items relating to each of the six domains, giving an overall score of between 6 and 24 for each domain. Children received a mean score for each of the six domains. Examples of items in the six domains are given below, and full details of which items correspond to which domain are shown in Appendix 1.

(*Scholastic competence*): "Some kids feel that they are ***just as smart*** as others their age **BUT** other kids aren't so sure and ***wonder*** if they are as smart."
(*Social acceptance*): "Some kids have ***a lot*** of friends BUT other kids ***don't*** have very many friends."
(*Athletic competence*): "Some kids do very ***well*** at all kinds of sports BUT other kids ***don't*** feel that they are very good when it comes to sports."
(*Physical appearance*): "Some kids are ***happy*** with the way they look BUT other kids are ***not*** happy with the way they look."
(*Behavioural conduct*): "Some kids usually do the ***right*** thing BUT others often ***don't*** do the right thing."
(*Global self-worth*): "Some kids often are often ***unhappy*** with themselves BUT other kids are pretty ***pleased*** with themselves."

Eapen and Naqvi (2000) reported that Harter's Self-Perception Profile is reliable in the Arabic culture. They assessed 100 children aged between 8-16 years in the United Arab Emirates, and found excellent internal consistency and reliability for the items, with Chronbach's alpha ranging from 0.86 to 0.92 for the six domains. Concerning age and gender differences, higher reliability scores were observed in the older children (range 0.88 to 0.93) when compared to younger children (range 0.58 to 0.66). Subscale alphas were found to be higher in girls (range 0.89 to 0.94) compared to boys (range 0.54 to 0.66).

2.2.5Importance Ratings in the Self-Perception Profile

Some children will view some things (e.g., athletic competence, physical appearance) as being very important to how favourably they perceive themselves, but for others such things will have little impact on self-perception. In order to assess how scores in domains that are personally important to the child related to their global self-worth, Harter (1985) developed a 10-item questionnaire. The format and administration of this questionnaire is identical to that of the Self-Perception Profile, but the child is asked to indicate how important different things are "to how you feel about yourself as a person" (e.g., "Some kids think it's important to be good looking to feel good about themselves **BUT** other kids don't think that's very important at all"). The questionnaire contains 2 items for each of the five specific domains: scholastic competence, social acceptance, athletic competence, physical appearance, and behavioural conduct. Children therefore received a score of between 2 and 8 for their ratings of the personal importance of each domain, and their mean importance scores per domain were calculated.

The procedure outlined by Harter (1985) was followed in order to establish any discrepancies between children's assessment of competence on the five individual domains of the Self-Perception Profile and their judgements about how important each domain was to them. For each child, any mean scores of 3.0, 3.5, and 4.0 for each of the five domains obtained from the 'Importance' questionnaire were identified. Such scores indicated that this domain was at least "sort of important" to the child. Next, for any domains with a mean importance score above 3.0, the corresponding competence score for that domain (obtained from the Self-Perception Profile) was identified, and the importance score was subtracted from the competence score for each domain, giving the discrepancy score. The discrepancy scores were totalled for each child to give a Total Discrepancy Score. Negative Total Discrepancy Scores indicate that the child's assessment of the importance of certain domains exceeded his or her perceived competence in these areas.

2.3 *Results*

2.3.1Descriptive Statistics and Preliminary Analyses

With respect to the categories obtained from the AM assessment, all but 1 British child and 86% (*N*=77) of the Saudi children produced orientation information. All British and all Saudi children produced referential information. For elaborations, 79% (*N*=55) of British children and 76% (*N*=68) of Saudi children elaborated on previous material. With respect to evaluations, 47 (67%) British children and 51 (57%) Saudi children included at least one such term in their narratives. Regarding the separate categories of evaluation relating to the specific hypotheses on cultural differences in children's portrayal of their own opinions, 27 (39%) British children and 20 (22%) Saudi children included at least one qualifier in their narratives. Due to the high number of zero scores and low means (see Table 2.1) for qualifiers, this category was treated as a dichotomous variable (qualifier present vs. qualifier absent) in analyses.

With respect to the markers of narrative cohesion, 47 (67%) British children and 67 (74%) Saudi children included at least one such marker in their narratives.

With respect to including other people in their narratives, 60 (86%) British children and 81 (90%) Saudi children mentioned at least one other person.

Table 2.1 shows the descriptive statistics for the frequency scores for AM and the mean self-evaluation scores for the British children with respect to gender. Table 2.2 shows the same data for the Saudi children.

Table 2-1: Descriptive Frequency Data for the British Children

	Girls (N=39)		Boys (N=31)		Overall (N=70)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Autobiographical memory						
Total narrative volume	107.97	66.89	90.29	54.69	100.14	61.99
Orientation information	4.31	2.68	3.90	2.79	4.13	2.71
Referential information	8.18	3.78	7.77	2.69	8.00	3.32
Elaborations	3.56	3.87	1.84	1.61	2.80	3.18
Qualifiers	0.54	0.79	0.61	0.88	0.57	0.83
Evaluations	1.82	2.01	2.87	4.58	2.29	3.41
Narrative cohesion	2.71	3.22	2.10	2.75	2.43	3.01
Other references	5.18	5.26	3.48	4.22	4.43	4.89
No memory	1.05	1.08	0.90	0.83	0.99	0.97
Self-Perception						
Scholastic competence	2.99	0.42	3.33	0.42	3.14	0.45
Social acceptance	3.17	1.79	3.31	0.52	3.23	1.36
Athletic competence	2.98	0.56	3.27	0.49	3.11	0.54
Physical appearance	3.11	0.50	3.23	0.47	3.16	0.49
Behavioural conduct	3.02	0.57	3.18	0.60	3.09	0.58
Global self worth	3.23	0.63	3.51	0.52	3.35	0.59
Discrepancy	-0.48	0.40	-0.30	0.24	-0.40	0.35

Table 2-2: Descriptive Frequency Data for the Saudi Children

	Girls (*N*=59)		Boys (*N*=31)		Overall (*N*=90)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Autobiographical Memory						
Total narrative volume	117.03	95.47	111.65	87.43	115.18	92.32
Orientation information	4.61	4.24	5.39	4.57	4.88	4.34
Referential information	9.29	4.53	9.61	4.94	9.40	4.65
Elaborations	3.36	4.56	3.10	4.09	3.27	4.38
Qualifiers	0.24	0.60	0.58	1.21	0.36	0.87
Evaluations	2.10	3.33	2.06	3.22	2.09	3.27
Narrative cohesion	4.81	4.90	5.42	6.23	5.02	5.36
Other references	6.73	9.11	5.94	8.14	6.46	8.75
No memory	1.41	1.34	1.42	1.34	1.41	1.33
Self-Perception						
Scholastic competence	3.66	0.43	3.69	0.39	3.67	0.42
Social acceptance	2.86	0.59	3.15	0.58	2.96	0.60
Athletic competence	3.02	0.64	3.22	0.49	3.09	0.59
Physical appearance	3.38	0.63	3.27	0.74	3.34	0.67
Behavioural conduct	3.61	0.56	3.66	0.43	3.63	0.52
Global self worth	3.59	0.49	3.66	0.37	3.61	0.45
Discrepancy	-0.42	0.30	-0.42	0.28	-0.42	0.29

The total narrative volume scores were non-normally distributed, and were therefore log-transformed before further analysis to reduce skewness and kurtosis to acceptable levels. The children who produced the five longest narratives (ranging from 324 to 492 words with a mean of 398.60) were all Saudi. With these children excluded, the mean number of words produced by the Saudi children was 101.13 (*SD* 65.58). These children were not, however, excluded from the analyses given that the transformed scores for the whole sample were normally distributed. The means for the transformed total narrative volume variable were as follows: British girls $M = 4.47$, $SD = 0.71$; British boys $M = 4.37$, $SD = 0.51$; British overall $M = 4.42$, $SD = 0.63$; Saudi girls $M = 4.07$, $SD = 0.80$; Saudi boys $M = 3.99$, $SD = 0.91$; Saudi overall $M = 4.06$, $SD = 0.83$.

Tables 2.3 and 2.4 show the descriptive statistics for British and Saudi children for the proportional measures of the AM categories used in the analyses. These data are expressed as percentages. Inspection of the distributions for all proportional variables indicated that transformation was not necessary, with indices of skewness and kurtosis in the acceptable range.

Table 2-3: Descriptive Proportional Data for the Autobiographical Narratives of the British Children

	Girls (*N*=39)		Boys (*N*=31)		Overall (*N*=70)	
	M	SD	M	SD	M	SD
Orientation information	4.39	1.83	4.58	2.43	4.47	2.10
Referential information	9.17	4.20	10.72	5.31	9.86	4.75
Elaborations	2.72	2.14	2.01	1.49	2.40	1.90
Evaluations	1.43	1.49	2.65	2.36	1.97	2.00
Narrative cohesion	2.08	2.19	2.03	2.33	2.06	2.24
Other references	4.26	2.75	3.40	2.95	3.88	2.85

Table 2-4: Descriptive Proportional Data for the Autobiographical Narratives of the Saudi Children

	Girls (N=59)		Boys (N=31)		Overall (N=90)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Orientation information	3.88	2.13	4.77	3.36	4.19	2.63
Referential information	10.40	4.98	10.86	3.94	10.56	4.63
Elaborations	2.19	1.60	1.99	2.38	2.12	1.89
Evaluations	1.21	1.41	1.38	1.27	1.27	1.36
Narrative cohesion	3.63	2.47	3.80	3.02	3.69	2.66
Other references	4.54	2.83	4.28	4.20	4.45	3.35

Children's age was not related to any of the AM variables (rs <.14) apart from children's proportional scores for mentions of other people in their narratives and the number of questions for which children could not recall a memory. Children's mentions of other people were positively correlated with age, $r(158) = 0.14$, p <.05, two-tailed, although the effect for this relation was small (Cohen, 1988). Children's no memory scores were negatively correlated with age, $r(158) = -.23$, p <.005, two-tailed. Thus, older children were more likely to include proportionately more mentions of other people in their narratives and were less likely not to be able to recall a memory in response to the questions during the AM interview. Age was not related to any of the self-evaluation variables (rs <.10).

2.3.2Relations between Nationality and Children's Autobiographical Memory

The relation between nationality and total narrative volume was investigated in a 2 (nationality) x 2 (gender) ANCOVA, with age added as a covariate. There was a main effect of nationality, $F(1, 155) = 8.75$, p <.005, but no effect of gender, F(1,

155) = 0.55, n.s., and no interaction, $F(1, 155) = 0.07$, n.s. As the scores on p 40 show, British children produced longer autobiographical narratives than their Saudi peers.

Relations between culture and the proportional AM variables were investigated in a 2 (nationality) x 2 (gender) MANCOVA, with age added as a covariate and the following AM variables entered as the dependent variables: proportion of orientation information, proportion of elaborations, proportion of evaluations, proportion of narrative cohesion markers, proportion of mentions of others. The multivariate analysis showed a main effect of nationality, $F(5, 150) = 6.89$, $p < .001$, and a main effect of gender, $F(5, 150) = 2.94$, $p < .025$. There was no interaction between gender and nationality, $F(5, 150) = 1.00$, n.s. Further analyses using post-hoc ANCOVAs showed that the effect of nationality was significant for (a) proportion of evaluations, $F(1, 158) = 7.02$, $p < .01$, and (b) proportion of narrative cohesion markers, $F(1, 158) = 16.85$, $p < .001$. As the means in Table 2.3 and 2.4 show, British children included a higher proportion of evaluations and a lower proportion of narrative cohesion markers than did the Saudi children. The effect of gender was significant only for proportion of evaluations, $F(1, 158) = 6.30$, $p < .025$. As Tables 2.3 and 2.4 show, boys used proportionately more evaluations than did girls.

With respect to the number of questions for which children could not recall a memory (no memory), relations with nationality and gender were investigated using a 2 (nationality) x 2 (gender) ANCOVA, with age added as a covariate. The main effect of nationality approached significance, $F(1, 158) = 3.56$, $p = .061$, but there was no main effect of gender, $F(1, 158) = 0.07$, n.s., and no interaction, $F(1, 158) = 0.02$, n.s.

As Tables 2.1 and 2.2 show, the non-significant trend was for Saudi children to be able to recall fewer memories than their British counterparts.

Cultural and gender differences in children's use of qualifiers were investigated using chi-square. British children were more likely than their Saudi counterparts to use at least one qualifier in their narratives, $\chi^2(1) = 5.07$, $p < .025$, two-tailed. Of the 98 girls, 25 used a qualifier, compared with 22 of the 62 boys. Gender was not related to children's use of qualifiers, $\chi^2(1) = 1.82$, n.s.

Next, relations with narrative volume for the individual memories were investigated. For these analyses, only children's total number of words for each memory was used since data for the individual AM categories were too infrequent. Memories for events on the previous night and the morning of the interview were collapsed into one category since both memories dealt with everyday events. Table 2.5 shows the mean scores for recall on the five individual memories. Volume data for all of the individual memories were found to be non-normally distributed, and scores were therefore log-transformed so that data for each memory were within acceptable ranges for skewness and kurtosis.

Table 2-5: Mean Volume Scores for All Children for the Individual Memories

	Mean	SD	Range
Evening/morning	36.43	26.60	0 – 229
Eid/Christmas	21.86	23.92	0 – 177
Nice	18.54	21.51	0 – 144
Told Off	9.56	14.31	0 – 104
Oldest	21.74	25.51	0 – 141

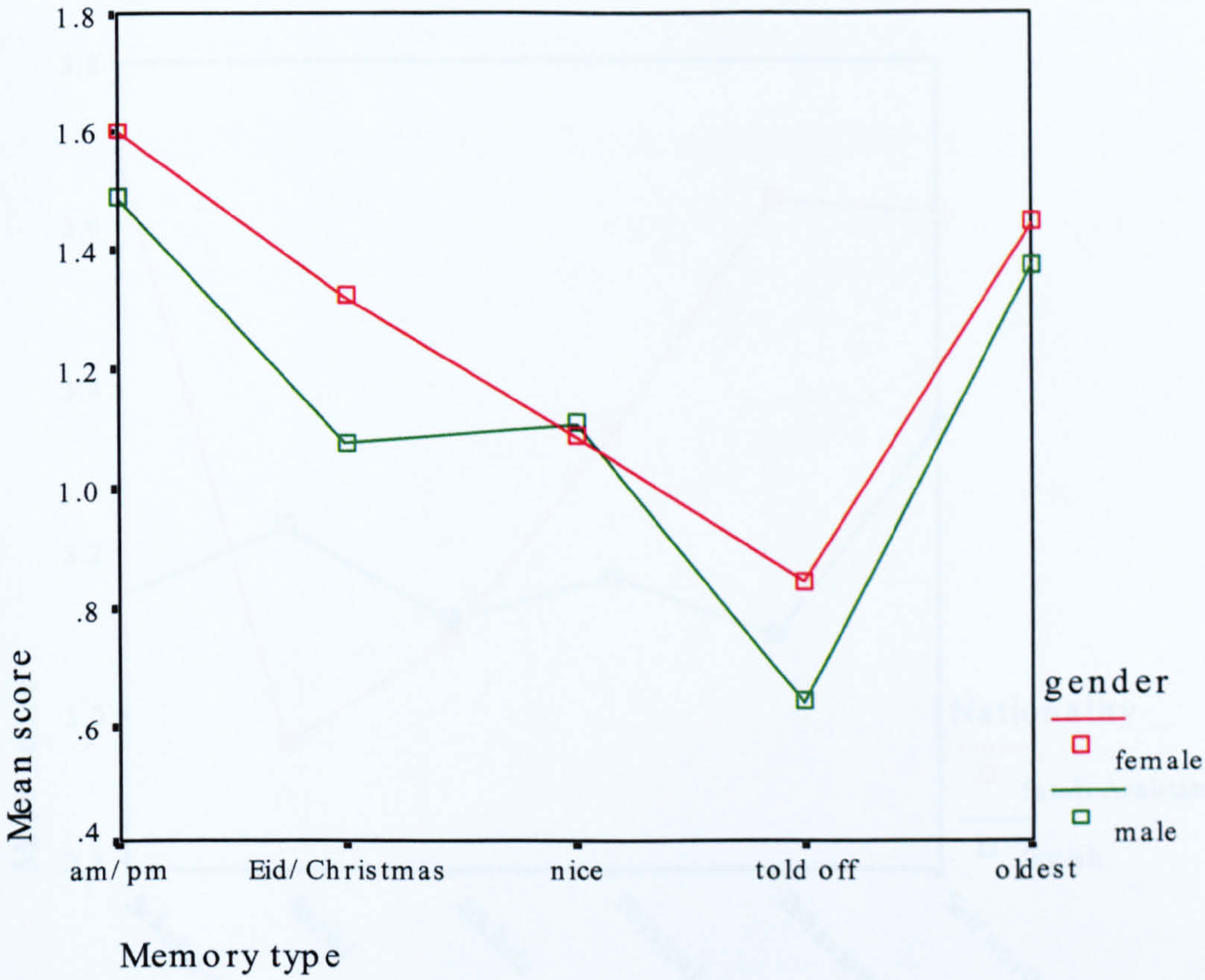
Relations with the volume of narrative for the individual memories were investigated using a repeated measures ANCOVA, with nationality, gender, and attachment added as fixed variables, age added as a covariate, and the transformed volume scores for the five individual memories added as dependent variables. The results of the ANCOVA are reported in Table 2.6

Table 2-6: Results of the ANCOVA Investigating Effects of Nationality and Gender on Children's Narratives for the Five Individual Memories.

Effect	F	d.f.	*p*
Memory type	2.22	4, 96	.073
Nationality	2.49	1, 99	.118
Gender	5.02	1, 99	<.025
Memory type x nationality	0.80	4, 99	.527
Memory type x gender	1.89	4, 99	.112
Nationality x gender	0.22	1, 99	.643
Memory type x nationality x gender	0.60	4, 99	.439

Figure 2.1 shows the main effect of gender on children's recall of the five individual memories. As Figure 2.1 shows, girls recalled more than boys for four of the five memories.

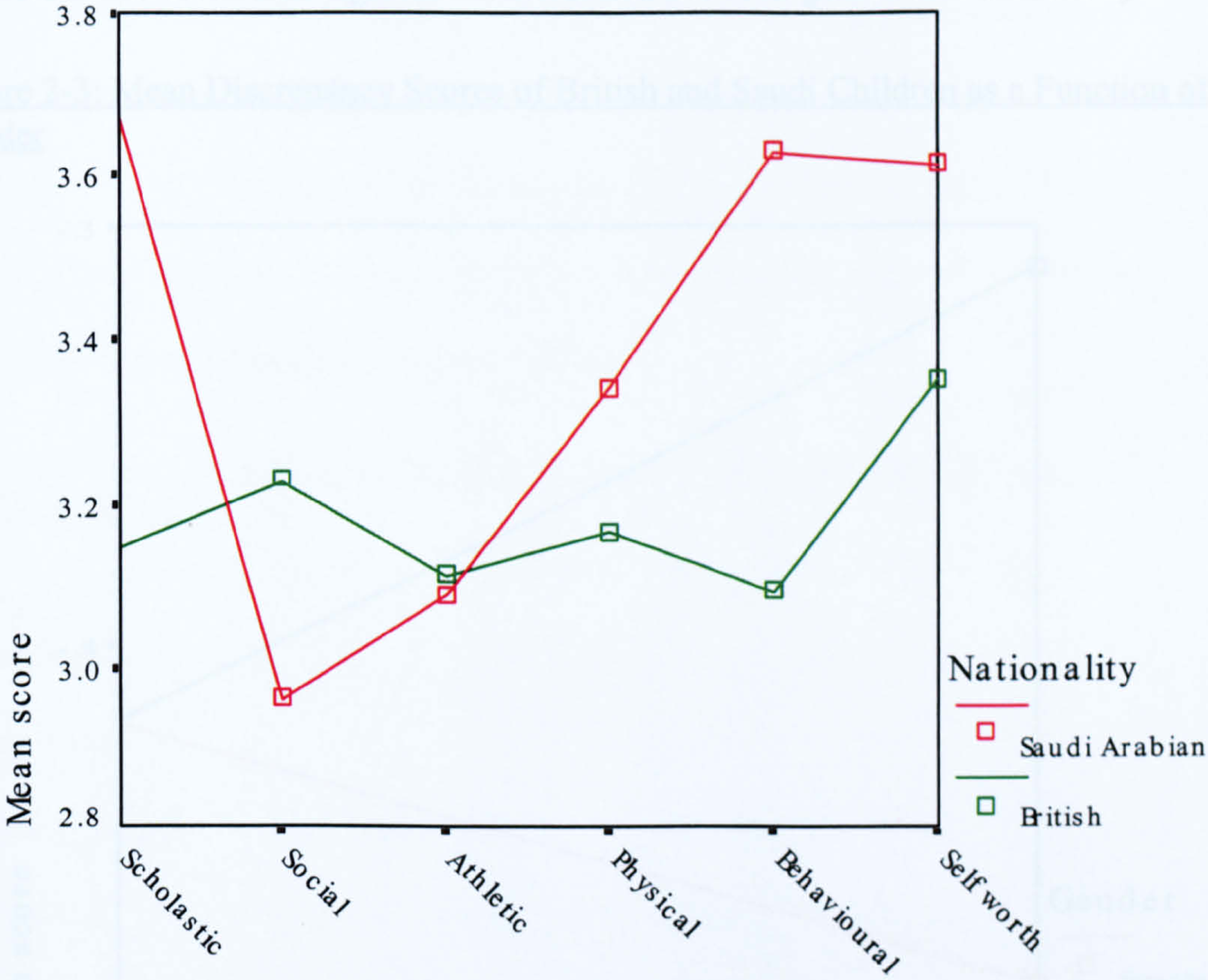
Figure 2-1: Relation between Gender and Recall of the Five Individual Memories



2.3.3Relations between Nationality and Children's Self-Evaluations

Relations between nationality and the self-evaluation variables were investigated using a repeated measures ANCOVA, with nationality and gender added as fixed variables, age as a covariate, and scores on the 6 self-evaluation dimensions as the dependent variables. The ANCOVA showed a main effect of gender, $F(1, 156) = 6.05$, $p < .025$, and nationality, $F(1, 156) = 9.51$, $p < .005$, but there was no main effect of self-evaluation dimension, $F(5, 152) = 0.39$, n.s. As Tables 2.1 and 2.2 show, in both countries, boys scored more highly on the self-evaluation dimensions than did girls. There was also a significant interaction between self-evaluation dimension and nationality, $F(5, 780) = 9.91$, $p < .001$. Figure 2.2 shows the graph for the interaction.

