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School of Psychology

Young Adults' Attachment and Caregiving Working Models: Features and Functions

By

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ABSTRACT

FACULTY OF MEDICINE, HEALTH AND LIFE SCIENCES

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Using attachment theory as the theoretical framework and social-cognitive, observational and self-report methods of data collection, this thesis addressed important questions pertaining to attachment and caregiving in young adulthood. This research is part of the growing field of adult attachment research from a social and personality psychology perspective. It has addressed a relatively new theme in adult attachment research: individual differences in caregiving toward romantic partners and peers. This thesis addressed three main research questions. The first addressed the affect of romantic caregiving on emotional well-being and evaluations of the self and romantic relationship. Romantic caregiving lead to temporary changes in the self-esteem and relationship dissatisfaction of young adult support-seekers. These changes were moderated by support-seekers' attachment orientation and perceived distress. The second focus addressed the way in which experiences of receiving care from attachment figures in childhood (i.e., mother and father) and young adulthood (romantic partner and peer) shaped young adults' caregiving ability. Results revealed that the way in which care is received from attachment figures shapes the way in which care is provided. Specific patterns of influence were found: same-sex parent and identification, opposite-sex parent and matching of features between the attachments (e.g., nature of dyad). The third focus addressed Collins and Read's (1994) propositions regarding the structural features of working models of attachment and caregiving. Model strength and model elaboration as an indicator of model strength were operationalised and hierarchical regressions were used to examine the way in which structural features moderate relationship-specific influences on adult caregiving. Findings are discussed in terms of their support for social-cognitive perspectives on attachment theory, their relevance for informing clinical and therapeutic interventions, the intergenerational continuity of caregiving patterns and the importance of romantic caregiving from an evolutionary perspective.

Correction Sheet

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"Like everyone else, I've spent a lot of time trying to figure out why some of my close relationships have succeeded and others have failed. Like many people, I've read about relationships, seen various media presentations about them, and gone to counselors who promised to help me understand. I've spent a portion of my career as a psychologist trying to understand what has worked for me and what hasn't."

(Sternberg, 1998, p. xi).

CHAPTER 1

General Introduction

"The behaviour of parents, and of anyone else in a care-giving role, is complementary to attachment behavior. The roles of the care-giver are first to be available and responsive as and when wanted and, second, to intervene judiciously should the child or older person who is being cared for be heading for trouble. Not only is it a key role but there is substantial evidence that how it is discharged by a person's parents determines in great degree whether or not he grows up to be mentally healthy."

(Bowlby, 1979, p. 133).

"It is evident, however, that attachment behavior is in no way confined to children...we see it also in adolescents and adults...whenever they are anxious or under stress...No one should be surprised therefore when a woman expecting a baby or a mother caring for young children has a strong desire to be cared for and supported herself."

(Bowlby, 1988, p.4).

"While the systematic study of attachment behavior, and especially the conditions influencing how it develops, has been in progress for twenty years, the systematic study of caregiving, or parenting, and how it develops is only in its beginnings."

Bowlby (1988, p. 82).

1.0 Introduction

John Bowlby described caregiving as *"the major role of parents and complementary to attachment behavior"* and as *"a basic component of human nature"* (Bowlby, 1988, p. 121). My thesis, in line with other contemporary adult attachment theorists described below, is that caregiving has a role in *romantic* attachment as well as caregiver-child attachment. In 1988, Shaver, Hazan, and Bradshaw proposed that adult romantic love involves the attachment, caregiving and sexual mating behavioural systems;

the first two of which are the topic of this thesis.[1] In 1991, Bretherton outlined the growing points of attachment theory, two of which were the exploration of the internal working models of attachment and adult-adult attachment. This thesis focuses on young adults' working models of attachment and caregiving.

Adult attachment research has focused mainly on adults' attachment orientation; only in the past 10 years has adult romantic caregiving become a research topic. Individual differences in caregiving and attachment styles in adulthood are partly determined by the quality of early attachment experiences with caregivers, and primarily one's parents. While growing up, sensitive and warm caregiving usually leads to feelings of worthiness and secure attachment, interfering and inconsistent caregiving leads to feeling unworthy and anxious/ambivalent attachment and neglectful or rejecting caregiving leads to feeling unworthy and avoidant attachment (Ainsworth, Blehar, Waters & Wall, 1978; Carnelley & Janoff-Bulman, 1992). Individuals learn both the caregiving and care-seeking roles in important attachment relationships (Bretherton, 1985). These patterns of attachment are a function of the nature and quality of caregiving (e.g., maternal sensitivity) provided by a parent (e.g., Sroufe & Fleeson, 1986). As parenting characteristics are strong determinants of an infant's attachment style, it seems plausible that parental caregiving styles would influence the caregiving styles of their offspring.

This thesis aims to explore how experiences of receiving care in childhood, adolescence and early adulthood are reflected in young adults' caregiving styles and in their working models of caregiving. I employ a variety of data collection methods (i.e., observation, self-reports and reaction-time measures) in order to investigate how romantic caregiving shapes young adults' view of self and relationship (akin to how early attachment research addressed how *parental* caregiving shaped young children's socio-emotional development) and how experiences of receiving care influence young adults' own ability to provide care to their romantic partner.

This chapter is presented in several sections. Sections 1.1 and 1.2 focus upon the developmental and social/personality perspectives on attachment theory from childhood to adulthood. Although, the early childhood research is pivotal for a thorough understanding of attachment theory, for reasons of expediency, I have devoted the majority of this section to adult attachment research. Sections 1.3 to 1.5 focus on the development of caregiving

[1] See also Furman and Simon (1998).

from childhood to adulthood, and the current empirical research on adult romantic caregiving. Finally, Section 1.6 focuses on theory and research that has addressed the organization, structure and function of attachment working models.

Attachment Theory

1.1 Attachment in Infancy and Childhood

1.1.1 The Origins of Attachment Theory.

Bretherton (1992) places the origin of attachment theory in the collaboration of John Bowlby's theory and research on how a child's tie to his or her mother influences his or her personality development and Mary Ainsworth's research on maternal sensitivity and individual differences in infant's behaviour (Bretherton, 1992). Bowlby formed the roots of attachment theory from the established theories of ethology, information processing and psychoanalysis. Consistent with traditional psychoanalytic theory, Bowlby focused upon the mother-infant bond. Like Anna Freud and Melanie Klein, Bowlby advocated research into the emotional and clinical problems experienced by young children (Bowlby, 1979). However, Bowlby's theory deviates from traditional psychoanalysis. Freudian psychoanalysis took a retrospective approach (using an adult's symptoms to distinguish likely childhood experiences), whereas Bowlby took a prospective approach, focussing upon actual disruption in the mother-infant bond and the subsequent psychological and pathological consequences (Bowlby, 1969/1982). Further, Bowlby based his theory on the observation of both human and non-human species, and in doing so; he rejected the psychoanalytic notions of psychic energy and drive reduction (Bowlby, 1969). Psychoanalysts considered early affectional bonds to be formed in order to reduce drives associated with food and sex (Bowlby, 1969). Bowlby noted that young monkeys and ducks (e.g., Harlow, 1958; Lorenz, 1935) developed strong bonds with their primary caregiver through exposure and proximity, and not because of the provision of food.[2] In turn, Bowlby postulated that human infants are biologically predisposed to remain close to their caregivers, with a range of innate behaviours, in order to promote their survival (Bowlby, 1969).