Figure 2-2: Mean Scores for the Six Self-Evaluation Dimensions as a Function of Nationality

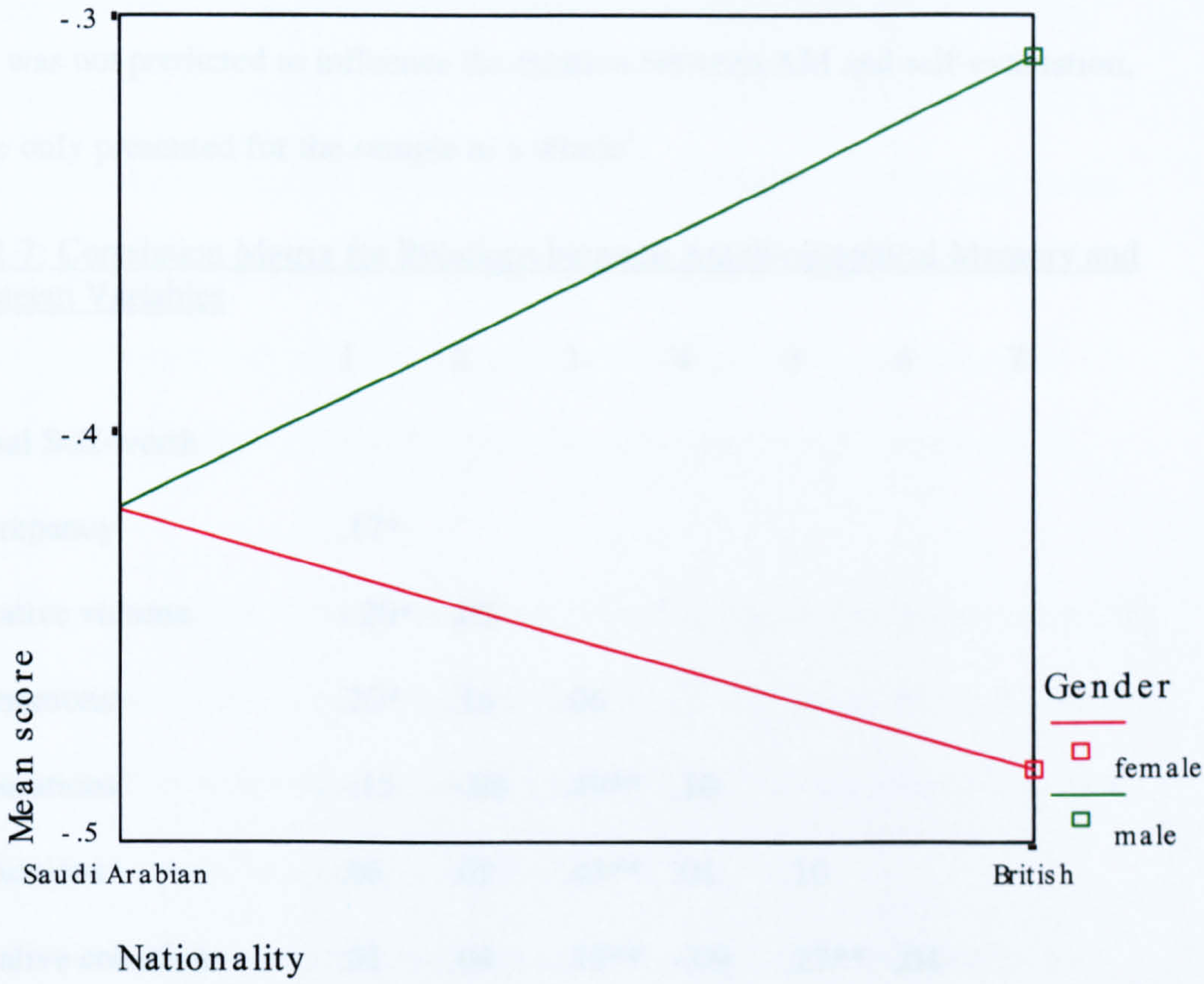


Post-hoc t tests further explored the British and Saudi children's scores for the dimensions on which inspection of Figure 2.2 indicated they differed (scholastic competence, behavioural conduct, and global self-worth). Adjusting alpha to account for the number of contrasts (p = .016), the Saudi children attained higher scores than their British counterparts with respect to (a) scholastic competence, $t(158) = 7.65$, $p < .001$, (b) behavioural conduct, $t(158) = 6.14$, $p < .001$, and (c) global self-worth, $t(158) = 3.17$, $p < .005$. The British and Saudi children did not differ in their social acceptance scores, $t(158) = 1.68$, n.s.

Relations between children's discrepancy scores and gender and nationality were investigated using a 2 (nationality) x 2 (gender) ANCOVA, with age added as a covariate. The main effect of gender approached significance, $F(1, 156) = 2.82$, p

=.095, but there was no effect of nationality, $F(1, 156) = 0.20$, n.s. The interaction between gender and nationality approached significance, $F(1, 156) = 2.76$, $p = .099$. Figure 2.3 shows the non-significant interaction between gender and nationality.

Figure 2-3: Mean Discrepancy Scores of British and Saudi Children as a Function of Gender



As Figure 2.3 shows, the non-significant interaction was due to differences in the discrepancy scores of the British girls and boys, and relations were further explored using a post-hoc t test. The British girls were found to have higher discrepancy scores than the British boys, $t(68) = 2.21$, $p < .05$, thus indicating that British girls were less satisfied than were British boys with their achievements in personally important areas.

2.3.4Relations between Autobiographical Memory and Self-Evaluations

Before investigating the hypothesised relations between self-evaluations and children's narrative accounts of emotional and non-emotional events, relations between self-evaluations and children's overall recall of autobiographical information were investigated. Table 2.7 shows the correlation matrix for the relations between global self-worth and discrepancy scores and the continuous AM variables. Since culture was not predicted to influence the relation between AM and self-evaluation, data are only presented for the sample as a whole[1].

Table 2-7: Correlation Matrix for Relations between Autobiographical Memory and Self-Esteem Variables

	1	2	3	4	5	6	7
1. Global Self-worth							
2. Discrepancy	.17*						
3. Narrative volume	-.20*	.02					
4. Orientations	.20*	.16	.06				
5. Elaborations	-.15	-.08	.49**	.10			
6. Evaluations	.06	.02	.43**	.01	.10		
7. Narrative cohesion	.01	.04	.33**	-.09	.27**	.04	
8. No memory	.15	-.01	-.69**	-.18*	-.34**	-.32**	-.27**

*p <.05, **p <.001.

Note: all AM variables except 'No memory' are proportional; transformed scores were used for Narrative volume.

[1] Note that the relations between AM and self-evaluations were essentially the same in both the British and Saudi samples, although the effects for the relations between global self-worth and (a) narrative volume, and (b) orientations were somewhat stronger in the British sample.

As Table 2.7 shows, children's mean global self-worth scores were (a) positively correlated with the proportion of orientation information included in their narratives, and (b) negatively correlated with overall narrative volume scores. Children who had higher global self-worth thus said less during the AM interview but included proportionately more information to help the listener contextualise their memories. However, both of these correlations represented small effects (Cohen, 1988). Children's discrepancy scores were not related to any of the AM variables. Table 2.7 also shows an unexpected positive correlation between children's global self-worth and discrepancy scores, suggesting that children's global self-worth increased in line with less favourable assessments of themselves in personally important areas. However, although significant, this relation was a small effect (Cohen, 1988).

Use of qualifiers was not related to children's global self worth scores, $t(158) = 0.74$, n.s. (qualifier present $M = 3.45$, $SD = 0.48$; qualifier absent $M = 3.52$, $SD = 0.56$), or to children's discrepancy scores, $t(158) = 0.55$, n.s. (qualifier present $M = -0.43$, $SD = 0.27$; qualifier absent $M = -0.40$, $SD = 0.33$).

Relations between self-evaluations and AM were further investigated by distinguishing between memories for neutral, positive, and negative events.

Table 2.8 shows the correlation matrix for relations between children's global self-worth and discrepancy scores and their transformed scores for volume of recall for the individual memories.

Table 2-8: Correlation Matrix for Relations between Individual Autobiographical Memories and Self-Esteem Variables

	1	2	3	4	5	6
1. Global Self-worth						
2. Discrepancy	.17*					
3. Last night/this morning	-.16*	.01				
4. Eid/Christmas	-.11	.03	.41**			
5. Nice	-.15[a]	.02	.42**	.24**		
6. Told off	-.16*	-.02	.23**	.36**	.29**	
7. Oldest	-.09	.04	.41**	.37**	.38**	.31**

*$p < .05$, **$p < .001$, [a] $p = .064$.

As Table 2.8 shows, children's global self-worth scores were negatively correlated with their recall of the two overtly emotional events (a nice event and a time when they were told off). Thus, children with higher self-worth scores tended to say less about emotional events of either positive or negative valence, although these effects were small. Global self-worth scores were also negatively correlated with recall for the last night/this morning memory, but once again this effect was small. Children's discrepancy scores were not related to volume of recall for any of the memories. Table 2.8 also highlights the fact that narrative volume scores across all of the different types of memory were highly positively correlated.

2.3.5Do Children's Self-Evaluations Independently Predict Autobiographical Memory?

In order to establish whether children's self-evaluations predicted AM independently of nationality, gender, and age, a series of regression analyses was carried out. Given that hypotheses were made with regard to relations between self-evaluations and emotional versus non-emotional memories, the transformed volume scores for the five individual memories were used as the dependent variables in these regression analyses. For each regression, nationality, gender, and age were added at the first step, with the global self-worth and discrepancy scores being added at the second step.

Table 2.9 shows the results of the regression for children's recall of the last night/this morning memory. As Table 2.9 shows, global self-worth scores were the only predictor of children's recall of this memory, with self-worth accounting for 3% of the variance. The total amount of variance accounted for was 4%.

Table 2-9: Predictors of Children's Volume of Recall for Last Night/This Morning Memory

	β	t	*p*
Step 1			
Nationality	-0.05	-0.58	.561
Gender	-0.05	-0.56	.589
Age	0.09	1.13	.260

Step 2			
Nationality	-0.09	-1.12	.266
Gender	-0.03	-0.31	.755
Age	0.09	1.12	.263
Global self-worth	-0.17	-2.00	.048*
Discrepancy	0.03	0.31	.758

Table 2.10 shows the results of the regression for the Eid/Christmas memory. As Table 2.10 shows, none of the variables was an independent predictor of children's recall for this memory. The total amount of variance accounted for was 4%.

Table 2-10: Predictors of Children's Volume of Recall for Eid/Christmas Memory

	β	t	*p*
Step 1			
Nationality	-0.05	-0.60	.546
Gender	-0.13	-1.59	.114
Age	0.10	1.20	.233

Step 2			
Nationality	-0.08	-0.96	.339
Gender	-0.12	-1.46	.147
Age	0.09	1.09	.276
Global self-worth	-0.11	-1.33	.187
Discrepancy	0.06	0.67	.502

Table 2.11 shows the results of the regression for the nice memory. As Table 2.11 shows, global self worth independently predicted children's recall for the nice memory, and accounted for 3% of the variance, with the total model accounting for 6% of the variance.

Table 2-11: Predictors of Children's Volume of Recall for Nice Memory

	β	t	*p*
Step 1			
Nationality	-0.03	-0.31	.757
Gender	0.03	0.35	.728
Age	0.10	1.28	.202

Step 2			
Nationality	-0.07	-0.87	.386
Gender	0.05	0.59	.556
Age	0.10	1.25	.212
Global self-worth	-0.17	-2.03	.044*
Discrepancy	0.03	0.41	.682

Table 2.12 shows the results of the regression for the memory of being told off. As Table 2.12 shows, age was the best predictor of children's recall of being told off, and accounted for 3% of the variance. Table 2.12 also shows that the effect of global self-worth approached significance, accounting for 2% of the variance. In total, the model accounted for 6% of the variance in children's recall for this memory.

Table 2-12: Predictors of Children's Volume of Recall for Told Off Memory

	β	t	*p*
Step 1			
Nationality	0.01	0.14	.888
Gender	-0.07	-0.88	.381
Age	0.17	2.12	.036

Step 2			
Nationality	-0.03	-0.38	.706
Gender	-0.05	-0.60	.552
Age	0.17	2.13	.035
Global self-worth	-0.15	-1.84	.067
Discrepancy	-0.01	-0.05	.959

Finally, Table 2.13 shows the results of the regression for children's oldest memory. As Table 2.13 shows, none of the variables independently predicted children's recall for this memory. The model accounted for 3% of the variance.

Table 2-13: Predictors of Children's Volume of Recall for Oldest Memory

	β	t	*p*
Step 1			
Nationality	-0.08	-0.77	.445
Gender	-0.07	-0.74	.461
Age	0.09	0.92	.362
Step 2			
Nationality	-0.11	-1.02	.312
Gender	-0.07	-0.71	.480
Age	0.07	0.65	.515
Global self-worth	-0.09	-0.87	.387
Discrepancy	0.07	0.68	.501

2.4 Discussion

The study reported in this chapter investigated relations between children's self-evaluations and their autobiographical memory in the context of a cross-cultural study. The results largely supported the hypotheses that were made regarding cultural influences on AM and self-evaluations, and the impact of self-evaluations on children's recall of emotional material. British children were found to recall more information during the AM interview than their Saudi peers. In addition, there was a non-significant trend for Saudi children to be more frequently unable to recall any memory in response to the AM interview questions than British children. In comparison with the Saudi children, British children included more personal opinions and proportionally more evaluations in their narratives. Gender was also found to have an independent effect on children's proportional use of evaluations, with boys scoring more highly than girls. However, there were some cultural differences that were contra to the hypotheses. Saudi children's narratives contained proportionately more narrative cohesion markers than those of British children, and there was no effect of nationality on the extent to which children elaborated on their memories. No support was found for the hypothesis that their collectivistic culture would prompt Saudi children to mention other people more frequently in their autobiographical narratives.

Nationality was not related to children's recall of the five individual memories (last night/this morning, Eid/Christmas, nice event, being told off, oldest memory), although gender was found to have a main effect. For four out of the five individual memories (all except the nice event), girls recalled more than boys.

Interesting findings were found with respect to relations between nationality and children's self-evaluations. Saudi children scored more highly than their British peers on three of the six dimensions (scholastic competence, behavioural conduct, global self-worth), although there was no difference between the two nationalities in children's ratings of themselves in personally important areas (discrepancy scores). However, the interaction between gender and nationality on children's discrepancy scores approached significance, and post-hoc tests showed that British girls were more dissatisfied with themselves in personally important areas than were British boys. Taken together, these results suggest that growing up in a collectivistic society gives children a more positive view of themselves in terms of their achievements at school, how well they behave, and their overall sense of self-worth. The strict gender segregation in Saudi society and its patriarchal structure appeared to have no effect on how children of both genders evaluated themselves. Indeed, the only gender effect showed that it was British girls who perceived themselves more negatively than their male compatriots in areas that they indicated were important to themselves.

The final hypotheses predicted that, in both countries, children's self-evaluations would relate specifically to their recall of emotional material. The correlation and regression analyses provided some support this hypothesis, although only with respect to children's global self-worth, and not their discrepancy scores. Global self-worth was found to be negatively correlated with children's recall for both the positive (nice event) and the negative (being told off) memories, and the regression analyses showed that self-worth independently predicted recall of both of these events. However, the effects for the relation with the told off memory only approached significance, and for both memories, the amount of variance accounted for was modest. Contrary to the hypotheses, children's global self-worth scores also related to their recall of events from the recent past (last night/this morning), again with higher scores correlating negatively with volume of recall. There were no relations between self-worth and children's recall for Eid/Christmas or their oldest memory.

A number of other findings are worthy of note. First, children's age was found to have very little effect on either the AM or self-evaluation variables, suggesting that age, at least between 6 and 9 years, is a poor indicator of children's autobiographical recall and how they view themselves. Second, as well as relating to children's emotional memories, global self-worth was also found to impact on more general characteristics of children's autobiographical narratives. Higher self-worth scores were related to proportionately more orientation information in the accounts, suggesting that children who view themselves more positively are more willing or able to provide the listener with information that will help him or her to put the memory in context. However, given that this relation was not hypothesised, and the comparatively high number of correlations performed, this finding should be treated with caution until is has been replicated. Finally, the total number of words across the different types of memory was highly positively correlated, suggesting some stability in individual children's volume of recall regardless of the content of the memory.

In summary, although general support was found for the hypotheses of this study, the observed relations between AM and self-evaluation were not strong. This suggests that the theoretical links made between these areas may not be supported by empirical evidence. In particular, nationality, gender, age, and self-esteem accounted for only modest amounts of variance in the amount children recalled for the individual memories, leaving the vast majority of the variance unaccounted for. The aim of the study reported in the next chapter was thus to investigate whether individual differences in other aspects of children's development might explain further variance in their autobiographical recall.

Chapter 3

3.1 *Internal Working Models of Attachment Relationships and their Impact on Autobiographical Memory and Self Evaluations*

The results reported in Chapter 2 provided no strong support for the hypothesis that children's AM is related to their self-evaluations. Relations with AM were only seen for children's global self-worth scores, with discrepancy scores being unrelated to all AM variables. There was no valence specificity in the relation between emotional memories and self-worth, with children having higher global self-worth recalling less both for the nice memory and the memory relating to a time when they were told off by their parents. Consequently, the aim of the study reported in this chapter was to consider whether differences in AM might be better explained in terms of individual differences in another aspect of children's self conceptions: their internal working models of attachment relationships.

3.2 *Assessing Attachment Constructs*

Robinson (1992) argued that we use our own past experiences to build models that enable us to understand our inner world and those of others, and thus help us to predict what might happen in the future. Similarly, Lockhardt (1989) maintained that the main function of AM is to facilitate the updating of concepts held by the individual that help him or her to understand the past and expect the future. This notion that the models of self and one's interactions with others that are formed from past experiences are used to predict future interpersonal relationships is a cornerstone of attachment theory. As discussed in Chapter One, Bowlby (1969, 1973, 1980) proposed the IWM construct to explain how children's early attachment experiences shape their expectations of future interpersonal interactions.

Individual differences in attachment relationships are now understood in terms of attachment security (Ainsworth, Blehar, Waters, & Wall, 1978). On the basis of the types of attachment behaviours demonstrated in the classic strange situation procedure (Ainsworth et al., 1978) for assessing attachment security, infants are assigned to one of four attachment categories. Infants who respond positively to the caregiver upon reunion after a short separation, seeking proximity or contact and being comforted if upset, are classified as securely attached. Those infants who appear indifferent and tend to avoid the caregiver should she seek interaction are classified as insecure-avoidant. Children in the insecure-resistant category show marked distress when separated from the caregiver, but respond to reunion with anger or passivity and cannot use the caregiver to gain comfort. Main and Solomon (1986, 1990) added a fourth category to Ainsworth et al.'s (1978) system: insecure-disorganised. Children in this category show no clear strategy for dealing with separation and reunion, and may additionally show odd, fearful, or dissociated behaviours.

Infants' attachment security can also be assessed from home-based observations using the Attachment Q-Set (AQS: Waters, 1995), in which a researcher performs a Q-sort on a series of 90 items relating to infant behaviours. The resulting distribution is compared against the optimal secure Q-sort in order to indicate how closely the child matches the optimally secure child. Thus, in contrast to the strange situation, the AQS does not provide categorical data relating to infants' attachment classification.

Procedures have also been developed to assess older children's IWMs of attachment relationships rather than focusing exclusively on attachment behaviours. Typically, such methods draw on children's responses to emotionally provocative attachment situations presented in pictures or story-stems. Attachment theorists suggest that IWMs of the attachment relationship structure children's responses to such representational tasks since they are 'operable' models of the real world, formulated from children's representations of themselves and their relationships with others. The oldest of the methods purporting to tap into children's IWMs of attachment relations is Klagsbrun and Bowlby's (1976) Separation Anxiety Test (SAT), in which children are shown a series of photographs or drawings depicting separations between children and parents (e.g., first day at school, parents going out for the evening). Children are asked (a) how the child in each picture feels, (b) why he/she feels that way, and (c) what the child will do. Indices of attachment, self-reliance, and avoidance are obtained from children's responses to these questions.

The more recent story-stem methods are based on Bretherton, Ridgeway, and Cassidy's (1990) procedure which involves acting out the beginning of a story on an attachment-related theme (e.g., the child is hurt or frightened, or the parents are going away for the weekend) and asking the child to complete it. This procedure has recently been adapted and extended to form the MacArthur Story Stem Battery (Emde, Wolf, & Oppenheim, 2003) which includes 13 vignettes on a range of topics involving the classic attachment themes of Bretherton et al.'s (1990) original procedure as well as vignettes on peer and parental conflict and moral dilemmas. A number of different coding procedures exist for story-stem tasks (see Page, 2001, for a review), and the MacArthur group advise that "the choice of coding method be governed by the specific aims of each particular study, as well as the age of the child participants and the size of the sample" (Bretherton & Oppenheim, 2003, p. 69).

A further adaptation of the story-stem procedure is the Manchester Child Attachment Story Task (MCAST: Green, Stanley, Smith, & Goldwyn, 2000) which classifies children on the basis of the predominant strategy used in their story completions in order to assuage distress. Children who adopt the *interpersonal (secure) strategy* show clear involvement of attachment figures in order to deal with and resolve their distress. Children who fail to involve attachment figures in their story completions, relying instead on self-care behaviours or denying the original distress, are classified as adopting a *non-interpersonal (avoidant) strategy*. Children whose stories show that involvement of the attachment figure promotes as much as resolves distress (either through contact with the caregiver resulting in conflict, or because the child signals distress so weakly that the caregiver does not or cannot help resolve the situation) are deemed to adopt an *ambivalent interpersonal strategy*. Finally, if stories lack any predominant strategy or assuagement of distress (because stories descend into chaos, or the child adopts multiple, incompatible strategies), the child is classified as *disorganised*. These four distinct strategies are proposed to map respectively onto the four behavioural attachment categories: secure, insecure-avoidant, insecure-resistant, and insecure-disorganised. Using dichotomous secure/insecure categories, Goldwyn, Stanley, Smith, and Green (2000) reported that children's MCAST classifications agreed with their classifications on the SAT in 80% of cases.

3.3 *Attachment and Autobiographical Memory*

Since the child's IWMs of attachment are formed on the basis of past experience with caregivers, and children's responses to the pictures and story-stems used to assess IWMs are assumed to be based on how their own caregivers have dealt with attachment-related issues in the past, it is not surprising that researchers have argued for links between IWMs and children's AM. Main, Kaplan, and Cassidy (1985) proposed that memory is associated with attachment because the security of the attachment relationship governs how openly memories and experiences can be recalled and discussed. Securely attached children do not recall only positive memories, but are capable of assimilating positive and negative experiences into a balanced view of their relationship with the caregiver.

There is some empirical support for the theoretically proposed links between attachment and AM. For example, Belsky, Spritz, and Crnic (1996) investigated links between attachment security and 3-year-olds' memories for emotional events they witnessed in a puppet show. Belsky et al. (1996) reported that children who had been classified as securely attached in infancy were more likely to remember the events associated with positive emotions, whereas children who were insecurely attached remembered the negative emotion events. Belsky et al.'s sample size meant that they could only do dichotomous secure/insecure comparisons, and this study thus cannot establish whether different types of insecure attachment differentially impact on children's processing of emotional information. However, while Belsky et al.'s (1996) results suggest links between attachment security and memory for the emotional content of personally experienced events, they do not support Main et al.'s (1985) argument that securely attached children will be able to represent and assimilate positive and negative emotional memories equally well.

There have, though, been more critical perspectives on IWMs and their relation with AM. Thompson and Raikes (2003) argued that the failure to define IWMs systematically has meant that little is known about how they develop or relate to children's other capacities for encoding, representing, and comprehending their experiences (e.g., linguistic ability, memory systems, understanding of mind and emotion). Attachment theory assumes that such cognitive processes 'service' IWMs (Bowlby, 1969; Bretherton & Munholland, 1999), but this has not been investigated empirically. Indeed, given the long history of theoretical research detailing links between attachment and AM systems, there is a surprising lack of empirical work investigating links between these areas. Moreover, studies that have been conducted have assessed children's AM only in the context of their joint reminiscences with their mothers. For example, Farrar, Fasig, and Welch-Ross (1997) investigated links between 3- and 4-year-olds' attachment security (as assessed using the AQS) and how they and their mothers discussed four previously experienced events that were aimed to elicit positive (a special occasion and a family outing) and negative (going to the doctor and a mother–child separation) emotions. Farrar et al. (1997) reported that attachment and children's gender related to the content of the dyads' autobiographical narratives, with mother–insecure daughter pairs engaging more in talk about negative emotions than mother–secure daughter pairs. Securely attached daughters did, however, elaborate more with their mothers on events regardless of their emotional valence, whereas insecure mother–daughter pairs tended only to elaborate when the event was positive. Farrar et al. (1997) found no consistent pattern of relations between attachment and AM for mother–son dyads.

Etzion-Carasso and Oppenheim (2000) investigated whether children's infantile attachment classification related to the coherence and openness of mother–child conversations at age 4 during a reunion after a 45-minute separation. Like Farrar et al. (1997), this study found gender and attachment to relate to mother–child communication, but Etzion-Carasso and Oppenheim (2000) found effects for mother–son dyads and not mother–daughter dyads. Secure mother–son pairs were more likely to engage in open communication than their insecure mother–son counterparts.

However, a number of reasons make it very difficult to establish from existing data whether children's IWMs of attachment are related to their AM skills. First, the studies discussed above did not assess children's AM independently of input from the mother. This is problematic given that mothers of securely attached children have been found to be more sensitive in responding to their infants' cues (e.g., Ainsworth, Bell, & Stayton, 1971), more effective and sensitive at teaching their children how to perform a construction task at age 3 (Meins, 1997), and are more likely to adopt an elaborative style when reminiscing with their children (Farrant & Reese, 2001). Thus, these differences in the mothers of securely attached children, rather than in the children's own AM, might account for any observed link between attachment and AM.

Second, Farrar et al. (1997) and Etzio-Carasso and Oppenheim (2000) did not assess children's AM and attachment independently. Farrar et al. (1997) focused on emotional events, at least one of which had a clear attachment theme (separation from the caregiver), and Etzio-Carasson and Oppenheim (2000) looked at communication upon reunion after a lengthy separation. Thus, these results cannot speak to the issue of whether attachment is related more generally to how children recall and organise their recollections about past events. Finally, the theoretical work focuses on links between children's AM and their IWMs of attachment relationships, whereas research has only investigated links between attachment *behaviours* and AM. There are no principled reasons to predict that basic attachment behaviours will relate to how children recall their past experiences.

There is thus a need for research investigating links between children's IWMs of attachment relationships and their general AM abilities as assessed independently of any input from caregivers. This was the main aim of the study reported in this chapter. On the basis of previous research, we predicted that children's volume and organisation of recall for emotional events would be related to their IWMs of attachment relationships, with secure IWMs being associated with longer, better organised narratives. But given the scarcity of research and the somewhat contradictory pattern of findings, no directional hypotheses were made regarding links between attachment and the emotional valence of the memory recalled.

In addition to investigating links between children's IWMs of attachment relationships and the volume and organisation of their independently-recalled AMs, the study reported in this chapter sought to investigate how the overall quality of children's autobiographical narratives related to their attachment status. The well-established and validated procedures for coding children's AM such as Fivush et al.'s (1995) scheme provide excellent information on the content of children's narratives, as well as giving frequency data on the extent to which children include temporal markers to give some sense of the chronology of events. However, this method of coding does not provide any assessment of whether the memory is internally consistent, coherent, and comprehensible. There is a tendency to regard highly elaborated memories with numerous temporal markers and evaluations (information on internal responses, verbatim dialogue) as superior to and easier to understand than briefer memories, but this has not been empirically tested. It may be the case that elaboration serves to make the memory more difficult to understand, and some types of evaluative information may be inappropriate and confusing.

The attachment literature provides a good starting point for addressing these issues relating to the coherence and comprehensibility of autobiographical narratives. The Adult Attachment Interview (AAI: George, Kaplan, & Main, 1985) and its associated coding scheme is an ideal example of a technique for assessing the global quality of people's narratives about their past experiences. The AAI is a semi-structured interview in which the individual is asked to recall their early relationships with caregivers, experiences of separation, rejection, and loss, and to reflect on how these early experiences have shaped their adult personalities and their current approach to attachment relationships. The AAI coding scheme is based on Grice's conversational maxims of (a) quantity (be informative, but not overly elaborate), (b) quality (do not state things that are false or for which you lack adequate evidence), (c) relevance (respond to the question being asked and talk about the current topic of conversation), and (d) manner (do not be obscure or ambiguous, avoid unnecessary wordiness, and be orderly in presenting information).

Adults who are classified as *autonomous* meet all of these maxims, and can provide the listener with a coherent and believable account, showing a clear valuing of attachment relationships. *Dismissing* adults primarily violate the quantity maxim, providing very few details on their attachment experiences, and may additionally violate the quality maxim by presenting an idealised account of their attachment figures for which they can provide no corroborating evidence. *Preoccupied* adults also violate the quantity maxim, but in contrast to the dismissing category, they provide overly elaborate accounts, which results in additional violations of the relevance and manner maxims.

More recent refinements of the AAI coding procedures have also highlighted the importance of the individual's willingness or ability to reflect on their own internal states and those of others in being able to create a coherent account. For example, Fonagy and colleagues have defined the construct of *reflective functioning* (Fonagy, Steele, Steele, Moran, & Higgitt, 1991; Fonagy, Target, Steele, & Steele, 1998), as the ability to reflect on people's psychological states and how they govern their behaviour. To assess reflective functioning, Fonagy et al. (1998) developed an alternative way of rating AAI transcripts, drawing on Hesse's (1996) central task of the AAI: the ability to reflect on attachment-related memories while maintaining a coherent narrative. AAI transcripts are coded for reflective functioning using a -1 to 9 point scale, and Fonagy et al. (1991) reported that RF and AAI classifications were related in expected ways, with autonomous individuals attaining higher reflective function scores.

A further aim of the study reported in this chapter was to investigate whether the types of narrative structure and the extent to which internal states are discussed and reflected upon in the accounts of adults with different AAI classifications could also be observed in children's autobiographical narratives. Moreover, the study sought to establish whether any such differences in global narrative quality and comprehensibility were systematically related to children's IWMs of attachment.

3.4 *Attachment and Representations of Self*

As discussed in Chapter One, from the outset, research on the development of self has argued that self emerges and develops via social interaction with others (e.g., Cooley, 1902; Gallup, 1977). Individual differences in the type of social interaction experienced by the child, such as those associated with different patterns of attachment, would therefore be expected to impact on self development. Cassidy (1988) argued that the sensitive care experienced by securely attached children will lead them "to develop simultaneously both a secure attachment and the sense that, as one who merits such treatment, he or she must be inherently worthy" (p. 122). In support of this argument, researchers have found the predicted associations between attachment and self. For example, Pipp, Easterbrooks, and Harmon (1992) reported that children who had been securely attached in infancy showed more complex and accurate knowledge of themselves and their mothers at ages 2 and 3 (as demonstrated by their performance on a battery of tasks involving visual recognition, verbal naming, and identification of gender of self and mother). Beyond the first years of life, associations have been found between attachment and self-esteem. Cassidy (1988) found that 6-year-olds' attachment behaviour (as assessed in terms of their responses to reunion with the mother after a lengthy separation) related to their self esteem, with securely attached children having a more positive self view.

Importantly, unlike the research on links between attachment and AM, research on security-related differences in self-esteem has assessed children's IWMs of attachment, and not merely their attachment behaviours. Verschueren and colleagues (Verschueren & Marcoen, 1999; Verschueren, Marcoen, & Schoefs, 1996) reported that children classified as securely attached on a story-stem task viewed themselves more positively, and these positive self-views were corroborated by teachers, who reported that these children were more socially competent and well-adjusted than children with more negative self-views. Easterbrooks and Abeles (2000) investigated links between self-evaluations and attachment representations in a sample of 8-year-olds. Easterbrooks and Abeles (2000) reported that children who could readily access self-evaluative information during an interview scored more highly for emotional security and secure coping responses during the SAT. On the basis of previous findings, it was therefore predicted that children with secure attachment representations would have more positive self-evaluations. In addition, the study reported in this Chapter investigated relations between children's attachment representations and their expressions of personal views and opinions in their autobiographical narratives. It was hypothesised that the positive self-view engendered by a secure attachment relationship will make individuals with secure representations more likely to include personal opinions and evaluations when recalling previous experiences.

3.5 *Cultural Influences on Children's Attachment Representations*

The final aim of the study reported in this chapter was to investigate cultural influences on children's attachment representations. Cross-cultural research in infant attachment behaviour has a long history, but research has not addressed how culture might impact on children's attachment representations. Early studies on infant attachment behaviour in Germany, Japan, and Israel suggested that the typical pattern of attachment in these countries differed significantly from that seen in the USA. Ainsworth et al. (1978) reported that around 70% of infants were securely attached, with 20% insecure-avoidant, and 10% insecure-resistant. In a subsequent meta-analysis including the insecure-disorganised classification, van IJzendoorn, Schuengel, and Bakermans-Kranenburg (1999) reported the following distribution in middle class, non-clinical samples: 62% secure, 15% insecure-avoidant, 9% insecure-resistant, and 15% insecure-disorganised. In comparison with these figures, Grossmann, Grossmann, Huber, and Wartner (1981) reported that the majority (52%) of the German infants they studied were classified as insecure-avoidant. In contrast, research on Japanese (Miyake, Chen, & Campos, 1985; Takahashi, 1986) and Israeli (Sagi et al., 1985) samples has found a preponderance of insecure-resistant infants. However, although van IJzendoorn and Kroonenberg's (1988) meta-analysis, involving nearly 2,000 strange situation classifications from studies in eight different countries, supported these findings on cultural differences in avoidant versus resistant attachment, they concluded that intracultural variation was more marked than intercultural variation. This meta-analysis showed that variation between cultures was 1.5 times less than variation within cultures. No research on attachment patterns has yet been conducted in Arabic cultures, and cross-cultural research on children's attachment representations, rather than their basic attachment behaviours, is lacking.

The study reported in this chapter sought to establish whether the collectivistic nature of Saudi Arabian culture resulted in differences in children's attachment representations. Given the lack of previous research, no directional hypotheses were made regarding differences between Saudi and British children's attachment representations. This study also investigated whether the different socialisation experiences of Saudi girls and boys related to the type of attachment representation formed.

3.6 *Summary and Hypotheses*

The study reported in this chapter investigated how children's IWMs of attachment related to their AM and self-evaluations in the context of a cross-cultural study of British and Saudi Arabian children. It was predicted that, compared with their insecure peers, children with secure IWMs would (a) recall emotional events more fully and in a more complex fashion, (b) recall memories relating to emotional events in a more coherent and comprehensible fashion, and (c) evaluate themselves more positively. No directional hypotheses were made regarding relations between the security of children's IWMs and their recall for non-emotional material. Finally, cross-cultural differences in children's attachment security were investigated.

3.7 *Method*

3.7.1Participants

Participants were the same samples of British and Saudi Arabian children who took part in the study described in Chapter Two (see page 30). The autobiographical memory and self-evaluation measures used in the analyses for this chapter were also described in Chapter Two.

3.7.2 Procedure

After the AM assessment in the first testing session, children took part in a story-stem task in order to assess their IWMs of attachment relationships. The task involved each child having to complete three stories on attachment themes, chosen and adapted from previously published story-stem batteries (Bretherton et al., 1990; Green et al., 2000). The stories were chosen since their themes focused on the most culture-free scenarios and would be familiar to both Saudi and British children. Three stories were used in order to reduce the length of the testing session (given that children were also participating in the AM assessment in the same testing session) and thus reduce fatigue. The three vignettes used in the study reported here involved stories about the following themes: being physically hurt (hurt knee), being taken ill (stomachache), and being frightened (nightmare). These three vignettes were chosen because they dealt with universal events experienced by all young children rather than culturally-specific practices. The MacArthur group state that sub-sets of the story-stem battery can be administered to focus on the particular themes with which individual studies are concerned, and that researchers can add story-stems of their own.

The materials for the story-stem task consisted of a furnished dolls' house and a mother and a child doll. The experimenter started the procedure by saying "What we're going to do is this. Firstly I'm going to tell you the beginning of a story with a child and his/her mummy in it. Then when we get into the story I'm going to ask you to *show* me with the dolls what happens next." The child was then offered a range of figures from which to choose a child doll and a mother doll. In order to encourage the child personally to identify with the child doll, the child doll was referred to using the participating child's name. The child then took part in a warm-up vignette (not involving an attachment theme) to familiarise him or her with the procedure.

The three test vignettes were then administered as follows, always in the same order of presentation:

Hurt knee: this vignette begins with the experimenter stating that the mother doll is inside the house watching TV. The experimenter continued, "[Name] doll is playing outside. What do you like to play outside? What would [name] doll be playing?" The experimenter then shows the child doll engaging in the chosen outdoor activity, after which she said, "[Name] doll is running along and suddenly, ooh, he/she falls over! And 'Ow!' he/she's hurt his/her knee, and looks down as sees it's bleeding, and it hurts. And he/she says, 'Ow, my knee's hurt, it's bleeding!'". The experimenter then passed over to the child, saying, "Show me and tell me what happens now."

Stomachache: this vignette begins with the experimenter asking the child what he/she likes to watch on TV, and the child's favourite programme is then used in the vignette. The experimenter continued, "[Name] doll is watching [child's favourite programme] on TV. Mum is next door in the kitchen cooking some food. Suddenly [name] doll has a pain in the tummy. And it gets worse, and he/she says, 'Oohh, I've got a pain in my tummy. Ow, it's getting worse'. And he/she feels her tummy – it's a horrible pain. 'Ow, my tummy hurts'". Once again, the child is then asked to complete the story.

Nightmare: this vignette began with the experimenter saying, "It's nightime and [Name] doll is in bed, and Mummy is in bed (experimenter places the dolls in bed). Everybody is in bed, and everybody is fast asleep. It's very dark and very quiet. Suddenly, [Name] doll wakes up and says, "Ooh, I've had horrible dream! I've had a bad dream!' and he/she starts to cry and says 'Ooh, a horrible dream!'" The child is then asked to complete the story.

3.7.3Scoring

The child's story completions were coded using the scheme developed for the MCAST. This scheme was chosen because the MCAST system allows children to be classified according to a categorical system that maps onto the ABCD infant classifications. Each category is based in terms of the behaviours the child demonstrates and describes in the story completions, as well as the effectiveness of these behaviours in assuaging the child's distress. In contrast, the scoring procedures used by the MacArthur group (e.g., Robinson, Mantz-Simmons, & Macfie, 1992) focus primarily on narrative coherence. This is potentially problematic because several studies have reported significant associations between narrative coherence and children's general verbal abilities (e.g., Oppenheim, Nir, Warren, & Emde, 1997). Thus, it is possible for children who are more skilled story-tellers to appear more secure by virtue of their superior language and narrative abilities, rather than the way in which they deal with the attachment theme in the story. Given that the study reported here involved a cross-cultural comparison of two groups known to differ in their narratives abilities (see Chapter Two), it was essential for the security of attachment IWMs not to be largely determined by narrative structure.

Within the MCAST coding scheme, each story can be coded for 27 different variables (e.g., engagement, arousal, carer sensitivity, exploratory play, affect). However, the analyses reported here focus only on the child's overall attachment classification. In order to establish the overall classification, each vignette is coded for the *Predominant strategy of assuagement of distress*. There four possible strategies (taken from Green, Stanley, Goldwyn, & Smith, 2005):

(i) *Interpersonal (Secure) Strategy*: The child clearly represents an interpersonal transaction that results in the assuagement of

distress, largely seen by communication or proximity to the mother and acceptance of caregiving behaviour. The child spontaneously turns toward the mother to share and resolve distress, and expects that distress will be mediated through contact with her.

(ii) *Insecure-Avoidant Strategy*: The child uses predominantly non-interpersonal means to assuage distress (e.g., self-care, displacement behaviours, denial of original distress), with little proximity seeking. 'Restriction' is commonly seen, in which the child suppresses any representations of distress, leaves the mother out of the narrative, or does not alert the mother to feelings of distress.

(iii) *Insecure-Ambivalent Strategy*: The child focuses on interpersonal contact, but in an ambivalent way. Although the child will spontaneously seek contact with the mother, the strategy adopted may appear to promote further distress, and often involves contradictory behaviours.