[2] Harlow (1958) and Lorenz (1935) as cited in Bowlby (1969).

In post-war Europe, Bowlby identified a consistent pattern of protest, despair and detachment that homeless and orphaned children displayed following the disruption of the mother-child relationship. This led Bowlby to draw his major conclusion about the nature of the child's tie to his or her mother (Bretherton, 1992): A child's physical and emotional health is determined by the relationship he or she has with his or her mother or "permanent mother-substitute" (Bowlby, 1988). Bowlby (1951) believed that the maternal relationship should be warm, continuous and enjoyed by and satisfying for both mother and child. Bowlby defined this relationship as an *attachment*. That is, a strong disposition "*...to seek proximity to and contact with [a] that individual and to do so in certain specified conditions*" (Bowlby, 1988, p.28).

For Bowlby (1958), attachment had a natural and healthy function, even into adulthood (Bretherton, 1992). A layperson may criticize the prominence of the mother-child bond in Bowlby's early research, particularly at the apparent neglect of the father-child bond; however, political, economic and historic explanations can account for this unfounded criticism. In post-war Europe, the mother was the predominant caregiver; perhaps fathers would have received greater emphasis if they had occupied the role of the primary caregiver at the time of Bowlby's research (Bowlby, 1988).

In Uganda (1967), Ainsworth observed the development of attachment and her data highlighted the relevance of Bowlby's ethological perspective. Ainsworth empirically validated the importance of the child's tie to his or her mother. Ainsworth's research was influenced by security theory (Blatz, 1940), which is concerned with the need for infants and young children to form a secure dependence on their parents before they explore unfamiliar environments. In observing the way in which mothers interacted sensitively and responsively to their infants, Ainsworth and her colleagues noted the important differences in the child's attachment to his or her mother. One of Ainsworth's greatest contributions to attachment theory was her concept of the *secure base*. A secure base is provided by an attachment figure and allows the attached person to explore the environment with the knowledge that he or she has a welcoming, available base to return to if threatened, in need of nutrition or encouragement (Bowlby, 1988).

At this point, it is appropriate to outline the four criteria of an attachment. *Proximity maintenance* involves actively seeking and maintaining physical closeness to the attachment figure. *Separation anxiety* is the child's distress shown when separated from

the attachment figure. The attachment figure provides a *safe haven* in which the child can find comfort, help and reassurance. The attachment figure also acts as a *secure base* whereby he or she is an available and responsive individual on whom the child can rely (Bowlby, 1969; Hazan & Diamond, 2000).

1.1.2 The Formation of An Attachment Bond

Bowlby (1982) believed attachment to be a gradual process that develops as the caregiver invests in the child. There are four phases to the attachment process in infancy. In the *pre-attachment* phase, the infant will seek and accept comfort indiscriminately. In the *attachment-in-the-making* phase he or she will direct signals toward a particular, familiar figure. In the *clear-cut attachment* phase, the infant displays separation distress or protest. In the final phase, *goal-corrected partnership* (Bowlby, 1969; Zeifman & Hazan, 1997), the infant is more interested in exploring his or her environment than showing interest in the primary caregiver; however, if a psychological or physical threat appears, the infant will turn to the attachment figure. Goal-corrected refers to the dynamic nature of attachment and caregiving over time. An infant may convey psychological distress by crying in which case the attachment figure must move toward the infant. An older child can verbally express his or her distress and is physically able to move towards his or her attachment figure. The intensity of an attachment bond can be seen in a child's reaction to the separation or termination of the attachment. In the *pre attachment* phase, the reaction should be relatively minor with little disappointment, whereas in the *goal-corrected partnership* phase, the child may show extreme anxiety and psychological disorganization.

1.1.3 The Attachment Behavioural System.

Bowlby (1980/1998) made the analogy between physiological systems, such as blood pressure, and behavioural systems. For example, physiologically, blood pressure, is maintained through homeostasis: when pressure rises, the body works to re-establish the desired level. Bowlby thought that homeostasis could apply to behavioural systems. Bowlby proposed that the attachment behavioural system (herein referred to as *attachment system*) is one of several systems operating in an organized, unified, interconnected network. The primary adaptive function of the attachment system is the maintenance of proximity to the primary caregiver (George & Solomon, 1999). Any action that jeopardizes the availability of the attachment figure would activate the attachment system and behavioural strategies would be employed to achieve homeostasis of the system. Other

systems include the caregiving system, the affiliative system (for friendships), the sexual system, and the exploratory system.

The adaptive function of these systems is survival and procreation. Fraley and Shaver (1998) suggest that the functional organization of the attachment system has two major components. The *appraisal* component assesses the threat and is associated with an individual's fears of being abandoned by the attachment figure. The *behavioural* component organizes attachment behaviour strategies and is associated with approaching or avoiding an attachment figure. As a result, the attachment system regulates an individual's instinctive attachment behaviours. To attain the goal of the attachment system, an infant will display *attachment behaviours*; i.e., *"...any of the various forms of behavior that the person engages in from time to time to obtain and/or maintain a desired proximity"* (Bowlby, 1988, p.28).

According to Bowlby, attachment behaviours are instinctual responses that bind the child to his or her mother, and indeed, the mother to her child. These behaviours have an evolutionary function: the protection of the child from danger (Bowlby, 1958; Bretherton, 1992). A child with an available attachment figure (e.g., one who is proximate and responsive) would display confident exploration and subtle contact maintenance. A child with an unavailable attachment figure would display intense, protest behaviours (e.g., crying, clinging). Bowlby (1988) considered it important to distinguish attachment from attachment behaviour; as he stated "*...whilst attachment behavior may in differing circumstances be shown to a variety of individuals, an enduring attachment, or attachment bond, is confined to very few.*" (Bowlby, 1988, p.28).

Initially, an infant will direct attachment behaviours indiscriminately towards all of his or her caregivers, but over time, the infant begins to direct these behaviours towards his or her primary caregiver; usually the mother. As an example, the attachment behaviour of a 12-month-old infant is instinctual (e.g., sucking, smiling) whereas the attachment behaviours of an 18-month-old infant are integrated and focused preferentially on the mother. Further, not all attachment behaviours are innate, some behaviours may adapt in line with changes in the environment (e.g., a child cannot seek proximity to his or her mother if she is unavailable). The display of attachment behaviours is associated with the age of the child and the length of the attachment relationship (Fraley & Shaver, 1998). Generally, older children display less distress upon separation from their attachment

figures because they have a growing ability to foresee the plans and motives of their attachment figures.