(iv) *Disorganised Strategy*: The child shows no goal-directed behaviour for assuaging distress, or behaviour that is contradictory or conflictual. This category is only used when it is clear that no predominant strategy can be coded. A best alternative from categories *i* to *iii* is also coded.

The *Secure* strategy is sub-divided into four categories akin to the B1 to B4 infant sub-classifications. For example, *Secure* strategy 1.1 involves an interpersonal strategy that has elements of avoidance or restriction in feeling, whereas in *Secure* strategy 1.4, assuagement of distress is dependent on continued contact with the caregiver. The *Avoidant* strategy is sub-divided into two categories (highly avoidant and weakly avoidant), as is the *Ambivalent* strategy, which distinguishes between children for whom interaction with the caregiver promotes distress and those whose behaviours are passive. Finally, the *Disorganised* category is sub-divided into children whose narratives are chaotic, with no structure or strategy for dealing with the attachment distress, and those who adopt multiple, incompatible strategies. (The complete descriptions of all categories are given in Appendix 2.)

Following Green et al. (2005), (a) if the child's story completions for all three vignettes were classified as having the same predominant strategy, then this would be the child's overall attachment classfication; and (b) if two or more vignettes were rated as insecure, the child's overall attachment classification must be insecure.

Green et al. (2000) reported that the MCAST has good inter-rater reliability and is able to discriminate among the different attachment categories. Green et al. (2000) also reported that the MCAST classifications showed levels of temporal stability that are comparable with those of other methodologies to assess children's attachment IWMs.

All of the MCAST sessions were coded by the author, who has been formally trained in the coding procedure and is deemed reliable, and a randomly selected 20% of the sessions were additionally coded by a second, trained rater (Dr. Elizabeth Meins). Although both raters had been involved in coding other assessments, these data were not referenced while children's attachment status was being classified, and it was not possible for the raters to recall any child's scores on the self-esteem or AM assessments. Inter-rater reliability across the four attachment categories was good, $\kappa = 0.80$.

Autobiographical Memory Coding

In addition to the AM coding that was described and reported in Chapter Two, the autobiographical narratives were coded for a second time using a scheme developed as part of this thesis. An additional coding scheme was deemed necessary to explore the relations between AM and children's IWMs of attachment relationships more fully. The coding scheme was based on the narrative qualities used to distinguish between the different attachment classifications on the AAI.

Each memory the child recalled was classified into one of the following exhaustive and exclusive categories:

Lacking in detail: the memory is difficult to understand because so few details are provided. Most of the statements are uninformative and very brief.

Overly elaborate: the memory is difficult to understand because the child provides too many details, most of which are unnecessary for comprehending what is being recalled.

Incoherent: the memory is difficult to understand because (a) the child appears to focus on events that are irrelevant and inappropriate given the memory he/she has been asked to recall, or (b) the child provides information that is contradictory, confusing, or inconsistent.

Appropriate: the memory is comprehensible and appropriate, but the child provides only basic information.

Coherent: the child recalls a memory that is comprehensible and appropriate and provides a reasonable amount of detail.

Detailed: the child recalls an appropriate memory in a vivid manner, providing rich detail while managing not to stray into irrelevancies.

All of the memories were coded using this scheme by Dr. Elizabeth Meins, who was blind to children's attachment status and self-evaluation scores. A randomly selected 20% were coded by a second, trained coder (Beth Liddle) who was working on a related project on AM andwas blind to all measures except culture (since the narrative content often betrayed the child's cultural background) and to the study's hypotheses. Inter-rater reliability across all seven categories was $\kappa = 0.66$, which is a good level of agreement. However, most disagreements centred around judgements of a memory being appropriate versus coherent, or coherent versus detailed. When such disagreements that were within 1 category of one another were classified as agreements, the level of inter-rater reliability rose to $\kappa = 0.91$, which is an excellent level of agreement.

3.8 *Results*

3.9 *Descriptive Statistics and Preliminary Analyses*

Two children (both Saudi Arabian) were excluded because one of their three vignettes was classified as insecure, with the other two being secure. (Green et al.'s [2005] coding system stipulates that a child must be classified as having insecure attachment representations when two out of four vignettes are coded as insecure.) Of the remaining 158 children, 92 were classified as adopting a secure strategy, 36 adopted an avoidant strategy, 5 adopted an ambivalent strategy, and 25 were disorganised. Given the low number of ambivalent children, statistical analyses were only performed using the secure, avoidant, and disorganised categories, or using dichotomous secure/insecure comparisons, although descriptive data on all four attachment groups are included for information.

Relations between Attachment Representations and Autobiographical Memory

Table 3.1 shows the AM scores of the British children with respect to attachment security and gender. Table 3.2 shows these same data for the Saudi Arabian children.

Table 3-1: Descriptive Autobiographical Memory Data With Respect to Attachment Security for the British Children

	Secure (*N*=45)				Avoidant (*N*=11)				Ambivalent (*N*=4)				Disorganised (*N*=10)			
	Girls (*N*=29)		Boys (*N*=16)		Girls (*N*=5)		Boys (*N*=6)		Girls (*N*=2)		Boys (*N*=2)		Girls (*N*=3)		Boys (*N*=7)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Total narrative volume	105.38	66.73	93.31	86.30	99.20	48.11	67.83	16.89	45.50	0.71	80.00	43.84	189.33	62.61	105.57	43.554
Transformed volume	4.43	0.74	4.34	0.63	4.49	0.52	4.19	0.25	3.82	0.02	4.30	0.58	5.21	0.34	4.60	0.36
Orientation information	4.70	1.79	5.26	2.54	3.42	1.41	4.36	2.72	5.51	1.64	4.29	0.30	2.31	1.41	3.30	1.98
Elaborations	2.61	2.11	1.57	1.31	2.23	3.31	2.37	1.99	3.31	1.61	2.94	1.61	4.18	1.02	2.44	1.37
Evaluations	1.53	1.65	1.91	2.21	1.30	0.87	4.13	1.38	0.00	0.00	0.45	0.64	1.63	0.50	3.70	2.73
Narrative cohesion	2.14	2.33	2.32	2.49	2.27	2.35	2.14	2.48	1.11	1.57	0.45	0.67	1.84	1.17	1.71	2.31
Other references	4.64	2.74	3.26	3.59	2.41	2.40	3.48	2.55	2.17	3.07	4.41	2.42	5.02	2.49	3.37	2.11
No memory	1.17	1.17	0.87	0.96	0.60	0.55	1.00	0.63	1.00	0.00	1.00	0.00	0.67	1.16	0.86	0.90

Note that scores for Orientation information, Elaborations, Evaluations, Narrative cohesion, and Other references are proportional scores expressed as percentages.

Table 3-2: Descriptive Autobiographical Memory Data With Respect to Attachment Security for the Saudi Children

	Secure (*N*=47)				Avoidant (*N*=25)				Ambivalent (*N*=1)		Disorganised (*N*=15)			
	Girls (*N*=37)		Boys (*N*=10)		Girls (*N*=12)		Boys (*N*=13)		Girls (*N*=1)		Girls (*N*=8)		Boys (*N*=7)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Total narrative volume	116.68	95.82	120.50	47.96	94.00	60.88	87.08	70.53	42.00		162.75	135.58	149.57	146.57
Transformed volume	4.01	0.84	4.35	0.55	3.94	0.73	3.65	0.92	3.23		4.53	0.65	4.16	1.22
Orientation information	4.10	2.19	6.44	3.86	3.71	2.43	3.97	2.76	4.76		2.83	1.31	3.79	3.43
Elaborations	2.29	1.66	2.45	3.46	1.54	1.41	1.35	1.58	0.00		3.01	1.30	2.57	1.86
Evaluations	0.97	1.28	1.48	1.10	1.14	1.54	1.38	1.43	0.00		2.51	1.38	1.42	1.33
Narrative cohesion	3.70	2.57	4.34	2.87	3.21	2.56	3.27	2.42	0.00		4.50	1.78	4.18	4.46
Other references	4.77	2.90	5.62	5.40	4.37	2.75	2.90	2.59	2.38		3.90	3.16	5.19	4.74
No memory	1.41	1.44	0.50	0.71	1.58	1.08	2.00	1.35	4.00		0.75	0.89	1.57	1.51

Note that scores for Orientation information, Elaborations, Evaluations, Narrative cohesion, and Other references are proportional scores expressed as percentages.

Relations between AM and attachment representations were investigated first using the scores from the AM interview as a whole. Relations with total volume of narrative (using transformed scores, see pages 80-81) were investigated in a 2 (culture) x 2 (gender) x 3 (security) ANCOVA, with age as a covariate. There was a main effect of nationality, $F(1, 153) = 4.39$, $p < .01$, and a main effect of security, $F(1, 153) = 3.89$, $p < .025$, but no main effect of gender, $F(1, 153) = 2.67$, n.s. None of the interactions were significant: gender x nationality, $F(1, 153) = 0.51$, n.s.; gender x security, $F(2, 153) = 1.08$, n.s.; nationality x security, $F(2, 153) = 0.57$, n.s.; gender x nationality x security, $F(2, 153) = 0.11$, n.s. Post-hoc pairwise comparisons showed that the main effect of security was caused by a significant difference between the disorganised and avoidant groups (mean difference = 0.57, $p < .025$), with none of the other pairwise comparisons being significant. Children with disorganised attachment representations produced longer autobiographical narratives than those with avoidant representations. Note that adding attachment security did not alter the pattern of main effects or interactions of the ANCOVA on narrative volume scores reported in Chapter Two, page 45.

Relations with the proportional categories of AM were investigated using a MANCOVA, with nationality, gender, and attachment added as fixed variables, age as a covariate, and the proportional scores for the following AM categories as dependent variables: orientation information, elaborations, evaluations, narrative cohesion markers, mentions of other people. Table 3.3 shows the results of the MANCOVA.

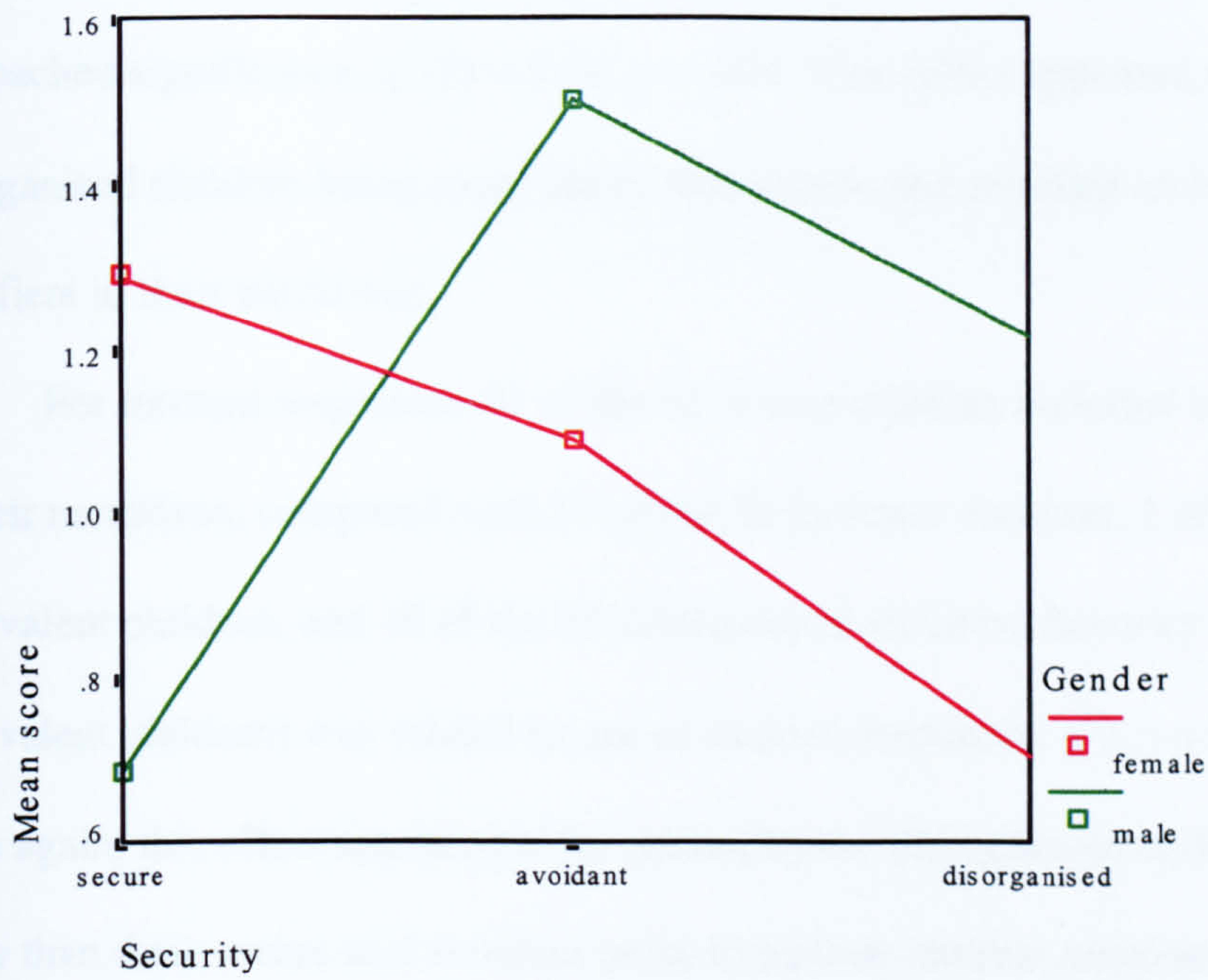
Table 3-3: Results of the MANCOVA Investigating Effects of Nationality, Gender, and Attachment Security on Children's Proportional Scores for the Autobiographical Memory Categories.

Effect	F	d.f.	*p*
Nationality	5.66	5, 135	<.001
Gender	2.76	5, 135	<.025
Security	4.56	5, 136	<.001
Nationality x gender	1.81	5, 135	.115
Nationality x security	0.78	5, 136	.566
Gender x security	0.80	5, 136	.552
Nationality x gender x security	1.54	5, 136	.182

As Table 3.3 shows, there were main effects of all three variables, but no interactions. Thus, adding attachment security to the MANCOVA left the effects of nationality and gender on the separate memory categories (reported in Chapter Two, see p. ??) unchanged. Post-hoc ANCOVAs were used to explore the effects of attachment security on the individual memory categories. The effect of security was significant for (a) proportion of orientation information, $F(2, 153) = 3.97$, $p < .025$, and (b) proportion of evaluations, $F(2, 153) = 5.60$, $p < .005$, and approached significance for (c) for proportion of elaborations, $F(2, 153) = 2.81$, $p = .063$. Further post-hoc pairwise contrasts showed that the effect of security on proportion of orientation information arose because of significant differences between the secure and disorganised groups (mean difference = 1.58, $p < .05$) with no other pairwise group comparisons being significant. As the data in Table 3.1 and 3.2 show, children with secure attachment representations used proportionately more orientation information in their autobiographical narratives than did disorganised children. For proportion of evaluations, the effect was also due to differences only between the secure and disorganised groups (mean difference = 1.07, $p < .05$). As Tables 3.1 and 3.2 show, children with disorganised attachment representations used proportionately more evaluations than did their peers with secure representations. For proportion of elaborations, none of the pairwise group comparisons were significant.

Relations with children's no memory scores were investigated using a 2 (nationality) x 2 (gender) x 3 (security) ANCOVA, with age as a covariate. The main effect of nationality approached significance, $F(1, 153) = 3.11$, $p = .080$, but there was no main effect of gender, $F(1, 153) = 0.53$, n.s., or security, $F(2, 153) = 0.68$, n.s. The gender x nationality interaction was non-significant, $F(1, 153) = 0.11$, n.s. Adding attachment security to the ANCOVA thus did not alter the pattern of effects reported in Chapter Two (see p. ??). There was a significant interaction between gender and security, $F(2, 153) = 3.58$, $p < .05$, but there was no interaction between nationality x security, $F(2, 153) = 2.82$, n.s., and the three-way interaction was non-significant, $F(1, 153) = 0.60$, n.s. The significant gender x security interaction was explored further. Figure 3.1 shows the interaction.

Figure 3-1:Mean No Memory Scores as a Function of Gender and Attachment Security



When the mean scores of secure boys ($M = 0.73$, $SD = 0.87$) were compared with those of secure girls ($M = 1.30$, $SD = 1.32$), boys' scores were found to be lower than girls' scores, $t(90) = 2.03$, $p < .05$, two-tailed, showing that secure boys reported having no memory for an event less than did secure girls. However, if alpha is adjusted for the number of comparisons, this difference is no longer significant. Comparing the mean scores of the avoidant boys ($M = 1.68$, $SD = 1.25$) and girls ($M = 1.29$, $SD = 1.05$) showed no significant difference, $t(34) = 1.01$, n.s., although the direction of effect was opposite to that observed in the secure children. For the disorganised children, there was no difference for scores between boys ($M = 1.21$, $SD = 1.25$) and girls ($M = 0.73$, $SD = 0.91$), $t(23) = 1.09$, n.s., but once again the effect was in the opposite direction to that observed for secure group children.

Relations between security and AM were also investigated with respect to the two dichotomous categories for AM. For qualifiers, 23 of the 92 secure children included at least one qualifier in their narratives, compared with 12 of the 36 avoidant children, 0 of the 5 ambivalent children, and 12 of the 25 disorganised children. The relation between security (excluding the ambivalent children) and use of qualifiers approached significance, $\chi^2(2) = 5.04$, $p = .081$. This effect appeared to be due to disorganised children being more likely than secure and avoidant children to include qualifiers in their narratives.

For internal responses, 47 of the 92 secure children included internal responses in their narratives, compared with 17 of the 36 avoidant children, 1 of the 5 ambivalent children, and 19 of the 25 disorganised children. Security (excluding the ambivalent children) was related to use of internal responses, $\chi^2(2) = 5.85$, $p < .05$. Once again, this effect appeared to be caused by the disorganised children being more likely than their secure and avoidant peers to include internal responses in their narratives.

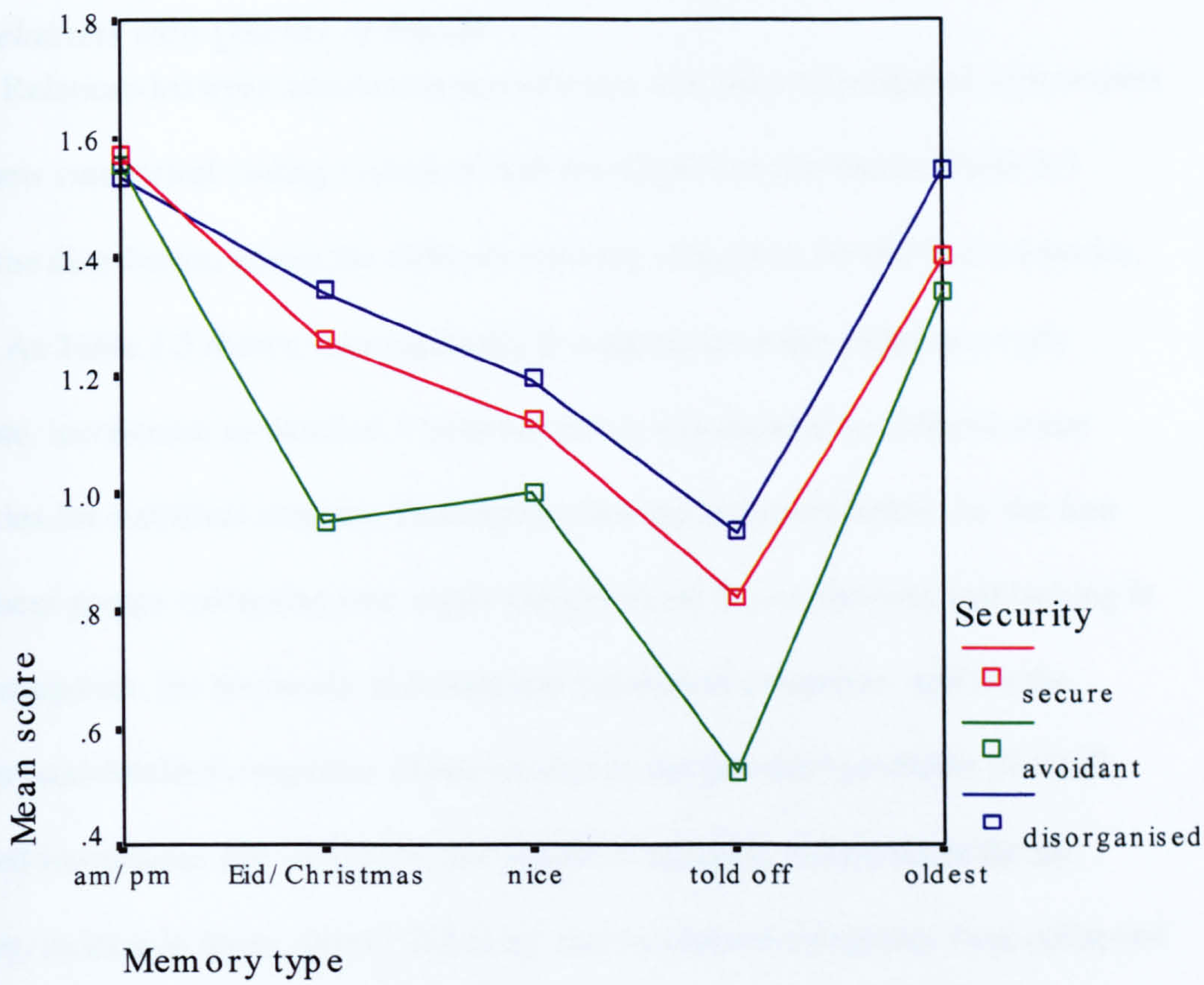
Next, relations between attachment security and narrative volume for the individual memories were investigated using a repeated measures ANCOVA, with nationality, gender, and attachment added as fixed variables, age added as a covariate, and the transformed volume scores for the five individual memories added as dependent variables. Table 3.4 shows the results of this ANCOVA. Note that adding attachment security to the ANCOVA did not affect the pattern of results reported on page 45 when only gender and nationality were included as independent variables.

Table 3-4: Results of the ANCOVA Investigating Effects of Nationality, Gender, and Attachment Security on Children's Narratives on the Five Individual Memories.

Effect	F	d.f.	*p*
Memory type	1.66	4, 86	.168
Nationality	0.66	1, 89	.418
Gender	6.21	1, 89	<.025
Security	4.48	2, 89	<.025
Memory type x nationality	0.78	4, 86	.541
Memory type x gender	0.73	4, 86	.575
Memory type x security	3.29	4, 87	<.025
Nationality x gender	0.83	1, 89	.366
Nationality x security	0.61	2, 89	.550
Gender x security	0.74	2, 89	.482
Memory type x nationality x gender	1.35	4, 86	.259
Memory type x nationality x security	1.96	4, 87	.108
Memory type x gender x security	2.67	4, 87	<.05
Nationality x gender x security	0.01	2, 89	.996
Memory type x nationality x gender x security	0.75	4, 87	.563

As Table 3.4 shows, as well as the main effect of security, there was an interaction between memory type and security. Figure 3.3 shows the relation between memory type and security.

Figure 3-2: Relation between Security and Recall of the Five Individual Memories



As Figure 3.4 shows, the most marked differences between the three attachment categories were for recall of memories for Eid/Christmas, a nice event, and being told off. Separate one-way ANOVAs with attachment security (excluding the ambivalent children) as the independent variable showed that there was an effect of attachment on children's scores for the Eid/Christmas memory, $F(2, 149) = 4.18$, $p < .025$, and for the told off memory, $F(2, 152) = 3.37$, $p < .05$, but not for the nice memory, $F(2, 152) = 1.62$, n.s. For the Eid/Christmas memory, children with disorganised representations recalled more than those with avoidant representations (mean difference = 0.40, $p < .025$), but none of the other pairwise comparisons was significant. For the told off memory, once again, children in the disorganised group recalled more than those in the avoidant group (mean difference = 0.36, $p < .05$), with no other significant pairwise comparisons.

3.9.1Relations with Quality of Recall

Relations between attachment security and AM were investigated with respect to the new categorical coding system of AM developed for this thesis. Table 3.5 shows the distribution across the different memory categories for the five memories.

As Table 3.5 shows, comparatively few memories were coded as overly elaborate, incoherent, or detailed. Consequently, it was decided to collapse some categories for statistical analysis. Descriptive data are presented below for the four attachment groups collapsing into single categories (a) the no memory and lacking in detail categories, (b) the overly elaborate and incoherent categories, and (c) the coherent and detailed categories. However, due to the potential problems of small expected frequencies for some cells, for statistical analysis, memories in the no memory, lacking in detail, overly elaborate, and incoherent categories were collapsed into a single 'non-optimal' category, and only comparisons using the dichotomous secure versus insecure (avoidant + ambivalent + disorganised) categories are reported below.

Table 3-5: Distribution of Memories Across Different Memory Categories

	No memory	Lacking in detail	Overly elaborate	Incoherent	Appropriate	Coherent	Detailed
Last night/this morning	3	7	3	8	68	64	5
Eid/Christmas	25	12	5	6	60	46	4
Nice	33	13	5	17	55	32	3
Told off	38	60	1	5	23	27	4
Oldest	53	7	2	19	27	39	11

Table 3.6 shows the distribution of memories for last night/this morning with respect to the security of children's IWMs. Security was not related to coherence of recall for the last night/this morning memory, $\chi^2(2) = 4.24$, n.s.

Table 3-6: Distribution of Last Night/This Morning Memory With Respect to Security

	No Memory/ Lacking	Elaborate/ Incoherent	Appropriate	Coherent/ Detailed
Secure	5	3	43	41
Avoidant	3	2	13	18
Ambivalent	0	1	4	0
Disorganised	2	5	8	10
Overall Insecure	5	8	25	28

Table 3.7 shows the distribution for the Eid/Christmas memory. Security was related to the coherence of the Eid/Christmas memory, $\chi^2(2) = 16.30$, $p < .001$, two-tailed. As Table 3.7 shows, this effect appears to be due to secure children being more likely than their insecure peers to provide coherent/detailed memories.

Table 3-7: Distribution of Eid/Christmas Memory With Respect to Security

	No Memory/ Lacking	Elaborate/ Incoherent	Appropriate	Coherent/ Detailed
Secure	17	2	33	40
Avoidant	14	2	16	4
Ambivalent	2	0	3	0
Disorganised	4	7	8	6
Overall Insecure	20	9	27	10

Table 3.8 shows the distribution for the nice memory. Security was related to children's coherence of recall for a nice event, $\chi^2(2) = 11.96$, $p < .005$, two-tailed. As Table 3.8 shows, securely attached children appear more likely than insecure children to recall the nice memory in an appropriate or coherent/detailed way.

Table 3-8: Distribution of Nice Memory With Respect to Security

	No Memory/ Lacking	Elaborate/ Incoherent	Appropriate	Coherent/ Detailed
Secure	22	7	38	25
Avoidant	14	5	11	6
Ambivalent	3	0	2	0
Disorganised	7	10	4	4
Overall Insecure	24	15	17	10

Table 3.9 shows the distribution for the memory of being told off. Security was related to the coherence with which children recalled being told off, $\chi^2(2) = 12.45$, $p < .005$, two-tailed. As Table 3.9 shows, this effect appears to be due to secure children being more likely than their insecure peers to provide a coherent/detailed memory about being told off.

Table 3-9: Distribution of Told Off Memory With Respect to Security

	No Memory/ Lacking	Elaborate/ Incoherent	Appropriate	Coherent/ Detailed
Secure	49	2	15	26
Avoidant	30	0	6	0
Ambivalent	4	0	1	0
Disorganised	15	4	1	5
Overall Insecure	49	4	8	5

Table 3.10 shows the distribution of children's oldest memory. Security was not related to children's coherence of recall for their oldest memory, $\chi^2(2) = 3.28$, n.s.

Table 3-10: Distribution of Oldest Memory With Respect to Security

	No Memory/ Lacking	Elaborate/ Incoherent	Appropriate	Coherent/ Detailed
Secure	34	8	19	31
Avoidant	17	4	6	9
Ambivalent	3	0	0	2
Disorganised	6	9	2	8
Overall Insecure	26	13	8	19

To investigate whether these relations between the security of children's attachment representations and the quality of the AMs were independent of gender or nationality, the chi-square analyses were rerun using a layered design. Due to the small counts for some of the cells, it was not possible to enter both gender and nationality simultaneously in the layered chi-square analyses. Adding gender or nationality did not affect the pattern of findings in any way: the security of children's attachment representations was still only related to the quality of the Eid/Christmas, nice, and told off memories[2].

[2] Note that gender was not related to the quality of any memory (χ^2s < 3.68), but nationality was related to the quality of (a) the last night/this morning memory, $\chi^2(2) = 7.50$, $p < .025$, two-tailed; (b) the Eid/Christmas memory, $\chi^2(2) = 7.25$, $p < .05$, two-tailed; (c) the told off memory, $\chi^2(2) = 9.98$, $p < .01$, two-tailed; and (d) the oldest memory, $\chi^2(2) = 8.08$, $p < .025$, two-tailed. In all cases, the effect appeared to arise due to Saudi Arabian children being more likely to produce a non-optimal memory than their British counterparts.

3.9.2Relations between Attachment Representations and Self-Evaluations

Table 3.11 shows the mean self-evaluation scores for the British children with respect to security and gender. Table 3.10 shows these same data for the Saudi Arabian children.

Table 3-11: Descriptive Self-Evaluation Data With Respect to Attachment Security for the British Children

	Secure (N=45)				Avoidant (N=11)				Ambivalent (N=4)				Disorganised (N=10)			
	Girls (N=29)		Boys (N=16)		Girls (N=5)		Boys (N=6)		Girls (N=2)		Boys (N=2)		Girls (N=3)		Boys (N=7)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Scholastic competence	3.07	0.42	3.34	0.47	2.87	0.38	3.42	0.32	2.42	0.12	2.92	0.12	2.78	0.25	3.35	0.42
Social acceptance	3.30	2.04	3.32	0.43	3.00	0.59	3.08	0.71	2.17	0.24	3.42	0.82	2.83	0.17	3.42	0.52
Athletic competence	2.94	0.62	3.13	0.47	3.27	0.35	3.42	0.47	3.00	0.24	3.08	0.59	2.89	0.25	3.50	0.50
Physical appearance	3.20	0.49	3.28	0.49	3.23	0.19	3.33	0.51	2.33	0.24	3.25	0.35	2.61	0.35	3.04	0.47
Behavioural conduct	3.10	0.59	3.16	0.64	2.97	0.38	3.61	0.34	2.17	0.47	2.92	0.82	2.89	0.25	3.00	0.54
Global self worth	3.38	0.58	3.49	0.65	3.03	0.43	3.69	0.29	2.17	0.94	3.25	0.35	2.78	0.25	3.46	0.90
Discrepancy	-0.50	0.43	-0.32	0.28	-0.41	0.18	-0.36	0.21	-0.04	0.30	-0.42	0.12	-0.77	0.07	-0.19	0.17

Table 3-12: Descriptive Self-Evaluation Data With Respect to Attachment Security for the Saudi Children

	Secure				Avoidant				Ambivalent		Disorganised			
	(*N*=47)				(*N*=25)				(*N*=1)		(*N*=15)			
	Girls (*N*=37)		Boys (*N*=10)		Girls (*N*=12)		Boys (*N*=13)		Girls (*N*=1)		Girls (*N*=8)		Boys (*N*=7)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Scholastic competence	3.67	0.40	3.55	0.53	3.78	0.36	3.76	0.34	3.50		3.40	0.65	3.74	0.23
Social acceptance	2.82	0.61	2.95	0.69	2.88	0.31	3.24	0.52	3.00		2.85	0.77	3.29	0.55
Athletic competence	3.02	0.58	3.22	0.46	2.92	0.60	3.22	0.52	4.00		2.96	0.89	3.10	0.48
Physical appearance	3.32	0.68	3.22	0.66	3.36	0.59	3.40	0.75	4.00		3.54	0.42	3.10	0.95
Behavioural conduct	3.69	0.45	3.30	0.41	3.75	0.34	3.91	0.19	3.50		3.08	1.00	3.64	0.48
Global self worth	3.63	0.48	3.48	0.45	3.60	0.51	3.65	0.32	3.00		3.50	0.60	3.86	0.24
Discrepancy	-0.39	0.32	-0.43	0.31	-0.48	0.18	-0.39	0.21	-0.16		-0.61	0.25	-0.49	0.40

Relations between self-evaluations and attachment representations were investigated in a repeated measures 2 (culture) x 2 (gender) x 3 (security) ANCOVA, with age added as a covariate and the six self-evaluation dimensions added as dependent variables. Table 3.13 shows the results of this ANCOVA.

Table 3-13: Results of the ANCOVA Investigating Effects of Nationality, Gender, and Attachment Security on the Separate Self-Evaluation Dimensions

Effect	F	d.f.	*p*
Self dimension	1.42	5, 137	.220
Nationality	6.35	1, 141	<.025
Gender	8.11	1, 141	<.005
Security	1.14	2, 141	.322
Self dimension x nationality	7.20	5, 137	<.001
Self dimension x gender	0.92	5, 137	.469
Self dimension x security	1.55	5, 138	.178
Nationality x gender	2.14	1, 141	.123
Nationality x security	0.70	2, 141	.496
Gender x security	2.19	2, 141	.116
Self dimension x nationality x gender	0.80	5, 137	.549
Self dimension x nationality x security	1.91	5, 138	.100
Self dimension x gender x security	1.74	5, 138	.130
Nationality x gender x security	0.03	2, 141	.973
Self dimension x nationality x gender x security	1.14	5, 138	.330

As Table 3.13 shows, there was no main effect of security, nor did security interact with any of the other variables. Adding security into the analysis did not alter the main effects of nationality and gender or the interaction between self dimension and nationality reported in Chapter Two (see p. 46).

Relations with children's discrepancy scores were investigated in a 2 (culture) x 2 (gender) x 3 (security) ANCOVA, with age as a covariate. Table 3.12 shows the results of this ANCOVA.

Table 3-14: Results of the ANCOVA Investigating Effects of Nationality, Gender, and Attachment Security on Children's Discrepancy Scores

Effect	F	d.f.	*p*
Nationality	0.34	1, 151	.561
Gender	5.45	1, 151	<.025
Security	0.67	2, 151	.511
Nationality x gender	2.24	1, 151	.137
Nationality x security	0.19	2, 151	.823
Gender x security	1.83	2, 151	.165
Nationality x gender x security	1.01	2, 151	.368

As Table 3.14 shows, there was no main effect of security on children's discrepancy scores, and security did not interact with the other variables. Adding security to the analysis left the effects reported in Chapter Two (see p 47) largely unaffected, although in the above analysis, the main effect of gender became significant, and the trend for the gender x nationality interaction became non-significant.

3.9.3Cultural and Gender Differences in Children's Attachment Representations

Table 3.13 shows the distribution across the four attachment categories for the British and Saudi children. Table 3.13 also shows the attachment distributions as a function of the child's gender.

Table 3-15: Attachment Distributions for Saudi Arabian and British Children

	Saudi Arabian			British		
	Girls	Boys	Overall	Girls	Boys	Overall
Secure	37	10	47	29	16	45
Avoidant	12	13	25	5	6	11
Ambivalent	1	0	1	2	2	4
Disorganised	8	7	15	3	8	11
Overall Insecure	21	20	41	10	16	26

Of the British children, 63% were classified as secure, 15% were avoidant, and 15% were disorganised. Of the Saudi children, 53% were secure, 28% were avoidant, and 17% were disorganised[3]. Relations between attachment representations and culture and gender were investigated using chi-square, with the ambivalent children excluded. Children's nationality was not related to the security of their attachment representations, $\chi^2(2) = 3.57$, n.s., but gender was associated with attachment representations, $\chi^2(2) = 11.16$, $p < .005$, two-tailed. Girls were more likely

[3] Unfortunately, it is not possible to compare the distribution of attachment classifications observed in the study reported here with that reported in Green et al.'s (2000) original paper because they only provided data on disorganised versus non-disorganised categories, or the four-way distributions including forced (alternative) codings of disorganised children. With respect to the disorganised/non-disorganised dichotomy, both the British and Saudi children in the study reported here appeared somewhat less likely to be classified as disorganised compared with the 26.4% disorganised reported by Green et al. (2000).

than boys to be securely attached. Relations between gender and attachment representations were further investigated within each nationality group. For the British children, the relation between attachment and gender approached significance, $\chi^2(2) = 5.45$, $p = .066$, two-tailed, and these variables were related in the Saudi sample, $\chi^2(2) = 8.01$, $p < .025$, two-tailed. As Table 3.15 shows, these effects arose because girls in both cultures were more likely than boys to have secure attachment representations.

Saudi girls and boys were compared separately with British children as a whole. There was no difference between the attachment representations of Saudi girls (37 secure, 12 avoidant, 8 disorganised) and British children (45 secure, 11 avoidant, 11 disorganised), $\chi^2(2) = 0.49$, n.s., but Saudi boys' attachment representations (10 secure, 13 avoidant, 7 disorganised) differed from those of the British children, $\chi^2(2) = 10.78$, $p < .005$, two-tailed. As Table 3.13 shows, this effect appears to be due to Saudi boys being more likely than British children to have insecure-avoidant attachment representations (43% of Saudi boys were classified as having avoidant representations).

Treating boys and girls as separate groups, the attachment representations of Saudi boys did not differ from those of British boys, $\chi^2(2) = 4.03$, n.s., and neither were there differences between Saudi girls and British girls, $\chi^2(2) = 1.96$, n.s.

3.10 *Discussion*

The results of the study reported in this chapter showed that the security of children's representations of their attachment relationships had pervasive associations with their recall of autobiographical memories. It is important to note that children's AM was assessed before their attachment representations, so the observed relations cannot be explained in terms of the attachment assessment impacting on the way in which children recalled their past experiences. Due to the fact that only 5 children were classified as having ambivalent attachment representations, comparisons were made only for the secure, avoidant, and disorganised groups. With respect to total narrative volume, there was a main effect of attachment security, with pairwise comparisons showing that children with disorganised attachment representations recalled more than their peers with avoidant representations, although there were no differences between the scores of the secure and avoidant or secure and disorganised groups. For the proportional scores for the specific types of information included in the children's autobiographical narratives, there was a main effect of attachment security. Post hoc analyses showed that children with secure attachment representations included proportionately more orientation information in their narratives than did their disorganised counterparts, but the disorganised children used proportionately more evaluations than their secure peers.

For the number of memories for which the child could recall no information, there was a significant interaction between gender and security, with secure boys reporting having no memory for an event less frequently than secure girls, while there was no difference in lack of memory between boys and girls in either the avoidant or disorganised groups. Children's dichotomous use of qualifiers and internal responses was related to the security of children's attachment representations, although the effect only approached significance (p =.08) for use of qualifiers. In both cases, the effect appeared to be due to children with disorganised attachment representations being more likely than those whose representations were secure or avoidant to include qualifiers or internal responses in their narratives.

Distinguishing between children's recall of different types of memory, security of attachment representations was found to have an effect on children's recall for emotional events, but not for more mundane occurrences. For all memories except recall of what happened last night/this morning, children with disorganised representations recalled the most information. The effect of security was significant for the Eid/Christmas memory and for recalling an occasion when the child was told off by his or her parents, with children who had disorganised attachment representations recalling more information than those with avoidant representations for both of these memories, while no differences in volume of recall were seen between the secure and disorganised groups. Note that for all of the above findings, adding attachment security into the analyses did not impact on the effects of gender and nationality on children's AM that were reported in Chapter Two.

A main aim of the study reported here was to investigate whether the security of children's attachment representations related not just to how much they recalled from their past, but to the quality of their memories. This was assessed by devising a new classification system whereby children's memory for each event was classified as being lacking in detail, overly elaborate, incoherent, appropriate, coherent, or detailed. Using this new coding scheme, significant effects of dichotomous attachment security were observed, again specifically for children's recall of emotional events. However, in contrast to the pattern of findings for volume of recall, assessing memories in terms of their quality rather than quantity highlighted advantageous effects for children with secure representations. Children with secure attachment representations appeared more likely to recall the Eid/Christmas, nice, and told off memories in a coherent/detailed way than their counterparts in the insecure group. For example, for the memory of being told off, 28% of children with secure representations recalled the event in a coherent/detailed way, compared with only 8% of children in the insecure group. Security of attachment representations was not related to children's quality of recall of events from last night/this morning or of their earliest memory.

In contrast to the associations between the security of children's attachment representations and various indices of their AM, there was a striking lack of association between security and children's self-evaluations. Effects of security of attachment representations failed to be seen on any of the measures of children's self-evaluations. Including attachment in the analyses did not have any major impact on the effects of nationality and gender on children's self-evaluations that were reported in Chapter Two.

Finally, to our knowledge, the study reported in this chapter is the first cross-cultural comparison of children's representations of attachment relationships. Although the overall effect of nationality on attachment was non-significant, the distribution of the different attachment categories was somewhat different between the British and Saudi children. While 63% of the British children had secure attachment representations, with 15% classified as insecure-avoidant, 53% of Saudi children were classified as secure against 28% who were classified as having avoidant representations. In contrast to the non-significant effect of nationality on children's attachment representations, gender was found to relate to the security of representations, with girls being more likely than boys to be classified as having secure representations. The effect of gender approached significance in the British sample, and there was a significant difference between boys and girls in the Saudi sample.

When Saudi girls and boys were compared separately with the whole sample of British children, no difference in the distribution of attachment representations was seen between Saudi girls and the British children, but Saudi boys were more likely to have insecure attachment representations than the British children. Specifically, Saudi boys appeared to be more likely to have insecure-avoidant representations, with 43% of Saudi boys falling into this category.