1.1.4 Internal Working Models.

Bowlby postulated that attachment behaviours are organized within an *internal working model* of attachment. The model consists of three representations: a model of the self, a model of the attachment figure, and the pattern of interaction between the two. For example, a child who consistently has his or her requests for proximity rebuffed by his or her caregiver will internalise the interactions such that, the self will be represented as unworthy of care, the attachment figure will be represented as unavailable, and the interaction will be of a negative valence.A working model begins to develop in the first few years of the infant's life and is created from the actual experiences the child has with his or her attachment figure(s) (Bowlby, 1988). In the *pre attachment* phase, the model is composed of general expectations of all caregivers (Bowlby, 1969). In this phase, the model is likely to contain sensory-motor information, such as proximity-maintaining and contact behaviours. In the *attachment-in-the-making* phase, as the child discriminates his or her caregivers, a specific model of the attachment figure is constructed. As the child's cognitive abilities develop, so too does the working model. An infant's working model will not contain a representation of the caregiver's beliefs or intentions; however, when the infant has acquired the ability to mentalise, working models will represent the beliefs and intentions of the caregiver (Cicchetti, Cummings, Greenberg & Marvin, 1990). In the *clear-cut attachment* phase, the model begins to stabilize, eventually becoming a "well-established, easily conjured-up" model in the *goal-corrected partnership* phase (Zeifman & Hazan, 1997, p.186). This phase occurs around two years of age, and is accompanied by greater cognitive and representational capacities (Zeifman & Hazan, 1997).

The working model governs the child's cognitions, emotions and behaviour in interaction with the attachment figure, and predicts the attachment figure's behaviour towards, and expectations of, the child (Bowlby, 1988; Collins & Read, 1994). In infancy, the working model is the property of the specific attachment relationship; however, over time, the working model comes to reflect the child and may be used in interaction with other caregivers (Bowlby, 1988). The patterns of interaction and models of self and attachment figure derived from previous experiences will guide the information processing and attention given in social interactions with close others.

Working models are expected to remain stable and be relatively resistant to change (Bowlby, 1979). Stability is maintained in two ways. First, when interaction patterns are frequently experienced, they gradually become less accessible to awareness and more habitual and automatic (Bretherton, 1992). Second, because working models are based on dyadic interactions, they are more resistant to change than individual patterns, because of reciprocal expectancies (Bretherton, 1992). For example, if a mother always provides hugs her child when the child is upset, the child will come to expect physical contact from his or her mother when he or she is upset. However, working models can change, if for example, the quality of caregiving changes. Nevertheless, it is their purported resistance to change (Bowlby, 1979) that implies that early working models are maintained and come to shape attachment experiences in adulthood (Collins & Allard, 2002).

1.1.5 The Caregiver's Sensitivity.

The primary caregiver's sensitivity is important in the development of the infant's perception of the self and of the caregiver and is important in developing the child's confidence and ability to control his or her own behaviour (Bell & Ainsworth, 1972). Ideally, the primary caregiver should be responsive to the infant's attachment behaviours and be socially interactive (Schaffer & Emerson, 1964). The quality of the social interaction between caregiver and infant is dependent upon his or her availability and responsiveness (Ainsworth, 1969; Bowlby, 1969; Collins & Allard, 2002). In the Baltimore project, Ainsworth developed a detailed scale to assess the caregiver's sensitivity to his or her child's signals. Sensitivity refers to the ability to initially perceive and interpret the infant's signals and then to respond promptly and appropriately to these signals. According to Ainsworth (1969), sensitivity has four essential components: awareness, accurate interpretation, appropriate responses, and promptness.

To be *aware* of the infant's signs of communication a caregiver should be attentive and available to notice the infant's cues. Awareness can be described in terms of thresholds (Ainsworth, 1969). A caregiver with a low threshold perceives even subtle cues, whereas a caregiver with a high threshold perceives only blatant signals. However, a caregiver may be aware of his or her infant, but be insensitive: the way in which the caregiver interprets his or her infant's signals is important.

The *accurate interpretation* of the infant's signals has three components (Ainsworth, 1969). Interpretation should be *free from distortion* and *empathic*. A

caregiver's perception of his or her infant's behaviour may be distorted to match his or her own beliefs and wishes. For example, a rejecting caregiver may perceive his or her child's behaviour as rejecting towards him or her (Ainsworth, 1969). The less distorted his or her interpretation, the more realistic is the caregiver's judgment of his or her infant's signals. An *empathic* caregiver is able to take his or her infant's perspective. Accurate interpretation is not sufficient for caregiver sensitivity: appropriateness and promptness of a caregiver's responses are paramount (Ainsworth, 1969).

An *appropriate response* involves perceiving the infant's needs accurately and knowing what action to take to satisfy the need. In addition, the caregiver should know the level of stimulation required by his or her child and ensure completed and resolved interactions. For example, if an infant signals to his or her father for social interaction, father may play with his infant for such a length of time that the infant need not request social interaction after the play has stopped. Nevertheless, an appropriate response does not imply an unrestricted form of caregiving. Sensitive caregiving does not imply being compliant to the infant's every demand (Ainsworth, 1969). Caregivers who can make appropriate responses may also impose limitations on their infant's behaviour. Sometimes it is important to discourage some behaviours (e.g., play during meal times) and encourage the appearance of others (Ainsworth, 1969).

Finally, a caregiver should respond *promptly* to his or her infant's signals. An appropriate response will lack sensitivity if it occurs too long after the infant's signal. There should be contingence between the infant's signal and the caregiver's response. This contingency is important for the infant to have a feeling of efficacy in controlling his or her environment (Ainsworth, 1969).

Taken together, a *sensitive* caregiver is one who is accessible to his or her infant, is attentive to verbal and non-verbal communication, forms judgments of his or her infant's signals that are free from distortion, is empathic in understanding his or her infant's needs and promptly responds with appropriate behaviours to his or her infant.

1.1.6 A Child's Security.

In Uganda, Ainsworth conducted naturalistic observations of twenty-six un-weaned infants (1 - 24 months) and their mothers for nine months. Ainsworth observed the onsets of proximity-promoting signals and behaviours, noting when these were directed preferentially towards the mother (Bretherton, 1992) and interviewed the mothers

regarding their sensitivity to their infants' signals. The observations highlighted individual differences in mother-infant interaction, which could be formed into three infant attachment patterns: secure, insecure and not-yet attached. In the Baltimore Project, Ainsworth repeated her naturalistic observations of mother-infant interaction on a North-American sample. Characteristic interaction patterns (e.g., responses to being held) were evident from the first three months of life (Bretherton, 1992). For example, when a mother picked up and held her infant, a positive response was conveyed through smiling, laughing and being delighted, whereas a negative response consisted of crying, hitting, or biting the mother (Ainsworth et al., 1978). Individual differences were also found in how sensitive, appropriate, and prompt the mother's response to the infants' signals were in feeding (Ainsworth & Bell, 1969) and face-to-face interaction (Blehar, Lieberman, & Ainsworth, 1977).