The study reported in this chapter is the first to have investigated links between attachment security and children's AM (a) using a representational measure to assess children's attachment security, and (b) assessing AM independently of attachment issues and input from caregivers. Previous research on links between attachment and AM suggested that securely attached children are more likely than their insecure peers to engage with emotional events they have experienced in the past, although the pattern of findings was not consistent across the valence of the emotions (Belsky et al., 1996; Farrar et al., 1997), and conflicting effects have been reported relating to children's gender (Etzion-Carasso & Oppenheim, 2000; Farrar et al., 1997). For example, Belsky et al. (1996) reported that securely attached children were more likely than insecure children to remember positive events they had witnessed, whereas Farrar et al. (1997) reported that insecure daughters and their mothers only elaborated on emotional events when they were positive. The findings reported above show that the effects of attachment security on children's AM are specific to emotional events, but suggest that attachment security impacts on recall of such events regardless of whether they were positive or negative.

Perhaps the most interesting finding of the study reported in this chapter is that the direction of effect between security of attachment representations and children's AM changed depending on whether one classified the memories for emotional events in terms of quality or quantity. If one looks at the quantity of information recalled (both in terms of total volume and the proportional use of elaboration, markers of narrative cohesion, evaluative information, and mentions of other people), children with disorganised attachment representations scored highest, with significant differences seen between the disorganised and avoidant groups, and no difference in recall between the disorganised and secure groups. Children with disorganised attachment representations were also the most likely group to include personal opinions (in the form of qualifiers) and information on their own and other people's internal states in their autobiographical narratives. However, if one focuses on the quality of recall, the pattern of effect is reversed, with children with secure attachment representations showing better quality of recall for the three emotional memories (Eid/Christmas, nice, and told off) also both in terms of total volume and the proportional use of orientation information secure children were the highest. Taken together, these findings suggest that, although children with disorganised attachment representations talk a good deal about their experiences and try to engage with their own and other people's thoughts and feelings when recalling past emotional events, they cannot organise their recollections into a coherent account that can easily be understood by the listener. The findings on the quality of recall of emotional experiences support Main et al.'s (1985) argument that secure children are capable of assimilating both positive and negative experiences to formulate a balanced view of their relationships with their caregivers.

While the findings reported here extend and help to clarify previous research on the relation between attachment security and children's AM, the lack of association observed between security and children's self-evaluations stands in contrast to previous research findings. Why might we have failed to find security-related differences in children's self-evaluations when others have found secure attachment to be positively associated with children's self view? One reason for the discrepancy may be the fact that children in the study reported here were older than those in previous studies. For example, Pipp et al. (1992) studied 2- and 3-year-olds, and the children in the studies of Cassidy (1988) and Verschueren and colleagues (Verschueren & Marcoen, 1999; Verschueren et al., 1996) were age 5 or 6. In these younger children, the security of their attachment relationships with caregivers may be a stronger determinant of how positively they view themselves, whereas in the 6- to 9-year-olds studied here, peer interactions may be more likely to determine children's self-evaluations.

Another reason for the lack of consistency between previous findings and those reported here may be the different methods used across studies to assess children's self-evaluations. The studies mentioned above used less detailed assessments of self-evaluations that were appropriate for these younger children, and crucially, the measure used by Verschueren and colleagues included questions relating to how the child behaved when interacting with parents. In addition, Cassidy (1988) assessed children's self-evaluations after an extended period of separation from the caregiver and subsequent reunion, raising the suspicion that the more positive reunion experiences of securely attached children may have had a carry over effect on how positively they perceived themselves. Thus, these aspects of the methodology used in these previous two studies may have served to inflate the positive association observed between attachment security and self-evaluations. In contrast, the study reported here assessed children's attachment representations and self-evaluations in separate sessions, with the attachment assessment preceding the self-evaluation assessment by around 2 days, reducing the likelihood of any carry over effects between assessment measures.

Methodological differences may also help explain why we failed to find an association between attachment security and self-evaluations when Easterbrooks and

Abeles (2000) reported security-related differences in self-evaluation in children the same age as those studied here. Easterbrooks and Abeles (2000) assessed children's self-evaluations using two different methods: (a) the ease with which children could access self-evaluations during an interview, and (b) a self-report measure of self-worth (Harter & Nowakowski, 1987) very similar to the Harter (1985) scale used in the present study. Easterbrooks and Abeles reported that children's attachment security (as assessed using the SAT) related only to ease of access of self-related material during the interview, and not to children's self-worth as reported by themselves on the scale. Moreover, the two measures of self-evaluation were not found to relate to one another. Thus, the results of the study reported above replicate the lack of association between a self-report measure of children's self-worth and the security of their attachment representation reported by Easterbrooks and Abeles.

The study reported in this chapter found that Saudi boys were more likely to have insecure attachment representations than Saudi girls and British children. Specifically, Saudi boys appeared to be more likely to have insecure-avoidant representations that British children. This difference might be explained in terms of the different socialisation experiences of Saudi boys and girls. As well as the previously discussed differences between Saudi Arabia and the UK in terms of strict gender segregation and the patriarchal nature of society, there is some suggestion that, compared with Saudi boys, Saudi girls have social interactions with women and children that are much more similar to typical child-rearing practices in the UK. For example, in their study on verbal mediation in Saudi and British children, Al-Namlah, Fernyhough, and Meins (2006) discussed how the combination of patriarchy and gender segregation has resulted in Saudi boys being permitted to attend important adult male gatherings, whereas girls' interactions are centred in the home with other young children and the womenfolk. Crucially, although Saudi boys are permitted to attend these important meetings, they are not allowed to contribute to the discussions (Seginer & Vermulst, 2002). In addition, Dwairy (2004) reported different opinions on parent-rearing practices depending on the gender of the Palestinian adolescents questioned (regarded to be representative of Saudi and other Arab nations). The Palestinian girls were more likely to perceive their parents as adopting authoritative practices, whereas the boys were more likely to perceive their parents as authoritarian. Taken together, Al-Namlah et al. (2006) argued that Saudi girls will be involved in more sensitive and reciprocal interactions with their parents than their male counterparts. These interpersonal experiences may help to explain why Saudi boys adopt attachment representations that are characterised by high self-reliance and self-care, coupled with a downplaying of the importance of close physical contact with the mother figure. The parenting practices adopted by Saudi mothers and their effect on the security of their children's attachment representations is the topic of the next chapter.

Chapter 4

4.1 *A Pilot Intervention Study: Can a Short-Term Group Intervention Have a Positive Impact on Attachment Security?*

As discussed in previous chapters, the types of mother–child interaction in Saudi Arabian families are very different from those typically seen in their British counterparts. In Saudi Arabian families, children are required to interact with parents and other older family members in respectful and deferential ways (Al-Garni, 2000; Al-Sudairi, 2000; Anderson, 2001). In addition, researchers investigating mother–child interactions in other collectivistic cultures have highlighted how, compared to their Western counterparts, mothers in collectivistic cultures talk to their children significantly less, with their conversations involving very little child-centred content (Mullen & Yi, 1995). Using Baumrind's (1971) distinction between authoritative and authoritarian parenting styles, Al-Garni (2000) reported that Saudi Arabian parents adopt an authoritarian style, characterised by high levels of discipline, strict adherence to rules, and a lack of warmth. Al-Garni (2000) described Saudi parent–child relationships in terms of the parents being "the ones who command and order, and the children... the ones who obey and follow" (pp. 39-40). This authoritarian, adult-centred approach to parenting is still widely adopted (Al-Banyan, 1980; Al-Sudairi, 2000). In addition to previous research, the findings reported in Chapter Three highlighted how Saudi boys were more likely to hold insecure (specifically avoidant) attachment representations than both Saudi girls and British children as a whole.

The aim of the study reported in this chapter was to explore the final theme of this thesis: the reorganisation of IWMs of attachment relationships in light of changes in the quality of the child's relationships with caregivers. Vaughn, Egeland, Sroufe, and Waters, (1979) amongst others have argued that attachment theory predicts both continuity and discontinuity over time. For continuity in attachment, significant others in the child's life should remain stable in terms of their presence and mode of interacting with the child. Ainsworth (1995) suggested that research showing a combination of stability and change requires careful examination of the rules and processes that govern patterns of attachment over time. Looking at continuity between attachment behaviours in infancy and attachment representations in adulthood, Waters and Hamilton (2000) discussed how individuals who experienced major negative life events such as severe illness, loss of a parent, or parental divorce were more likely to show discontinuity in their attachment security. These findings highlight an important part of Bowlby's theory that is often overlooked by attachment researchers: attachment is determined not only by individual's past history but also by his or her current circumstances (see chapter 1 page 21). Present conditions can therefore modify the influence of past history.

The aim of the study reported here was to establish whether an intervention to improve the quality of mother–child interactions of children who had been classified as having insecure representations of their attachment relationships might lead to children becoming more secure in their IWMs of close relationships. Bowlby (1980) argued that, although IWMs of attachment relationships become relatively fixed at around age 5, sustained changes in the quality of interpersonal interactions can lead to a reorganisation in one's IWMs. The intervention study aimed to investigate whether an intensive intervention over a short period of time aimed at improving the quality of mother–child interaction would be sufficient to have a positive impact on children's IWMs of their attachment relationships. The intervention study would thus address whether such an intervention could constitute the kind of sustained change that Bowlby implied was necessary for a reorganisation of the child's IWMs. A further aim of the pilot study reported in this chapter was to explore Saudi Arabian mothers' views about their relationships with their children and how they could be improved.

4.2 *Method*

4.3 *Participants*

Participants were 14 of the 90 Saudi Arabian children who had participated in the studies described in the previous chapters and their mothers. It was decided to carry out the intervention only on Saudi participants given that the intervention was heavily dependent on the ability of the author to manage the group-based intervention work, and the sessions were felt to be most appropriate if conducted in her native language. Of the 14 children, 6 children (4 girls) had secure attachment representations, and 8 (4 girls) had insecure-avoidant attachment representations as assessed using the MCAST story-stem task.

4.3.1Procedure

Mothers were recruited for the study by sending out information sheets and consent forms (see Appendix 3) to all of the 90 mothers who had given permission for their children to participate in the study described in Chapters Two and Three. Mothers were told that the aim of the study was to provide them with information on how to improve the quality of their relationship with their children by giving them home-based activities to practise and providing them with the support of group sessions. Of these 90 mothers, 20 expressed an interest in taking part in the intervention study, and of these, 8 were selected on the basis of (a) their children being insecurely attached, and (b) the mothers being able to commit to attending all five sessions within the specified period of time. A further 6 securely attached children whose mothers wished to take part were also included (a) to establish that any effect of the intervention was specific to children with insecure attachment representations, and (b) to provide the mothers of insecurely attached children with role models of the types of mother–child interaction typical of secure dyads. The 14 mothers were divided into two groups, each of which consisted of 4 mothers whose children had insecure representations, and 3 mothers whose children's representations were secure. Although no formal assessments were made of socio-economic status or family background, the families who participated in the intervention did not appear noticeably to differ from the whole group of Saudi participants.

4.3.2The Intervention

The activities that formed the intervention were chosen on the basis that they would increase the quality of interaction between the mother and child by encouraging discussion in an environment where the child felt happy, safe, and satisfied by his or her mother within the family setting. Each group received five 1-hour group sessions over a period of 45 days[4], with sessions being held once per week. Only the mothers participated in the group sessions; children were not involved.

The first session introduced the activities to the mothers and provided them with a pack which included detailed instructions on the activities and all of the materials needed. The group sessions were all led by the author, who has considerable previous experience in running group counselling and intervention sessions and has an MA in Adult Guidance and Counselling. The first session involved the author going through the different activities and answering any questions in order to ensure that all mothers knew what was required of them. In this session, the mothers were also informed how to keep a diary to

[4] Three mothers, all of whom had children with insecure attachment representations, contacted the author to request a meeting to discuss their relationships with their children on a one-to-one basis. The author met with these mothers and answered their questions on their concerns about how they interacted with their children.

monitor their involvement in the activities and also their views on the progress they felt they were making. Mothers were told to make their diary entries with the following three questions in mind: (a) what does the researcher need to know? (b) why does she need this information? and (c) how can I best provide her with the relevant information? Strauss and Corbin (1990) give a number of important steps that researchers can follow to make the data analysis easier and more successful. The researcher reads the material and engages in a process of open coding. This activity has been defined as the process of breaking down, examining, comparing, conceptualizing, and categorising data. This style of research can be used to study organisations, groups, and individuals in the social and behavioural sciences.

The most important aspect of running a personal development group is helping members to present themselves and to describe their experiences in their own way. Mothers were therefore told that they should not worry about making entries with perfect grammar or writing, since the things they were writing about were much more important. Mothers were told that their diaries could include things like (a) their thoughts, feelings, and ideas; (b) how they had changed their interactions with the child, and what had initiated such changes; (c) their experiences of sharing the child's feelings; (d) what they felt they and their children were learning from the group sessions; (e) what they felt they had done well, and (f) what they believed they need to develop or improve in the relationship with the child.

The second, third, and fourth sessions provided the mothers with opportunities to raise any problems they had encountered, and to obtain feedback from the researcher on their diary entries and how the activities were being conducted. The final session closed the group with a discussion of the mothers' and children's experiences of carrying out the activities and attending the sessions.

4.3.3Intervention Activities

In the first session, mothers were given a handout detailing two different types of comment: (a) effective commands and reminders of rules, and (b) unclear, vague, or critical commands (see Table 4.1). These comments were adapted from Webster-Stratton's (1999) guidelines for improving the quality of classroom interactions between teachers and pupils. Mothers were asked to consider which type of comment they most typically used when interacting with their children. If they indicated that (b) was more typical, they were encouraged to try to replace such comments with those in list (a), and mothers were also given examples of how to praise their children (see Table 4.2) and instructed to give such praise whenever the child did something well, no matter how small.

Table 4-1: Substitute phrases for unclear, vague or critical comments

Examples of Effective Commands and Rules Reminders	**Examples of Unclear, Vague or Critical Commands**
"Walk slowly thanks" "	"Stop running"
"Talk softly"	"Don't yell"
"I will listen when you are using a quiet voice"	"Stop whining"
"Please put the toys away"	"Didn't I tell you to pick that up?"
"Remember to …"	"I've told you before…"
"Keep the paint on the paper"	"You made a mess! Can't you be careful?"
"Remember our house rule …"	"Are you supposed to be doing that?"
"Don't forget to…"	"How many times do I have to tell you

<u>Table 4-2 Examples of ways I to praise children effectively</u>

"You do a super job of..."

"Good idea for..."

"What a wonderful job you have done of..."

"That's correct, that's a cool way to..."

"You are a real problem solver for..."

"Great thinking"

"You are being a good friend or brother or sister by..."

"Thanks for being so patient and waiting while I was..."

"I like the way you remembered to... "

"I knew you would remember to ..."

"Thank you -----, for making a quiet choice for..."

Mothers were then introduced to the 10 age-appropriate activities that were used in the intervention:

Sometimes I Worry About... (Stelle & Wise, 1986)

Give your child this set of sentences and ask him/her to complete them. Tell your child that he/she will have 5 minutes to think about and explain his/her feelings to you. You can start this activity yourself to show that you worry about things too, and this will help you to share your feelings with your child and let him/her know that you may both worry about the same thing.

Sometimes I worry about ....
Sometimes I worry about ....
Sometimes I worry about ....
Sometimes I worry about ....
Sometimes I worry about ....

The Magic Card Tells Me... (Stelle & Wise, 1986)

Invite your child to give you names of people whom they consider to be VIPs. Children can suggest celebrities or anyone in their lives. Record these names on a sheet of paper, and keep them on display throughout the activity. Show your child the card and explain that there is some information in it about a very important person. Ask your child who he/she thinks the VIP in the card might be. Then give your child the card to open. (There is a mirror in the card.) Discuss with your child that he/she is a very important person in your life.

TV Show (Kaduson & Schaefer, 2001)

This activity is about creating a TV show to negotiate and debate a problem that your child is experiencing. Encourage your child to give the show a name and name the main actor in it. It is best if your child makes him/herself the hero in the show. You should then make the hero suffer from the problem that your child is experiencing, and explore with your child ways in which the hero might solve it.

Circle Time (King, 1999; McGuiness, 1989)

Once a week or every few days, meet as a family. Everyone should sit in a circle and each person should tell the others one thing he/she has learned about him/herself, or one thing that he/she likes or does not like about him/herself. Your child can choose not to share an experience, and should be told this before starting the activity.

Same but Different (Stelle & Wise, 1986)

This activity is a good way of introducing your child to the ways in which he/she is the same as and different to you. Use it to show how you and your child share many common features and interests, but that you are also different from each other in interesting and important ways. You and your child should write down a list of your similarities and differences. For example:

Has a brother
Likes ice-cream
Has been to London
Likes maths

What is in My Name? (Stelle & Wise, 1986)

Encourage your child to think about positive characteristics to go with each letter of his/her first name. For example, John could be Jokey, Open, Honest, Nice. This is a good activity to engage in during mealtimes. This activity can be used to lead on to discussing name-calling and other forms of bullying if these are issues for your child.

Things about Mum and Me (Kaduson & Schaefer, 2001; Webster-Stratton, 1999) Sometimes it's difficult for parents to tell their children how good they are, but you can create situations where your child hears positive messages about him/herself. Write down things that your child *does* rather than things like their appearance. *Every comment should be positive – no put-downs.* It's good to write down positive things in the table below and keep it in your child's bedroom so that you can add new things to the list as you find out about them. You can then get your child to complete the list showing good things about yourself. This way you can learn about the things you do that your child likes and that make him/her happy.

My child is

My mum is

Proud Circle (Stelle & Wise, 1986)

This activity encourages your child to focus on his/her positive characteristics and be proud about them. Once a week or every few days, meet as a family and ask your child to talk about something that he/she is really proud of. Encourage your child to talk about personal attributes or things that he/she has done or achieved that should engender a feeling of pride.

My Super Hero (Kaduson & Schaefer, 2001)

Get your child to select a person who he/she thinks is the greatest. Discuss with your child why he/she has chosen this person and why he/she is so good. Ask your child whether he/she has anything in common with his/her hero, and chat with your child about the good things that his/her hero does and how your child may achieve similar things in the future.

Role Swapper (Stelle & Wise, 1986)

This activity can help your child to face situations where he/she has experienced conflict, and understand that different situations need different responses. In this activity try to explain to your child how situations can be understood differently from more than one point of view. Choose a situation where our child has recently got into conflict with yourself or someone else, and swap roles so that you both experience the situation from everyone's perspective. Exchanging roles is very important because it allows the child to understand and experience the same situation from a perspective other than his/her own.

Mothers were encouraged to try one of the activities each day, selecting activities that might be particularly appropriate for the child's current experiences. In addition to the set activities, each mother was instructed to spend 15 minutes of one-to-one time with her child just before he or she went to bed. Mothers were told that, although the 10 activities did not have to be performed daily, they should ensure that they spent this 15 minutes of quality time with the child every single day. The time could be spent in any way, but it was suggested that the mother should spend this time doing quiet activities, such as chatting with her child about the events of the day. From personal experience, the author has found that this dedicated time every day has had a very positive impact on children's self-confidence and behaviour.

4.3.4Post-Test Assessment of Children's Attachment Representations

Within 1 week of the final group session, all children participated for a second time in the MCAST in order to establish the security of their attachment representations. This was administered using precisely the same procedure as detailed in Chapter 3 page 72.

Green et al. (2000) reported that MCAST classifications were stable over a period of 5.5 months, although the level of stability depended on the child's original classification. Children who were classified as secure on all vignettes showed 100% stability in classification, whereas there was 76.5% stability in the ABC secure/avoidant/ambivalent categories, and 69% stability in the disorganised category.

4.4 *Results*

In order to establish whether the intervention had had any impact on the security of children's IWMs of attachment relationships, their pre- and post-intervention attachment classifications were compared. Of the 8 children with insecure attachment representations, all had become more secure after the intervention: 4 of these children responded to all three vignettes in a secure fashion (of these children, 2 had previously responded to all three vignettes in an insecure fashion, and 2 had responded insecurely to two of the three vignettes), and the remaining 4 were classified as secure on at least one of the three vignettes (1 child moved from being classified insecure on two vignettes, and 3 children had previously responded insecurely to all three vignettes). None of the children with secure attachment representations changed; all responded in a secure fashion to all three vignettes at post-test. Compared with children previously classified as secure, those who had been classified as insecure before the intervention were more likely to change classification (and all changed in the direction of becoming more secure), $\chi^2(1) = 14.00$, $p < .001$, two-tailed. Using dichotomous secure/insecure categories to compare the security of children's attachment representations pre- and post-intervention, there was a significant difference, $\chi^2(1) = 4.20$, $p < .05$, two-tailed, with children with insecure attachment representations being more likely to become secure in their representations after the intervention.

4.4.1Assessing the Effectiveness of the Intervention

Given the obvious change in children's attachment representations between the pre- and post-intervention sessions, it is important to establish that the observed change was accompanied by changes in the quality of mother–child interaction. Feedback during the group sessions and the mothers' diaries was used to investigate whether the intervention had had any impact on parenting behaviour.