Following the naturalistic observations, Ainsworth conducted laboratory-based research, using a novel method, the *Strange Situation* (Ainsworth & Wittig, 1969), to observe individual differences in maternal sensitivity and secure base use. The Strange Situation procedure consists of an infant or child being placed in a playroom in which seven episodes of separation and reunion with his or her mother and a stranger occur. Trained observers assess the behaviour of the infant along six scales: proximity seeking, contact maintaining, resistance, avoidance, search, and distance interaction when confronted with the presence and absence of his or her mother and the stranger. Results indicated that the infant's exploration was affected by the presence of a stranger and the absence of the mother and the infants' reunion behaviours with their mothers. (Ainsworth et al., 1978). Further, the interaction patterns shown by mother and child in the family home were also evident in the laboratory (Ainsworth & Wittig, 1969).

Ainsworth et al. (1978) categorised infants' attachment behaviour into three main groups and eight subgroups. Group B (*secure*) infants had positive interactions with their mothers upon reunion. These interactions were harmonious, cooperative and the infants complied with their mothers' demands. Mothers of securely attached infants tend to be sensitive to cues, express acceptance of their child (e.g., Ainsworth et al., 1978), are accessible, are prompt in their responses (Ainsworth, 1969), promote exploration, are cooperative, and have frequent warm physical contact with their child. Ainsworth et al.

(1978) described group B infants as less anxious than the other two groups. Group C (*resistant*) infants showed anger, ambivalence and rejecting behaviours towards their mothers upon reunion. These infants have anxious attachments to their mothers, having more separation anxiety, and unconfident expectations of their mothers. Mothers of resistant infants tend to be less sensitive to cues, are inconsistent in being accessible and responsive, are interfering and accepting, but are less cooperative.

Group A (*avoidant*) infants avoided their mothers upon reunion, despite searching for her during her absence. These infants were more frequently angry than the other two groups of infants (Ainsworth et al., 1978). Mothers of avoidant infants are the least sensitive to their infant's cues, are more rejecting of attachment behaviours, less accessible, and responsive, more controlling than cooperative, and have less frequent physical contact with their infant.

The influence of early caregiving relationships post-infancy. Bowlby (1988) emphasized the importance of the child's experiences with his or her parents upon personality development. Subsequent developmental research has demonstrated the impact of these early experiences on a child's social competence from childhood through to adolescence. Experiences with both mother and father (when available) are important in children's social experiences. Main and Weston (1981) observed infants' interactions with their mother and father separately. The distribution of children's attachment pattern to their fathers mirrored the distribution of those to their mothers. However, the attachment pattern to one parent was not contingent upon the pattern to the other parent. Interestingly, children who had secure attachments to both parents behaved more confidently and competently in interactions with new people and tasks compared to children who had insecure attachments to both parents (who were the least confident and competent) or one secure and one insecure attachment to their parents (Bowlby, 1988). Ainsworth (1967) found that nearly all infants in her observations were attached to the mother *and* to other figures in the household (e.g., an older sibling). It is adaptive for children to have several caregivers who can fulfil their attachment needs (Howes, 1995). Indeed, a secure attachment to at least one caregiver can compensate for other insecure attachments (Howes, Rodning, Galluzzo, & Myers, 1988).

In a detailed review of the literature, W. A. Collins and Sroufe (1999) review the

research, most of which is longitudinal, that has shown a link between a child's attachment history and the nature of their interactions with peers and other figures. The general consensus is that the more positive one's early experiences are, so too are subsequent interactions. Children with secure attachment histories are more popular, display more positive affect in their interactions, are less likely to be involved in victimizer-victim interactions and show more empathic behaviour; children with anxious-ambivalent attachment histories are more likely to be victims of physical or verbal abuse and show less loyalty to their friends; children with avoidant attachment histories are more aggressive at school, are more likely to be victimizers, use hostile behaviour toward other children and teachers, are more likely to worsen another child's distress rather than be empathic and make negative attributions of others' intentions (see W. A. Collins & Sroufe, 1999). Further, young adults' with a dismissing attachment representation, were found to have received less sensitive maternal care in infancy, than infants with secure or preoccupied attachment representations (Beckwith, Cohen, & Hamilton, 1999).

In sum, research has established the link between early experiences with parents and later social competence. I now turn to discuss attachment experiences in adult romantic and peer relationships, in particular, examining how early experiences continue to influence attachment experiences in adulthood.

1.2 Attachment in Adulthood

Bowlby (1980) believed that attachments are developed first between parent and child and subsequently between two adults. Further, the complementary behaviour to attachment – caregiving – exists between parent and child, from infancy to adolescence (and possibly beyond), but also from one adult to another (Bowlby, 1980). Attachment in adulthood serves the same function as that in infancy and childhood. An adult will seek proximity to a familiar other (e.g., a romantic partner) to gain a sense of felt security (Berman & Sperling, 1994). West and Sheldon-Keller (1994) suggest that as well as proximity seeking, separation protest, and having a safe haven and secure base, adult attachment is based around reciprocity, and the anticipated permanence of the relationship (West & Sheldon-Keller, 1994). That is, despite the strong similarities between attachment in infancy and adulthood, there are also understandable differences. Unlike parent-child

attachment, adult-adult attachment is reciprocal and an adult can suppress his or her attachment needs (Weiss, 1982). Research has clearly supported Bowlby's ideas: the attachment process is found in adulthood (Zeifman & Hazan, 1997) and, like children, adults experience separation distress when they lose their partner (e.g., Parkes, 1972).

Ideally, research investigating the enduring influence of early experiences with parents on relationships post infancy and childhood, would employ a longitudinal design. However, it is beyond the scope of this thesis. Nevertheless, sufficient previous research has demonstrated that an individual's capacity for intimate relationships across the lifespan has its foundations in early relationships. W. A. Collins and Sroufe (1999) suggest three ways in which experiences in infancy influence our capability for closeness, and in turn, intimacy (W. A. Collins & Sroufe, 1999). First, because we internalise our attachment experiences, experiencing positive interactions with available and responsive caregivers should lead to positive expectations about others. Second, with our caregivers we learn how to reciprocate and how to relate to others empathically. Third, these positive experiences help us develop a view of the self as worthy of respect and care. Taken together, these experiences will influence the people who we form relationships with outside of the family.

1.2.1 The Formation of an Adult Attachment Bond

Zeifman and Hazan (1997) describe a four-phase model of the *romantic* attachment process in adulthood, which parallels the parent-child attachment process reported above. The *pre-attachment* phase involves the initial sexual attraction and flirtation that motivates two people to seek proximity from each other, which is the only component of the attachment system to be activated. Familiarity and responsiveness are important features in the selection of an attachment figure in both infancy (Ainsworth et al., 1978) and adulthood (Aron, Dutton, Aron, & Iverson, 1989). Individuals seeking an enduring relationship will look for cues that highlight a person's *attachment-worthiness*, such as his or her warmth, responsiveness, and reciprocated attraction (Zeifman & Hazan, 1997).

In the *attachment-in-the-making* phase, the focus is on falling in love: the preferential attention to one person involving verbal exchanges, close bodily contact, and prolonged mutual gazing (Zeifman & Hazan, 1997). Instead of flirtations, physical contact becomes more intimate, reassuring or parental. Unlike in the *pre-attachment* phase, the

effects of this phase extend beyond time spent with the potential attachment figure, such that people may report sleeplessness and reduced hunger (Tennov, 1979). In this phase the safe haven component is activated. Each partner acts as a source of support and shows more personal disclosure, which in turn tests the other partner's commitment, acceptance and caring for his or her partner (Zeifman & Hazan, 1997). The prolonged mutual gazes present in this phase contribute to the development of a mental representation of the partner (Zeifman & Hazan, 1997).

In the *clear-cut attachment* phase, several changes occur in the romantic relationship (Zeifman & Hazan, 1997): people stop idealizing their partner, sexual activity decreases, and emotional support and nurturance increases. The romantic partner becomes the preferred person for proximity-seeking behaviours and separation protest will be directed toward the partner. Finally, in the *goal-corrected partnership* phase, life returns to normal (Zeifman & Hazan, 1997). Attachment behaviours, gazing and the need for physical contact decrease in frequency whereas exploration of activities outside of the relationship (e.g., friends, work) increases. At this stage, expectations of reliability and availability of the attachment figure have been derived, signifying the existence of the fourth attachment component: secure base. Berscheid (1983) suggested that this phase is one of interdependence, marked by a person's trust in the availability of their partner.

Zeifman and Hazan (1997) suggest that in the *pre-attachment* phase, the reaction to termination should be minor with little disappointment, leading to extreme anxiety and psychological disorganization in the *goal-corrected partnership* phase of adult attachment formation. However, adults show attachment orientation differences in their levels of physical contact (Brennan, Wu, & Loev, 1997), sexual behaviour (Brennan & Shaver, 1995), relationship dissolution (e.g., Simpson, 1990) and self-disclosure (Mikulincer & Arad, 1999; Pistole, 1993), therefore, the rate of progression through the four phases may differ among adults of different attachment orientations.

1.2.2 Attachment Figures in Adulthood.

Most of the research into late adolescents and young adults multiple attachment figures has focused on four primary attachment figures: mother, father, romantic partner and close or best friend (e.g., La Guardia et al., 2000; Pierce & Lydon, 2001). An implicit criticism of this research is whether romantic relationships are attachments. Hazan and

Shaver (1987) described romantic love as a process that "*facilitates attachment between adult sexual partners*" (Hazan & Shaver, 1987, p. 523). Every romantic partner a person has is not equal to, or should be equated to, the intense, affectional bond that a person shares with his or her parents. Crowell, Fraley and Shaver (1995) state that adult attachments are distinguished from other types of adult relationships because they "*provide feelings of security and belonging, and without which there is loneliness and restlessness*" (Crowell et al., 1995, p. 435-436). Consequently, measures have been devised to distinguish between those relationships in young adulthood that constitute attachments and those that do not.

Hazan and Zeifman (1994) devised the WHOTO, a self-report measure that assessed how attachment functions may be fulfilled by different figures in adulthood. Although peers provided safe haven and secure base functions, full-blown attachments (i.e., those that involve an orientation to the attachment figure for all four attachment functions) were limited to parents, romantic partners of approximately 2 years and peers of approximately 5 years. In these college-aged participants, primary attachment figures were romantic partners of 2 years or more (see also Fraley & Davis, 1997). For participants in shorter relationships, or without a partner, parents were the primary attachment figures. Hazan and Zeifman suggested that attachment figures were organized into hierarchies, and that parents would feature somewhere in this hierarchy for young adults.

Trinke and Bartholomew (1997) examined the characteristics of attachment hierarchies in young adults. College-aged students listed their significant others and ranked them in terms of who they desired or actually used for proximity maintenance, secure base use, safe haven use and separation anxiety. Like Hazan and Zeifman (1994), Trinke and Bartholomew found that the longer their participants had known their romantic partners, the more likely they were to orient towards their romantic partner over their other significant persons for the fulfilment of their attachment needs. Results revealed a shift in the use of family members as attachment figures to using peers, especially as a safe haven. Romantic partners were ranked higher than mother, father, siblings and best friends for desired and actual use as a safe haven and desired use as a secure base, but mothers, fathers and romantic partners were ranked similarly for *actual* secure base use. Mother, friends and romantic partners were ranked high on desired and actual use as a safe haven.

Trinke and Bartholomew (1997) defined all significant others who were ranked on

all four of the attachment functions as attachment figures. The average rank for each attachment figure was used as an indicator of preference for use as an attachment figure. These ranks were then used to examine the attachment figure hierarchies of young adults, with the most preferred attachment figure being topmost in the hierarchy. The typical hierarchical organization of attachment figures was: mother, father, sibling(s), and best friend(s). If participants had a romantic partner, the hierarchy was; romantic partner, mother, father, sibling(s), best friend(s). Thus, parental figures, especially the mother, maintain a position in the attachment hierarchies of young adults, even when new attachment figures are present.

1.2.3 Individual Differences in Adult Attachment.

Self-report questionnaires are a popular method to assess adult attachment style; especially by social and personality psychologists (e.g., Brennan, Clark & Shaver, 1998; Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994; Hazan & Shaver, 1987). Hazan and Shaver (1987) re-wrote Ainsworth et al.'s (1978) three infant attachment patterns (secure, resistant and avoidant) into descriptions appropriate for adult romantic relationships. A secure adult is confident, comfortable being close to others and depending on others for support; an *anxious-ambivalent* adult has exaggerated desires for closeness and dependence; and an *avoidant* adult sees close relationships as unimportant and is comfortable being alone (Hazan & Shaver, 1987). Predictable experiences of love were found for adults endorsing one of the three styles (Hazan & Shaver, 1987). Avoidant adults feared intimacy and were jealous whereas anxious-ambivalent lovers were obsessively involved and extremely jealous.

Hazan and Shaver's (1987) 3-category measure has been superseded by 4-category measures and dimensional measures. Both infant and adult researchers have recognized that at least four main attachment categories exist (e.g., Main & Hesse, 1990). Bartholomew (1990) noted that Hazan and Shaver's 3-category measure did not differentiate between those adults who have an active fear of close relationships and those who have an active self-reliance. Bartholomew proposed a fourth style: *fearful avoidance*, which is a combination of the avoidant and anxious-ambivalent styles. Bartholomew's 4-category measure is based upon Bowlby's conceptualisation of internal working models, which are composed of models of the self and models of the other. Using this system, a *secure* person has a positive model of the self and of others, is comfortable with intimacy

and autonomy'; a *preoccupied* (akin to the anxious-ambivalent attachment pattern) individual has a negative model of self but a positive model of others and places a great emphasis on relationships; the *fearful avoidant* individual has an active fear of close relationships, often distrusts others yet desires relational intimacy (Bartholomew, 1997), has a negative model of self and of others and has been recognized in clinical settings (Stein, Jacobs, Ferguson, Allen & Fonagy, 1998); the *dismissive avoidant* individual is actively self-reliant, sees the self as invulnerable to rejection (Bartholomew, 1997) and avoids relationships and has a positive model of self but a negative model of other (Bartholomew, 1990).