4.4.2Feedback From Group Sessions and Diaries

Strauss and Corbin (1990) recommend that, whenever possible, qualitative data should be framed in terms of activities and processes rather than static entities. First, mothers' individual experiences in being a member of the group are addressed. In the first session, some members reported being confronted with unexplored blocks relating to their values, self-confidence, self-awareness, and being rejected. Members will only benefit from the group sessions if they are willing to be honest with each other and the group facilitator, and this will encourage self-disclosure in other group members (Corey, 2000). To encourage honesty and self-disclosure, the author tried to provide an environment ruled by full acceptance of the members' feelings. In the beginning of the first session, I introduced myself in a simple way and was calm and relaxed throughout in order to enable the members to feel familiar with the group. The positive atmosphere of the group sessions was mentioned in one of the members' diaries: "I loved the calm, safe, united atmosphere".

From the outset, the author outlined the main issues that would rule the group environment: (a) willingness to listen, (b) being non-judgemental, and (c) congruency toward members' feelings and their children. This introduction had a positive effect on the group members as some of them revealed in their diaries: "I loved being free to speak or not, but welcomed at the same time".

In the beginning of the second session with both groups, there were long periods of silence. I was aware of the importance of respecting these silent periods. I started expressing various non-verbal communications, such as eye contact and smiling. The message I intended to give was to make them feel free and relaxed even if they chose not to talk. After a short time, both groups had the intuition to break the silence through discussing their feelings and expectations from this group.

Encouraging group members to empathise with one another was not an easy task, especially given the different approaches to parenting adopted by different group members. However, empathy was the most important thing to practise in order to give the mothers a chance to reflect on their feeling about being unable sometimes to satisfy their children's needs, or feeling that their children were being resistant to their attempts to make their relationships closer. From Roger's (1970, 1983) point of view, a facilitator in a group situation can encourage empathy by listening to, reflecting, clarifying, summarising, and showing acceptance of views being expressed by group members. Empathy cannot be encouraged if the facilitator adopts a judgemental attitude towards group members' opinions, and the facilitator will thus have to accept negative as well as positive feelings (Corey, 2000).

The key issue for me in establishing trustful relationships with the potential to develop over time with the two groups was achieving and providing an environment which might make them able to build such a relation with their children. Participants were very happy to be listened to and accepted unconditionally. Their confidence about what they said and shared with the group increased from session to session as illustrated by the following diary entry: "I know that some of what I believe in is right, but I did not expect that I would be happy to show it to the group members without feeling guilty or shy. The company we have in the sessions makes me confident in myself". Moreover, members found in the group an environment that they wished to reproduce in their daily lives with their children: "I do not know if I can have the same kind relationships [as developed in the group] later with other people, but I know that these relationships were special". The author attempted to facilitate this carry-over by having them discuss the saying "children learn what they live".

On the other hand, this shared environment of understanding and acceptance did not prevent the group members criticising one another and expressing their different attitudes and values. This was revealed through the feedback which the members in one of the groups gave to each other in the fourth session. This voluntary process of giving feedback was of great help to the group, due to the major importance and effect of others' expectations on the behaviour of Saudi Arabians.

Most of them were surprised by the feedback given to them by their colleagues and how they interpreted their behaviours. One participant said to another member: "When I first saw you I thought that you were really showing off talking about the perfection you want from your children, but in this group, I can see that you are actually trying and no one has has been taught how to be a parent before". This process highlighted how "feedback from others can help us realize how our attitudes and behaviours are interpreted" (Duboust & Knight, 1999, p. 35).

Despite the positive feedback on the sessions and how they were helping mothers to try to improve their interactions with their children, mothers also discussed the difficulties they were having in implementing the intervention techniques. Some mothers expressed how they had their own problems and anxieties, and that attempting to follow the activities and be responsive to their children's needs added further pressure to their lives. Certain members of the groups also felt that some of the activities would be embarrassing because they were not used to interacting with their children in such ways, but other group members pointed out to them that they should not let these feelings prevent them from trying the activities because improving their interactions with their children would have such a positive effect on the atmosphere at home. Other mothers expressed how it was sometimes difficult to get their children to take part in the activities, because children were resistant to stop playing in order to come to sit and talk with their mothers. The group sessions encouraged mothers not to give up on the activities in the face of seeming lack of interest from the child. Children would initially be unaccustomed to having these types of interaction with their mothers, but once they had learnt that the activities were enjoyable and involved having quality interaction with the mother, they would be keener to participate. However, although some mothers found the activities difficult, all mothers were extremely positive about spending 15 minutes of quality time with their children before bed, and found this easy to implement on a daily basis. One mother expressed how this was a perfect time to make peace with your child if you hadn't managed to improve your interactions with him or her that day as much as you had wished. She stated that you could use this time to tell your child how important he or she was to you and to end the day on a loving and positive note.

Given the authoritarian approach to parenting typical of many Saudi families, it was a challenge to change mothers' attitudes to punishment by getting them to see that rewarding good behaviour and ignoring bad behaviour was a more effective disciplining strategy. Some mothers spoke about how they believed that children could not be controlled by positive actions alone, and many group members believed that problems they had in interacting with their children stemmed from not being effective in teaching their children right from wrong, and not from failing to spend quality time with them. Consequently, mothers who felt the need to discipline their children were instructed to use 'time outs' rather than physically punishing their children.

Further extracts from typical mothers' diaries are included below to show differences in how mothers approached the activities, and in their views on the intervention (note that only the child's initial is given to mask identity).

4.4.3Mother of Child with Secure Pre-Intervention Representations

Feelings, difficulties, and comments	Kind of the activity or conversation between me and my child or discussions in sessions
The problem is not how to play with the children. The problem is	Group sessions

how to control being angry at them in the hard times. But we shared many problems at the sessions, most importantly those which are common and difficult like stubborn children, shy, and aggressive behaviour. Anyway, I loved being free to speak or not, but welcomed at the same time.	
I was so excited to see my child's face when she saw herself in the mirror. I liked it when the researcher did this to us and gave us the same chance to guess who was in the card. I felt like it was a good chance to explain how much I like my daughter.	Magic card
It was nice to go through this activity because I wanted to say why I feel S is the most important person. She was so happy to see the results.	Things about mum and me

I wanted to know which things can make her worry. And as I expected, she is worried each time I go out and stay out late. She doesn't like to go to sleep unless I am home. She is also worried if she watches a movie where kids stay away from their parents.	Sometimes I worry about
This was a very nice activity. She took a long time insisting on thinking what can she get out of her name. She now knows what her name means.	What is in my name
Each time she did something wrong in the house, I reminded her that she has to be proud of herself because of being nice to everyone, so this was so good.	Proud circle

Mother of Child with Avoidant Pre-Intervention Representation, Classified as Secure Post-Intervention

Feelings, difficulties, and comments	Kind of the activity or conversation between me and my child or discussions in sessions
I found it hard to convince my child to leave games or favourite TV shows and start playing. Bed time was perfect, but sometimes children are so exhausted. Also I feel that I will never be able to satisfy my children especially while I am working full time, but I am doing my best. It is depressing sometimes to feel that it is not possible to do this all the time with them. I feel I know how to make my child happier, although I still have problems of my own.	General comments
I tried to use the circle time and encourage H and his sister to say positive comments about each other. It was a very good chance for them to experience the other's point of view and to help them	Circle time

understand each other.	
I really enjoyed watching him being happy when he saw himself in the mirror. H thought that he would find his younger brother's photo or anything, but not something about him. I think this is one of the most interesting activities.	Magic Card
I always wanted to know what can make him worry, and I found that spelling class was the first choice, and he chose being hit by a car as a second one. He mentioned something about the dark as well.	Sometimes I worry about
I was happy to hear that H has a lot to be proud of. He took a long time to tell me, but in the end he said he is proud of playing football and bowling.	Proud circle
It was not easy for him to get	What's in my name?

positive things out of his name. But he found that he can be patient, quick in running, and the strongest in his class.	

Mother of Child with Avoidant Pre-Intervention Representation, Classified as Secure Post-Intervention

Feelings, difficulties, and comments	Kind of the activity or conversation between me and my child or discussions in sessions
I was interested to attend because Y lost her father a few months ago and I feel like we have not sat together and talked for a long time. I wanted to compensate her with this programme and I really feel I do not care about her as much as I used to.	General comments
I believe that positive support for children is not enough on its own, but we have to keep trying.	
I found this a good opportunity to	Magic card

express my feelings for Y. I can't forget her face when she saw her face in the mirror.	
Bedtime is a really nice and calm time for both of us because we sleep in the same room now and we can keep talking for a long time. I found Y enjoyed this to the maximum.	Bedtime routine

Mother of Child with Avoidant Pre-Intervention Representation, who Became More Secure After the Intervention

Feelings, difficulties, and comments	Kind of the activity or conversation between me and my child or discussions in sessions
The phrases to substitute for critical commands helped me a lot to build some respect and get positive reactions from my child, but it wasn't easy to do this all of the time.	Initial comments
S did very well in the magic card activity. She was desperate to know who was in there, and it was a nice surprise that she saw herself. I felt	Magic card

glad that I expressed my feelings to her about her being the most important star.	
I needed to know what S thinks of me and she was happy to see positive feedback from me on the chart. She waits most of the time now to see the comments I might put on the chart before she goes to bed.	Things about mum and me
S and even I used to think that the model and perfect example she has in her life might be hard to reach. So we both learned that these heroes or models were children once.	My super hero
I prepared myself for this in advance in case I couldn't find exact words. She felt absolutely happy to transfer her name to these nice characteristics.	What's in my name?

4.5 *Discussion*

The results of the intervention study reported in this chapter suggest that the group sessions had a marked positive impact on both the quality of mother–child interaction and children's representations of attachment relationships. Of the 8 children with insecure attachment representations whose mothers participated in the intervention, 4 were classified as secure on all three vignettes in the post-intervention attachment assessment, and the remaining 4 children had all become more secure, responding in a secure fashion to at least one of the three vignettes. The feedback from the group sessions and from mothers' diaries showed that all of the mothers had attempted to use the intervention advice and activities to increase the amount of quality time they spent with their children, and all had adopted the bedtime routine on a daily basis. The children who had been classified pre-intervention as having secure attachment representations who were included in the intervention as controls were stable in attachment security, with all responding to 100% of the vignettes in the post-test in a secure fashion. Given the levels of stability in MCAST classifications reported by Green et al. (2000) over a period of 5.5 months, it appears highly unlikely that the degree of change observed in the study reported here can be explained in terms of poor test-retest reliability. The fact that only the children with insecure attachment representations changed in any way also indicates that the observed changes resulted from the intervention rather than inconsistencies or inaccuracies in assessing the security of children's attachment representations.

The study reported here is unusual in addressing precisely what might qualify as the type of sustained positive change in children's interactions with attachment figures that Bowlby (1980) argued would be sufficient to reorganise children's IWMs of attachment relationships. Our findings suggest that weekly group sessions and associated home-based activities, conducted over a period of 6 weeks, had a powerful effect on the security of children's attachment representations, and thus appear to index sustained change. Of course, the study reported here involved only a small number of mothers, so it would be wise to be cautious in drawing any firm conclusions until they have been replicated in a larger sample. Nevertheless, these findings are important in providing some indication of the types of activity and length of intervention that might be required to improve how children represent their relationships with attachment figures.

The precise reasons why the intervention implemented in the study reported here may have had such an impressive effect on how children represented their attachment relationships are discussed in greater detail in the final chapter.

Chapter 5

5.1 *General Discussion*

The main purpose of the investigations reported in this thesis was to investigate interrelations between children's AM, self-evaluations, and attachment representations in the context of a cross-cultural study. Relations between AM and self-evaluations were investigated first in Chapter Two in samples of Saudi Arabian and British children aged between 6 and 9 years. Although the predicted relation was observed between children's global self-worth scores and their recall of emotional material, the effects were small, and the results regarding the valence of the emotional memory were somewhat contradictory, with higher self-worth being associated with less extensive recall of both positive (a nice event) and negative (being told off by parents) events. Children's discrepancy scores for self-esteem were unrelated to any aspect of AM, suggesting that children's recall of both emotional and non-emotional experiences was unrelated to how positively they judged themselves in areas that were personally important to them.

Children's nationality and gender were found to relate to both their AM and their self-evaluations. In support of hypotheses regarding cultural differences in AM, in comparison with their Saudi peers, British children (a) produced longer autobiographical narratives, (b) included more personal opinions, and (c) produced proportionately more evaluations. However, no support was found for hypotheses relating to cultural differences in the cohesion and elaboration of memories, or the extent to which children included references to other people in their narratives. Nationality was unrelated to children's elaborations, and Saudi children produced proportionately more markers of narrative cohesion (temporal markers and descriptives) than their British counterparts. The collectivistic nature of Saudi culture appeared to have no impact on the extent to which children mentioned others when recalling past events. Across both cultures, boys were more likely to produce proportionately more evaluations than were girls.

With respect to the impact of gender and culture on children's self-evaluations, Saudi children were found to view themselves more favourably than their British counterparts, attaining higher average scores on three of the six self-worth dimensions. Saudi children were more likely than British children to (a) view themselves as being intellectually competent and good at school, (b) perceive themselves to be well-behaved, and (c) attain higher global self-worth scores. There was an interaction approaching significance between nationality and gender for children's discrepancy scores, and post hoc tests indicated that the interaction was caused by British girls being more dissatisfied with themselves than British boys in areas that were personally important.

The study reported in Chapter Three investigated whether differences in the security of children's attachment representations related to children's AM and to their self-evaluations. Pervasive relations were found between attachment representations and children's AM, but the direction of the effect of security varied depending on whether AM was assessed in terms of quantity or quality. For overall volume of narrative, there was a main effect of attachment security, with children with disorganised attachment representations recalling more than those whose representations were avoidant. Children with disorganised attachment representations included proportionately more evaluations in their narratives than did children with secure attachment representations, and disorganised children appeared more likely than those with secure or avoidant representations to include internal responses and personal opinions in their autobiographical narratives (although the effect for personal opinions only approached significance). In contrast, the narratives of children with secure representations included proportionately more orientation information than those of their disorganised peers.

Turning to relations between attachment representations and volume of recall for different types of memory, effects were only seen for recall of emotional events. When recalling the previous Eid/Christmas and a time when they were told off by parents, children with disorganised attachment representations recalled more than those with avoidant representations, while there were no differences in volume of recall for these memories between the disorganised and secure groups.

When the *quality* of children's autobiographical narratives was used, however, the pattern of relations with the security of children's attachment representations was reversed. Using the new coding scheme developed for this thesis to assess the coherence, relevance, and comprehensibility of children's memories, attachment security was once again only related to recall of emotional events, but it was now the children with secure attachment representations who scored most highly. Using dichotomous secure/insecure comparisons and controlling for gender or nationality, children with secure attachment representations were more likely than those whose representations were insecure to recall the memories for Eid/Christmas, a nice event, and being told off in a coherent or detailed way. Gender was found to be unrelated to the quality of recall for all memories, but nationality related to quality of recall of the last night/this morning, Eid/Christmas, told off, and earliest memories. For all of these memories, Saudi children were more likely than their British counterparts to produce a non-optimal (lacking in detail, overly elaborate, or incoherent) memory.

The security of children's attachment representations was also expected to relate to their self-evaluations. However, contrary to hypotheses, children's attachment representations were found to be unrelated to all indices of children's self-evaluations. Thus, the results of the study reported here did not show that children with secure attachment representations were more likely to hold more positive self-views than those with representations that were insecure.

The study reported in this thesis was the first to investigate cultural differences in children's attachment representations. Nationality was not significantly related to the security of attachment representations, although there was some suggestion that Saudi children were less likely to hold secure attachment representations (53% versus 63%) and more likely to hold avoidant representations (28% versus 15%). These differences between the British and Saudi children were found to be caused by a cultural difference specifically in Saudi boys' attachment representations. Saudi girls were more likely to be classified as having secure attachment representations than Saudi boys, and although there was no difference in the distribution of Saudi girls' attachment representations when compared with that of British children, Saudi boys were found to be more likely to hold insecure attachment representations than were British children. Saudi boys seemed more likely than British children as a whole to be classified in the insecure-avoidant category, with 43% of Saudi boys receiving this classification.

Finally, Chapter Four reported a pilot intervention programme which aimed to improve the quality of mother–child interaction in dyads where children were classified as having insecure attachment representations, and assess whether any such improvement would impact positively on the security of children's attachment representations. The 6-week intervention, which involved group sessions with the mothers and home-based activities, was found to have a positive effect on quality of mother–child interaction as reported by mothers in their diaries and via feedback in the group sessions. Most notably, the intervention appeared to have a marked impact on the security of children's attachment representations, with all of the insecure children becoming more secure in their post-intervention attachment representations, and half of the insecure children being classified as having secure attachment representations after the intervention.

5.2 *Comparisons with Previous Research Findings*

Previous studies on cultural differences in children's AM have investigated whether children living in collectivistic cultures in Asia differ from their Western counterparts in terms of how they recall personally experienced events. The study reported in this thesis is the first to investigate AM in children from an Arabic culture. The findings comparing Saudi Arabian children's autobiographical narratives with those of Western children in the UK largely mirrored the pattern of findings reported by researchers comparing Asian and American children. For example, the study reported here replicated Han et al.'s (1998) findings that children from collectivistic cultures produce shorter autobiographical memories that contain fewer personal opinions.

Previous research has investigated links between attachment security and AM, but only in the context of attachment behaviours and/or when AM is assessed from joint mother–child reminiscences. The study reported here helps to clarify whether attachment is only related to recall of memories of positive or negative valence, and extends previous findings by considering the link between children's attachment representations and AM. For example, Belsky et al. (1996) showed that 3-year-olds classified as securely attached in infancy were better able to recall only positive events, with their insecurely attached peers showing better recall for negative events. In contrast, Farrar et al. (1997) reported that insecure mother–daughter dyads only elaborated when the emotional memory was positive, whereas elaboration for secure mother–daughter dyads was unrelated to the valence of the memory. The findings reported here suggest that, when attachment is assessed at the level of representation and AM is measured independently of input from the mother, secure attachment does not mean that the child will be able to recall more information about previously experienced events. Indeed, in terms of volume of recall, children with disorganised attachment representations recalled more for all events apart from the last night/this morning memory.

The study reported here failed to replicate previous findings of a positive association between attachment security and children's self evaluations (Cassidy, 1988; Pipp et al., 1992; Verschueren & Marcoen, 1999; Verschueren et al., 1996). As discussed in Chapter Three, the divergent findings may have resulted from methodological differences or age differences in samples, with these previous studies focusing on younger children for whom the quality of relationships with attachment figures may more strongly determine how positively they view themselves. The results reported here on the lack of relation between self-evaluations and attachment representations do, however, replicate the null finding of Easterbrook and Abeles (2000) who reported that the security of 8-year-olds' attachment representations as assessed using the SAT did not relate to self-report measures of self-worth.

5.3 *Implications for Theoretical Perspectives*

The results reported in this thesis speak to three main theoretical issues: (a) developmental accounts of the relation between self and AM, (b) links between IWMs of attachment relationships and children's more general cognitive representational capacities, and (c) the extent to which IWMs can be updated in light of changes in the quality of the caregiver–child relationship.

5.3.1 Developmental accounts of the relation between self and AM

Several researchers have argued for links between children's AM and self, either at the level of basic self-recognition (Howe & Courage, 1993, 1997) or more sophisticated conceptions of a enduring, temporally stable self (Neisser, 1988; Povinelli, 1995; Welch-Ross, 1995). Despite the persuasive nature of these theoretical accounts, there is little empirical support for links between AM and self, and Reese (2002, 2003) has highlighted how mothers' reminiscing style may mediate the link between self and AM recall since studies have only assessed children's AM in the context of joint reminiscences with their mothers. Reese (2002) argued that there were clearer theoretical reasons for predicting that children's AM would be related to their self-evaluations rather than to their more basic understanding of self (e.g., self-recognition, endurance of self over time), since how one appraises oneself might influence the way in which previous experiences, perhaps particularly emotional experiences, are recalled. Certainly, as discussed in Chapter One, there is literature from adults to support this suggestion (e.g., Wilson, 2000). But although Welch-Ross et al.'s (1999) findings suggested that 3- and 4-year-olds' autobiographical recall related to their self-evaluations, once again, this study only assessed AM in the context of joint mother–child reminiscences, making it impossible to establish whether children's individually recalled AM relates to their self-evaluations.

The study reported here is this the first to investigate the link between self-evaluations and children's independent autobiographical recall. What impact do the weak findings of any link between these factors have on theoretical accounts of the development of AM? Although at first glance, the findings reported here may be regarded as weakening theoretical perspectives that view self as being an important determinant of AM, it is wise to be more cautious before drawing this conclusion. For example, it may be that the relation between self and AM is predictive, and the fact that these measures were taken concurrently in the study reported here may have served to mask their true relation. Longitudinal data would help to address this issue and also to clarify the direction of effect for any relation between self and AM. It may be that children's self-recognition and understanding that self is an enduring concept that is stable over time is a prerequisite for recalling personally experienced events. However, the way in which children organise, appraise, and recall past events might then go on to determine children's later self-evaluations. Thus, there may be bi-directional influences between self and AM depending on the nature of the self assessment and the temporal relation between self and AM. Future research using a longitudinal design should attempt to investigate these possibilities.