Although attachment categories are often easier for conceptualising connections between variables, dimensions may more accurately describe individuals (Fraley, 2002; Fraley & Waller, 1998). The use of discrete category measures has been criticized because of the loss in precision in the description of behaviour (Fraley & Waller, 1998) and the possibility of stereotyping individuals (Griffin & Bartholomew, 1994). The most recent measure of adult attachment, the *Experiences in Close Relationships* questionnaire (Brennan et al., 1998; Fraley, Waller, & Brennan, 2000), uses two dimensions: *avoidance* and *attachment anxiety*. Avoidance is characterized by independence and discomfort with closeness and attachment anxiety is characterized by fear of rejection and abandonment (Brennan et al., 1998). These dimensions underlie all of the adult attachment self-report measures and were derived from a factor analysis of self-report adult attachment measures (Brennan et al., 1998). According to Brennan et al. (1998), these two dimensions capture important individual differences in adult romantic attachment.

1.2.4 Assessing The Influence of Early Experiences on Adult Attachment.

The self-report questionnaire is a practical and resourceful tool for the study of adult attachment. Studies in this area often require large numbers of participants to satisfy statistical analysis procedures and convenience sampling often implies that data is collected from large groups of participants at the same time. Despite the popularity of the self-report questionnaire, it has been criticised for its (in)ability to provide accurate reports of people's attachment histories and to tap the unconscious elements of attachment.

Attachment researchers from the developmental tradition (e.g., Crowell & Treboux, 1995) have questioned whether self-reports can access the unconscious or automatic processes involved in attachment because self-report measures assess *subjective*

experiences of attachments. In examining adult attachment, developmental researchers often use an *interview* method (e.g., Bartholomew & Horowitz, 1991; Crowell, 1990; George, Kaplan & Main, 1985). The *Adult Attachment Interview* (AAI; George et al., 1985) examines adolescent and adult representations of the parent-child attachment relationship by coding the narratives of adults' discussion of their attachment experiences (Stein et al., 1998). Participants evaluate how experiences with their parents have influenced their present personality and behaviour (de Haas, Bakermans-Kranenburg & van Ijzendoorn, 1994). However, the AAI is thought to assess the impact of parental caregiving rather than attachment to a romantic partner. Thus, its use may be more appropriate in studies predicting childrearing and parenting behaviours (Stein et al., 1998). Perhaps a strength of the AAI is that researchers can uncover unconscious defences in the way in which a person discusses early attachment experiences; in turn, these defences aid in classifying attachment status. Nevertheless, as Crowell et al. (1995) state, most adults can provide information on their emotional experiences and have sufficient experience in romantic relationships to be able to describe their experiences within them. Self-report questionnaires are also used in conjunction with social-cognitive methods, which can demonstrate the differences in the content of working models, which may not so readily be accessible by self-report.

Stability in adult attachment orientation from childhood to adulthood should be expected with the absence of significant negative life events. However, the extent of contributors to stability (e.g., temperament, relationships with family members, and the occurrence of negative life events) has not been thoroughly investigated (Levy, Blatt & Shaver, 1998). Nevertheless, longitudinal research (e.g., Elicker, Englund, & Sroufe, 1992; Waters, Merrick, Albersheim, & Treboux, 1995) demonstrates that infant attachment style classifications are maintained over extended periods. For example, Waters et al. (2000) found that early infant attachment security with the mother was related to attachment status assessed using the AAI twenty years later.

Research examining the relation between early attachment classification to parents and romantic attachment security has produced less clear results. On the one hand, adults of different attachment orientations report markedly different experiences (e.g., Collins & Read, 1990; Hazan & Shaver, 1987; Levy et al., 1998). For example, Levy et al. (1998) found that secure participants described their mothers and fathers as more benevolent, and

their fathers as less punitive than did insecure participants. Similarly, Hazan and Shaver (1987) found that secure participants described their mother as warmer than did avoidant and anxious-ambivalent participants, avoidant participants described their mother as cold and rejecting compared to anxious-ambivalent participants, and the fathers of anxious-ambivalent participants were described as unfair. These parental descriptions are in line with the kinds of experiences that would lead to these attachment-styles in infancy and childhood. On the other hand, there is little congruence between parent-child attachment style and adult romantic attachment style. Baldwin et al. (1996) report a lack of overlap between the attachment styles reported for mother and father and the style reported for romantic partner. Several explanations may be behind these incongruent findings.

First, it is possible that there is *discontinuity* in attachment orientation across the lifespan. Adults with *earned security* have developed a coherent perspective on the inadequate parenting they received as a child (Phelps, Belsky, & Crnic, 1998), thus breaking the cross-generational cycle of insecure attachment (Phelps et al., 1998). Earned secures and continuous secures (i.e., those who have always had a secure attachment orientation) are similar in the effectiveness of their own parenting under levels of stress, but earned secures have a higher risk of depressive symptoms than continuous secures, which indicates their resemblance to insecurely attached adults (Pearson, Cohn, Cowan & Cowan, 1994). Levy et al. suggest that fearful individuals may be security-enhancing parents, but may exhibit their fearful avoidance in their romantic or marital relationship (see Bartholomew, 1990). However, Paley, Cox, Burchinal and Payne (1999) found that wives with an earned-secure attachment status regulated their affect as competently as continuous-secure wives during a discussion with their husband about a marital disagreement.

Second, retrospective recall of attachment experiences is not accurate. Research shows that memory for previous attachment experiences using self-report measures is biased by current attachment status. Kirkpatrick and Hazan (1994) found that 76% of their participants incorrectly recalled the attachment style that they had endorsed four years earlier. Further, participants believed that their current choice was consistent with the choice made 4-years earlier. Scharfe and Bartholomew (1994) examined the perceived stability of retrospective reports and concluded that these were unlikely to be valid assessments of previous experiences because of the strong consistency bias, although

secure participants were more likely than insecure participants to be accurate in the recall of their attachment style over eight months (Scharfe & Bartholomew, 1994). These biases in recall are thought to occur because people infer their past attachment style from two factors: how they are attached currently and how they think their attachment has changed over time. As a consequence, adults may exaggerate the consistency between the past and the present (Scharfe & Bartholomew, 1994). Because this thesis relies heavily upon retrospective reports of childhood and adolescent experiences with parents and current experiences with romantic partners and other peers, I discuss research to support my choice of this method.

Retrospective reports. Hardt and Rutter (2004) suggest several reasons why retrospective reports of childhood experiences may be unreliable and invalid. People have a tendency to forget some of their early experiences and subsequent life events may influence what is forgotten or people may try to provide explanations for their personal experiences (Hardt & Rutter, 2004). In asking people to report on childhood experiences, it should be taken into account that people may not have noticed or attended to certain events and therefore cannot accurately recall them. Finally, people may recall memories that are congruent with their current affective state. However, Salovey and Singer (1989) report that mood-congruent recall only occurs when recalling recent as opposed to childhood memories. For example, Salovey and Singer induced either a happy, sad or neutral affect in college-aged participants. Participants were then asked to recall five childhood memories and five memories from the previous week. The nature of the recalled memories was not congruent with the induced mood when participants recalled childhood memories, but when participants recalled recent memories, those induced with a happy mood recalled happier memories.

Another important issue concerns who should provide the retrospective report: the parent or the adult child? Adults' reports of the care received from their parents during childhood are likely to be different from parents' own reports of their caregiving. Two people from the same family may report different perceptions of the same experiences (Ben-Zur, 2003). Hardt and Rutter (2004) report that there is often only weak agreement between reports given by parents of, in their case, adverse experiences in childhood, and those given by their children. Similarly, Sessa, Avenevoli, Steinberg and Morris (2001) report little consensus in parents' and children's reports of parenting behaviour. They

found that, consistent with research with older children and adolescents, preschool children perceive the parenting they receive differently from their mothers and trained observers. Results revealed greater consistency between pre-school children's perceptions of parenting and objective observer-reports of parenting than between children's and mothers' perceptions. Parents reporting on their own behaviour may have a perspective bias, such as presenting oneself in a positive light or in line with what should be expected of a parent (Hardt & Rutter, 2004; Sessa et al., 2001). However, Sessa et al. suggest that it is an "inherent paradox" to expect similarities between children's and parents' self-reports because self-reports assess individual's *subjective* experiences (Sessa et al., 2001, p. 54). Indeed, subjective experiences may have an important influence on development and behaviour (Sessa et al., 2001).

Noller and Callan (1988) report that it is not clear whether the lack of agreement between parents and their children is due to "*real differences, differences in perception or measurement error*" (Noller & Callan, 1988, p. 707). Noller and Callan had the mother, father, and adolescent of one family rate their own behaviour during a videotaped interaction and then had the mother, father and adolescent from a second family (the *outsider* family) rate the first family's behaviour. Results indicated that adolescents' perceptions were more in agreement with the outsider family than with their parents. The motivations behind parents' and adolescents' perceptions may explain their lack of agreement (Noller & Callan, 1988). Parents are aware of positive interactions because of their commitment and investment in their family whereas adolescents, fuelled by their desire for uniqueness and separation, may be more negative about their family interactions.

From the above review, it seems that reports of attachment figures' behaviour may be more objective than reports of one's own behaviour. This corroborates my decision to not use parental reports of parenting because they too would be retrospective reports. Indeed, there is little agreement between parents' current reports of their parenting and their retrospective reports (Hardt & Rutter, 2004). This thesis may be limited because of my choice of data collection method and participant sample; however because of time and resources, alternative data collection methods, such as a longitudinal study, were not logistically viable. B. C. Feeney and Collins (2001) found good agreement between one partner's perception of received care and the other partner's reports of the care he or she provided. This suggests that it is possible to report on received care with good, though not

perfect, accuracy. This provides some confidence in using the self-report method.

Caregiving

1.3 Caregiving

In the last 10 years, adult attachment research has begun to address how early caregiver-child experiences shape adults' caregiving patterns (e.g., Carnelley et al., 1996; J. A. Feeney, 1996). Although the patterns of *parental* caregiving associated with children's attachment patterns have been documented (e.g., Ainsworth et al., 1978; George & Solomon, 1999; Solomon & George, 1996), little research has addressed the patterns of adult caregiving towards romantic partners or peers (Berscheid & Collins, 2000). In order to address this issue, researchers have turned to the field of social support to inform theory and research into adult caregiving. Nevertheless, it is important to stress why adult caregiving, although sharing similarities, differs functionally from social support provision. The addition of caregiving as an aspect of adult-adult relationships has been met with criticism, as well as enthusiasm. In the two sections below, the similarities between adult caregiving and the social support literature are highlighted and the criticisms of adult attachment and caregiving research are addressed.

1.3.1 Current Issues in Caregiving Research.

According to Bell and Richard (2000) the importance of caregiving has been trivialized by attachment theory, evidenced by Bowlby's and other attachment researchers, lack of attention to the caregiving system compared to the attachment system. The first criticism concerns the comparison of parent-child attachment to adult-adult romantic attachment. Kirkpatrick (1998) proposes that the function of a romantic attachment figure, is as a long-term mating partner. According to Kirkpatrick, adults are capable of relieving their own distress and therefore, an adult partner does not need to provide a secure base or safe haven. Similarly, McAdams (2000) criticized the idea that intimate or romantic relationships in adulthood constitute attachment bonds. McAdams argues that any similarities between parent-child attachment and intimate adult relationships are superficial. Unlike a parent-child attachment bond adult relationships are not composed of a dominant (e.g., stronger, or wiser, more self-aware) 'parent' and a 'child' (who is

clueless and dependent) (McAdams, 2000). McAdams considers caregiving to be a minor aspect, one of several components, involved in some adult romantic relationships (McAdams, 2000; cf. Kunce & Shaver, 1994). I agree with McAdams, to some extent: researchers should not consider all romantic relationships as attachments; this would trivialize the intensity of an attachment bond by comparing it to the often fleeting, romantic liaisons that feature in many college-aged students' (who are the main participant group) social lives. Rather, in this thesis, effort is made to examine only those romantic (and peer) relationships that meet the criteria for attachments (i.e., proximity maintenance, safe haven, separation distress, and secure base); to examine caregiving within an adult relationship in which one or both partners achieve felt security from their partner. I would expect that the attachment and caregiving systems are most influential in young adults' attachment relationships (or those which are likely to become attachments; Berlin & Cassidy, 1999), whereas the affiliative or sexual mating systems may be most influential in non-attachment romantic relationships (cf. Berlin & Cassidy, 1999).

Further, adult attachment theorists are aware of the differences between parent-child and adult-adult attachments. Adult romantic caregiving is expected to differ qualitatively from parental caregiving and play mothering (see Simpson & Rholes, 2000) because adult romantic relationships are reciprocal. Each partner will recognize the importance of his or her partner, monitor the location of him or her, understand each other's goals, intentions, and desires, experience strong emotions and experience separation distress if, and when parted from each other (Fraley & Shaver, 2000). Like parent-child attachment, adult-adult romantic attachment should be marked by interdependence, synchrony, and intertwined goals (Fraley & Shaver, 2000; W. A. Collins & Sroufe, 1999).

Instead of focusing on the differences, it might be relevant and productive to focus on the similarities. For example, the responsiveness and sensitivity of a caregiver is important for a child's security and is likely to be important in adulthood, too. In childhood, maternal (or indeed, paternal) sensitivity and responsiveness can ensure the survival of the infant and the reproductive fitness of the caregiver (Cassidy, 2000). Cassidy (2000) suggests that the caregiving responsiveness of the parent is transferred from parent to child (through modelling), thus the child learns how to caregive and be responsive to others. It follows that if parents teach their children to be responsive and sensitive, those

children who have learned the most optimal pattern of caregiving will have an increased ability to attract desirable partners in adulthood. These adults will be more attractive, in terms of reproductive fitness (Cassidy, 2000). Indeed, Pietromonaco and Carnelley (1994) found that romantic partners were more preferred if they were sensitively responsive. Further, J. A. Feeney and Hohaus (2001) found that those participants who reported a caregiving style characterized by high responsiveness described specific events where they had supported their spouses' diverse needs. This support led to a greater intimacy for the couple, and the spouse reported positive feelings about the care they had received.