5.3.2Links between attachment IWMs and other representational capacities

The IWM is a central concept in attachment theory, and is invoked to explain many important findings in the attachment literature, such as intergenerational transfer of attachment security from parent to child, and secure children's superior developmental outcome. However, several authors have been critical about the poor definition and operationalisation of IWMs. For example, Hinde (1988) described the IWM as a catch-all that "can too easily explain anything" (p. 378), and Thompson has voiced similar concerns more recently. Thompson and Raikes (2003) argued that there are no grounds on which to assume that IWMs are independent of other cognitive representational systems. Thompson (1998) proposed that IWMs entail (a) social expectancies (in existence from the first year), (b) event representations (in existence from the third year), (c) autobiographical memory representations (third year), and (d) theory of mind abilities (third and fourth years). In each of these later systems, representations are shaped not only by direct experience and evaluation, but by narrative co-construction with caregivers.

While there is evidence that children's IWMs are linked to their understanding of mind and emotion (de Rosnay & Harris, 2002) and linguistic abilities (Bretherton et al., 1990; Waters, Rodrigues, & Ridgeway, 1998), the developmental relation between IWMs and children's AM systems is currently unclear. In addition, the fact that representational tasks to assess children's IWMs only focus on attachment themes means that it is not currently possible to establish whether individual differences in attachment security relate specifically to children's ability to organise attachment-related narratives, or to their more general ability to construct coherent narratives, regardless of content. The finding reported here that children classified as having secure attachment representations provide more coherent narratives when talking about past emotional experiences, but not about previously experienced mundane events, suggests that attachment IWMs may be part of some more general cognitive system for encoding, representing, and interpreting emotional material. The results reported here do not, however, suggest that IWMs can be equated with the coherence or organisation of children's more general AM abilities, thus providing some empirical evidence for the discriminant validity of IWMs as assessed via story-stem tasks.

5.3.3 Updating IWMs

Although Bowlby (1973, 1980) argued that the child's IWMs of relationships become fixed at around age 5, he left the door open for continued change in IWMs beyond this point if the individual experienced sustained change in the quality of their interpersonal interactions. As discussed in previous chapters, this highlights an aspect of attachment theory that is often overlooked in research on attachment-related differences in children's development. Bowlby (1973) argued that ontogenetic development "turns at each and every stage of the journey on an interaction between the organism as it has developed up to the moment and the environment in which it then finds itself" (p. 364). Thus, the vast majority of researchers only assess attachment at a single time point, and assume that the security of the attachment relationship will remain unchanged in the intervening time until follow-up assessments, but the child's current circumstances will impact on their security.

Researchers investigating long-term continuity in attachment from infancy to early childhood have begun to address processes that may be responsible for stability or change in attachment security over time. Some researchers have reported stability between infantile attachment security as assessed in the strange situation and young adults' present state of mind regarding attachment as assessed using the AAI in around 75% of individuals (Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). In contrast, others have found no longitudinal stability between strange situation and AAI security (Lewis, Feiring, & Rosenthal, 2000; Weinfield, Sroufe, & Egeland, 2000). The latter findings are perhaps more intriguing because of claims of *lawful discontinuity* (Weinfield et al., 2000) depending on the experiences of the child in the intervening years. For example, Weinfield et al. (2000) reported that individuals showing discontinuity could be differentiated from those showing continuous patterns of security in terms of their experiencing maltreatment, maternal depression, and poor family functioning in early adolescence. Furthermore, Lewis et al. (2000) reported that insecure attachment representations at age 18 were related to parental divorce. These longitudinal studies thus highlight the damaging impact of negative life events on the security of young adults' attachment representations despite the secure nature of their early attachment relationships.

Considerably less attention has been focused on how positive changes in the child's circumstances may lead to insecure representations being reorganised to form secure IWMs of relationships. The intervention study reported in Chapter Four is thus an important contribution to the literature. The results of this study suggest that improving the quality of mother–child interaction by getting the mother to spend a short amount of dedicated one-to-one time with her child every day, praising the child for good behaviour rather than focusing on punishment for misdemeanors, and showing the child that he or she is an important person in the mother's life, appeared to be sufficient to constitute a sustained change and lead to an associated reorganisation in the child's attachment IWMs. It is tempting to think of sustained change in terms of periods of years or at least months over which positive activities and approaches must be maintained before any effects can be felt, but it may be that real change can be effected in mere weeks if caregivers are willing and able to change their parenting behaviours.

While these findings have clear implications for real-life caregiving situations, they also raise some interesting theoretical points. First, researchers have not considered whether the speed at which IWMs might be updated is dependent on the direction of change. It may be more adaptable to reorganise one's IWMs more rapidly in the face of positive change than of negative change. Although it would obviously be unethical to study the effects of negative change within an intervention procedure, studies on child maltreatment or using at-risk samples could address this question. Second, the individual responsible for the change to more positive interactions may impact on the speed at which IWMs may be updated. For example, if a child with insecure attachment representations begins to experience a positive and satisfying relationship with a caregiver who has previously been unresponsive and unavailable, how quickly should the child update his or her IWMs? Would it be more adaptable to respond immediately to the improved relationship and begin to expect more positive outcomes for this and other relationships in the future, or would it be wiser to be slower in adapting given the long past history of less than optimal interactions? The results of the study reported here suggest that the former more rapid updating appears more likely.

In contrast, how should a child respond to improvements in social interactions when the person involved is a new caregiver such as a foster or adoptive parent? Researchers have begun to consider how experiences of foster care and the sensitivity and attachment representations of foster carers relate to children's attachment security (Bernier, Ackerman, & Stovall-McClough, 2004, Dozier, Stovall, Albus, & Bates, 2001), but this research is in its early stages. Future research should, however, consider the possibility that adaptation of the child's attachment security in response to experiencing a more sensitive and nurturing environment provided by a new caregiver may take longer than responding to change in an existing relationship. Alternatively, in contrast to negative changes, positive changes regardless of who instigates them may result in a quicker updating of attachment IWMs. The results of the study reported in Chapter Four thus suggest interesting avenues for future research in both biological and foster/adopted families.

5.4 *Future Directions*

Many of the hypotheses formulated in the study reported here assumed that mother–child interaction in Saudi Arabian dyads was qualitatively different from that typically observed in British dyads. Although this assumption was based on the author's own personal experience of Saudi Arabian culture and was backed up by information provided by some of the mothers who participated in the intervention study, it is important to assess potential cultural differences in the context of actual observations of mother–child interactions. It would be interesting to assess differences between British and Saudi dyads both in their more general interactions and in their joint reminiscences about past events. Such a study would enable one to investigate cultural differences in mother–child talk about the past. Establishing how such interactions relate to children's individually-recalled memories and to their attachment representations would be a worthwhile endeavour. Attempting to assess the accuracy of children's memories, particularly about emotional events, and relations with self-evaluations and attachment relationships would help further clarify potential relations between these factors.

Assessing differences in British and Saudi children's peer relationships as well as attachment relationships would also provide interesting cross-cultural data that could test the hypothesis that peer relationships become more important determinants of children's self-evaluations as they move into middle childhood.

Finally, a more complete picture of the precise nature of the links between attachment IWMs, AM, and self-evaluations would be obtained by assessing the IWMs of the caregivers as well as the child. Supplementing the measures reported in this thesis with AAI assessments of the children's mothers would enable one to establish whether maternal attachment representations impact on the way in which the child constructs narratives about past experiences. Although researchers have recently begun to address how parental attachment representations might impact on their children's AM (Alexander & Schaaf, 2001; Alexander et al., 2002b; Goodman et al., 1991), these studies have only considered attachment in light of children's memories for stressful events, and have only assessed parental attachment using self-report measures rather than the AAI. Investigating how parents' AAI narratives relate to their children's self-evaluations and independent autobiographical recall, as well as to how the parent collaborates with the child in constructing a narrative account of his or her past experiences, will provide important information on the potential pathways via which interpersonal relationships impact on how children construct models of themselves and their relationships with others, and their ability to tell their life stories.

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Appendix 1: Harter's (1985) Self-Perception Profile for Children

TEXT BOUND INTO

THE SPINE

What I Am Like

me ______________________________ Age ________ Birthday ______________ Group ________

Month Day

y or Girl (circle which)

SAMPLE SENTENCE

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
	☐	☐	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	☐	☐
.	☐	☐	Some kids feel that they are very *good* at their school work	BUT	Other kids *worry* about whether they can do the school work assigned to them.	☐	☐
.	☐	☐	Some kids find it *hard* to make friends	BUT	Other kids find it's pretty *easy* to make friends.	☐	☐
.	☐	☐	Some kids do very *well* at all kinds of sports	BUT	Other kids *don't* feel that they are very good when it comes to sports.	☐	☐
.	☐	☐	Some kids are *happy* with the way they look	BUT	Other kids are *not* happy with the way they look.	☐	☐
i.	☐	☐	Some kids often do *not* like the way they *behave*	BUT	Other kids usually *like* the way they behave.	☐	☐
3.	☐	☐	Some kids are often *unhappy* with themselves	BUT	Other kids are pretty *pleased* with themselves.	☐	☐
7.	☐	☐	Some kids feel like they are *just as smart* as as other kids their age	BUT	Other kids aren't so sure and *wonder* if they are as smart.	☐	☐
3.	☐	☐	Some kids have *alot* of friends	BUT	Other kids *don't* have very many friends.	☐	☐

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
9.	☐	☐	Some kids wish they could be alot better at sports	BUT	Other kids feel they are good enough at sports.	☐	☐
0.	☐	☐	Some kids are *happy* with their height and weight	BUT	Other kids wish their height or weight were *different.*	☐	☐
1.	☐	☐	Some kids usually do the *right* thing	BUT	Other kids often *don't* do the right thing.	☐	☐
2.	☐	☐	Some kids *don't* like the way they are leading their life	BUT	Other kids *do* like the way they are leading their life.	☐	☐
3.	☐	☐	Some kids are pretty *slow* in finishing their school work	BUT	Other kids can do their school work *quickly.*	☐	☐
4.	☐	☐	Some kids would like to have alot more friends	BUT	Other kids have as many friends as they want.	☐	☐
5.	☐	☐	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might *not* do well at sports they haven't ever tried.	☐	☐
6.	☐	☐	Some kids wish their body was *different*	BUT	Other kids *like* their body the way it is.	☐	☐
7.	☐	☐	Some kids usually *act* the way they know they are *supposed* to	BUT	Other kids often *don't* act the way they are supposed to.	☐	☐
8.	☐	☐	Some kids are *happy* with themselves as a person	BUT	Other kids are often *not* happy with themselves.	☐	☐
19.	☐	☐	Some kids often *forget* what they learn	BUT	Other kids can remember things *easily.*	☐	☐
20.	☐	☐	Some kids are always doing things with *alot* of kids	BUT	Other kids usually do things *by themselves.*	☐	☐

Really True for me	Sort of True for me				Sort of True for me	Really True for me
☐	☐	Some kids feel that they are *better* than others their age at sports	BUT	Other kids *don't* feel they can play as well.	☐	☐
☐	☐	Some kids wish their physical appearance (how they look) was *different*	BUT	Other kids *like* their physical appearance the way it is.	☐	☐
☐	☐	Some kids usually get in *trouble* because of things they do	BUT	Other kids usually *don't* do things that get them in trouble.	☐	☐
☐	☐	Some kids *like* the kind of *person* they are	BUT	Other kids often wish they were someone else.	☐	☐
☐	☐	Some kids do *very well* at their classwork	BUT	Other kids *don't* do very well at their classwork.	☐	☐
☐	☐	Some kids wish that more people their age liked them	BUT	Other kids feel that most people their age *do* like them.	☐	☐
☐	☐	In games and sports some kids usually *watch* instead of play	BUT	Other kids usually *play* rather than just watch.	☐	☐
☐	☐	Some kids wish something about their face or hair looked *different*	BUT	Other kids *like* their face and hair the way they are.	☐	☐
☐	☐	Some kids do things they know they *shouldn't* do	BUT	Other kids *hardly ever* do things they know they shouldn't do.	☐	☐
☐	☐	Some kids are very *happy* being the way they are	BUT	Other kids wish they were *different*.	☐	☐
☐	☐	Some kids have *trouble* figuring out the answers in school	BUT	Other kids almost *always* can figure out the answers.	☐	☐
☐	☐	Some kids are *popular* with others their age	BUT	Other kids are *not* very popular.	☐	☐

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
3.			Some kids *don't* do well at new outdoor games	BUT	Other kids are *good* at new games right away.		
4.			Some kids think that they are good looking	BUT	Other kids think that they are not very good looking.		
5.			Some kids behave themselves very well	BUT	Other kids often find it hard to behave themselves.		
6.			Some kids *are* not very happy with the way they do alot of things	BUT	Other kids think the way they do things is *fine*.		

Susan Harter, Ph.D., University of Denver, 1985

Appendix 2: Manchester Child Attachment Story Task

GENERAL SCORING RULES for MCAST

The coding scales apply to specific aspects of the content and style of the narrative. Most are coded on a 1-9 scale. For the majority of the scales, a general overall schema applies as follows. Where there are exceptions to this, these are indicated.

Score 7 - 9: Scores of 7 and above are within the normal or optimal range but of varying quality.

Score 5 - 7: "Borderline" normal or sub optimal scores but potentially "secure" in categorisation.

Score 3 - 5: Abnormal scores, generally raising the likelihood of "insecure" categorisation.

Score 3 and below: Seriously abnormal scores that will often reflect clinical caseness.

- **MCAST CODING SHEET**

NAME.. DOB...................

INTERVIEWER... .... DOA...................

PHASE 1

	b'fast	v1	2	3	4	5	6
1A Engagement							
1B Arousal							
1C Turntaking							

PHASE 2

	b'fast	v1	2	3	4	5	6
2A Proximity child to mother							
2B Proximity mother to child							
2C Self care							
2D Displacement (doll)							
2E Displacement (child)							
2F Reversal							
2G Conflicted behaviour							
2H Carer sensitivity							
2I Carer warmth							

2J Carer intrusiveness/control							
2K Assuagement (child)							
2L Assuagement (observer)							
2M Exploratory play							
2N Affect							
2O Content							
PREDOMINANT STRATEGY (1-5)							

STATE OF MIND	b'fast	v1	2	3	4	5	6
3A Quality							
3B Quantity							
3C Relevance							
3D Manner							
3E Child of self Mentalising							
3F Child of mother Mentalising							
3G Metacognition							
OVERALL COHERENCE OF NARRATIVE							

D PHENOMENA

b'fast v1 2 3 4 5

6

1.2 Scale 4: Episodic D phenomena	**1.3**	**1.4**	**1.5**	**1.6**	**1.7**	**1.8**	**1.9**
1.10 OVERALL D SCORE	**1.11**	**1.12**	**1.13**	**1.14**	**1.15**	**1.16**	**1.17**

1.18

1.18.1OVERALL CATEGORISATION:

1.18.2Predominant strategy ....

Metacognition/mentalising..............

1.18.3Coherence of mind .... D score....................

1.18.4Classification.............

Notes:

1. Interpersonal (Secure) Strategy

In this strategy the child clearly represents an interpersonal transaction that results in the assuagement of distress. This will largely be seen by communication or proximity to the caregiver and acceptance of care giving and consequent assuagement. The child will spontaneously turn towards the other person to share and resolve distress. It is clear that the child's expectation is that distress will be largely mediated through contact with another.

1.1 Interpersonal strategy but with elements of avoidance or restriction. Proximity scores 4 - 7. Parental reaction low on warmth. There may on occasions here be initial avoidance or restriction but with a clear "warming" through the vignette to more contact.

1.2 This is a "default" secure category. For patterns of interpersonal strategy which are not easily codeable in other sub categories of this section. In this category, the parental reaction may be less than optimal, and the child may show significant independence. For instance, the child may need to make a lot of noise to attract mother's attention or may gain very swift assuagement and run out of play.

1.3 Optimal version of interpersonal strategy. Here particularly the child will represent a dyadic interaction: parental reaction will be warm, concerned, appropriate and well timed. There will be high scores on assuagement and exploratory play.

1.4 The essential concept in 1.4 is that continuing assuagement *depends on* continuing contact with the caregiver. This "contact maintenance" can be achieved in various ways; an example would be the child who does not get out of the maternal bed after the nightmare vignette. A consequence of this is that there will be less high scores on assuagement and less high scores on exploratory play since a characteristic of this category is that the child does not easily move on to the exploratory phase of the attachment cycle.

1.18.52. Non Interpersonal (Avoidant) Strategy

1.18.6In this strategy the child uses predominantly non-interpersonal means to assuage distress, this will involve a focus towards self-care or displacement strategies or denial of the original distress. Lack of representation of interpersonal behaviour will be seen by a lack of proximity seeking (low scores on proximity scales) or one transient ineffectual interpersonal bid. This lack of interpersonal bid is complimented by increase in displacement and self care strategies reflected in those scales. The other phenomenon commonly seen is "restriction"; when the child will suppress any representation of distress, leave the parent out of the narrative, or where the child does not alert parents to feelings of distress. Self help strategies may be used independently of the parent's knowledge, i.e. the parent may get on with their activities in the narrative without knowing about what is happening to the child.

1.18.72.1 Highly avoidant. Here there is a complete and sometimes highly organised form of the avoidant strategy. Sometimes, this organised form will be apparently successful in assuaging distress thus high scores on the assuagement scales are not incompatible with this category. There will be high levels of restriction of attachment themes, or overwhelming use of self-care strategy.

2.2 Weakly avoidant. Here the avoidant strategy is less complete and organised and will often need a "top-up" of interpersonal contact with the parent outside the theme of attachment e.g. making a meal together. Interaction may be minimally represented, e.g.. no voice for the mother doll. No effective interpersonal contact.

1.18.8

1.18.9*3.* Ambivalent Interpersonal Strategy

Here the child will look towards interpersonal contact but in an ambivalent way. Often the strategy will seem to promote as much as assuage any distress and will often involve contradictory behaviours. However, there will be inclusion of another person within the behaviour and the child will spontaneously reach towards contact with another in this context.

3.1 Interaction promotes distress. There is characteristic dispute and anger. Vignettes tend to be long. Initial distress and interpersonal contact evolves into conflict between mother and child around non-relevant issues, e.g.. clothes and eating, or child introduces new action into the narrative that creates a new focus for ongoing distress or anger. NB to code here anger must be dyadic between caregiver and child rather than some more diffuse anger/aggression in the vignette.

3.2 Passive. Weak signalling of distress, weak but clear use of the other for Assuagement. Assuagement will be poor. An example would be a child who asks for Assuagement and then passively hides.

1.18.10

1.18.11*4.* Chaos or Lack of Clear Strategy

This coding is characterised by an absence of any predominant strategy or assuagement within the vignette. The child's behaviour will not show goal directedness or else will be internally contradictory or show high levels of motivational conflict. This category should only be used when it is clear that there is no predominant strategy that can be coded. A best alternative coding should be made. See section 4 on "coding attachment disorganisation" for further discussion of this category.

4.1 **Complete chaos**. This is a coding for narratives in which there is a lack of structure and complete lack of overarching strategy or an apparent absence of capacity to mount a strategy at all. The coding of 4.1 is based on the narrative quality rather than any inference as to aetiology although experience suggests there are likely to be two forms of problem underlying these narratives:
(a) a group with developmental difficulties who fail to engage effectively in the task at all (e.g.. significant comprehension difficulties or attentional disorder) (**4.1d**);
(b) children who understand the task but go on to exhibit highly chaotic behaviour. These children will often appear to be highly traumatised (**4.1t**).

4.2 **Use of multiple strategies**. Here the child uses a number of different and incompatible strategies for assuagement during the course of the narrative, none of which have predominance and none of which are effective in finally assuaging distress. The use of up to 4 sequential strategies can be coded in 4.2, use of more than 4 strategies will be considered completely chaotic and code into 4.1. Note any brief strategies in sequence Thus 4.2/1.1/3.1/2.1. Avoid coding "cusp" B/A or B/C cases into this category. However a common pattern coded as 4.2 will be a mixture of avoidant and ambivalent ("A/C").

Chapter 2

Chapter 3 5. Control of caregiver

This category is distinguished by the initial absence of the signalling of distress or dependency by the child and the *substitution* of one of two forms of active control of the caregiver at the critical juncture of assuagement in the attachment cycle.

5.1 "Coercive/angry" control, where the child will order the parent around, direct them, force them off in play into journeys or (often dangerous or damaging) situations. There may or may not be anger actively displayed, the critical issue is control of the caregiver at a critical juncture, e.g. in the hurt vignette, the child tells the mother to "get the plaster".

5.2 "Solicitous" control. The focus may be initially shifted to the welfare or safety of the caregiver or the child may need to do an initial activity for the parent in order to get them into a situation where they will care. E.g. child makes a meal for the mother before being able to express distress.

Appendix 3

CONSENT FORM

3.1.1Children's Views about Themselves and Relationships with Others

Please circle your answer

Have you read the Project Information Sheet? YES NO

Do you agree to your child being video-taped? YES NO

Do you consent to the anonymous and confidential use

of the recordings for scientific purposes? YES NO

Do you understand that your child is free to withdraw

him/herself from the study? YES NO

I give consent for my child to take part in this study

Signed.. Date......................

Child's name (please use BLOCK

LETTERS)...