Further, like parents, adults will have other priorities (Dix, 2000), which may affect their ability to monitor their partner. For example, as in parent-child relationships, in adult-adult relationships competition from other behavioural systems could impinge on one's time and energy to provide optimal care. Adults may have family commitments, academic or work-related restrictions. Furthermore, relationship satisfaction may affect caregiving toward a romantic partner (Carnelley et al., 1996). Research suggests both dating and marital relationships function better when attachment and caregiving needs are in agreement between both partners. Carnelley et al. (1996) found that dating women reported greater satisfaction and positive interactions with their partner, and married men and women reported greater dyadic adjustment, if their partners or spouses reported that they displayed more reciprocal, engaging, and less neglectful caregiving.

The second criticism of adult romantic caregiving addresses why adults should be motivated to care for a romantic partner. Bell and Richard (2000) suggest that attachment theory does not provide a motivation for caregiving. However, Finkenauer and Meeus (2000) suggest that the motivation is a self-oriented need. As human beings, we strive to develop lasting, positive, and significant relationships to avoid feeling lonely. These relationships are emotionally developed, in the sense that we will avoid finishing them, even if we have negative experiences within them (Baumesister & Leary, 1995). Reasons for avoiding loneliness might be because of the association between interpersonal relationships and mental well-being, low mortality rates, and fewer physical health problems (see Finkenauer & Baumeister, 1997). That some people have children because they fear loneliness in old age (Blake, 1979) and the need for belonging, suggests that, rather than working selflessly toward satisfying the needs of dependents, we are seeking our need fulfilment when we engage in caregiving relationships. Another caregiving

motivation is the love a person feels for the child or partner (Noller & J. A. Feeney, 2000). Noller and J. A. Feeney (2000) suggest that love is the primary emotion involved in caregiving, and that caring is the behavioural expression of love. The attachment bond is a source of intense emotions (Bowlby, 1969, 1973, 1980), one of which is love (Shaver et al., 1988); hence, the motivations for caregiving may develop with the development of the attachment bond. In short, the reduction of loneliness, and emotion of love provide reasonable explanations for examining caregiving in adult-adult attachment, and for making comparisons across parent-child attachment and adult-adult attachment.

1.3.2 Caregiving and Social Support.

Bartholomew, Cobb, and Poole (1997) discuss four ways in which the theories of social support and attachment are linked. First, the characteristics of social support and attachment are highly similar. Social support is defined as the provision of support, the availability of others for support, and a sense of acceptance (e.g., Sarason, Pierce, & Sarason, 1990), which is highly similar to some of the features of a secure attachment: feeling worthy of love and acceptance, views of others as available and supportive and seeking help when it is needed (Bartholomew, 1990). Second, proximity-seeking attachment behaviours are comparable to support-seeking ones (see Cottrell, 1992). According to Bartholomew et al. (1997), the restoration of felt security can be achieved by seeking a safe haven in the attachment figure or seeking members of one's social network. Third, the knowledge that one has a secure base to return to following exploration (e.g., trying out new activities) is comparable to evaluating one's available support before taking on a task that may require the help of others (Pierce, Sarason, Sarason, Joseph, & Henderson, 1996). For example, a young adult may turn to parents (i.e., attachment) or members of their church (i.e., social support) as available sources of support during their first term away at university. The final link between attachment and social support is the internalisation of expectations, beliefs and attitudes about others' availability and reliability (Bartholomew et al., 1997). Pierce et al. (1996) use the term *social support schema* to refer to the expectations an individual has of their support network. This schema contains previous experiences of receiving support and is thought to be developed from initial experiences with primary caregivers during childhood (Sarason, Pierce, Bannerman, & Sarason, 1993). This schema is akin to a working model of attachment. For both internal representations, positive experiences with others lead to expectations of their availability

and supportiveness, and negative experiences lead to expectations of unavailable and unsupportive others.

Consequently social support *provision* and caregiving can be viewed as highly similar behaviours. Both can alleviate loneliness, meet individuals' need for belongingness, provide proximity and security, and may involve the same observable behaviours. For example, there are several types of care or support, such as emotional (e.g., offering reassurance or comfort), tangible (e.g., providing food or money) and instrumental (e.g., helping a person to complete a task) (Collins & B. C. Feeney, 2000; J. A. Feeney, 1996). With these similarities in mind, the social support literature is often referred to in this thesis to support findings and drive hypotheses. Nevertheless, there are three major ways in which caregiving is distinct from social support provision. First, whereas a range of people, such as a colleague, a neighbour or a doctor, may provide social support, caregiving occurs within a pair-bond, that is, a relationship that is emotionally significant to both the support-seeker and the caregiver (Ainsworth, 1989). Second, whereas social support provision has numerous functions (e.g., completing everyday tasks), caregiving has an adaptive function to ensure the survival and transmission of one's genes (Cassidy, 2000). That is, the primary, ultimate goal of caregiving is the safety and protection of one's dependent(s). Thus, caregiving involves the provision of a secure base and a safe haven. Finally, and related to the second difference, caregiving has an explanatory mechanism for its development and purpose. Attachment theory provides a framework for understanding why some people are optimal, effective caregivers, where their expectations and beliefs are derived from, and what effect these cognitions will have on behaviour (Crowell et al., 2002).

1.4 The Caregiving Behavioural System

George and Solomon (1999) view caregiving as "*organized within a behavioural system that is independent from, but linked developmentally and behaviorally to, attachment*" (George & Solomon, 1999, p. 651). Kunce and Shaver (1994) expect individual differences in the two systems to be related because aspects of the working models involved in both systems arise from prior experiences with important attachment figures. The caregiving system, like the attachment system is composed of working models, representing previous experiences of caregiving with individual caregivers.

Through repeated interactions with significant others, the two sides of an attachment relationship are learnt: attachment behaviours and caregiving behaviours. For example, we learn the attachment behaviours that are necessary to alert the attachment figure (e.g., to cry when hurt) and result in the satisfaction of the attachment need. We also learn the caregiving behaviours that are necessary to respond to the attached person (e.g., crying signals an attachment need) and behaviours to maintain felt security. Nevertheless, the caregiving working model has been relatively unexplored (cf. George & Solomon, 1989), especially in adult attachment research.

There are two main functions of caregiving: to provide security when requested from the attached (e.g., the infant), and to provide security, which allows the dependent to be autonomous, and able to explore his or her environment (Kunce & Shaver, 1994). The primary goal is protection, which is achieved by proximity. To achieve this goal, the caregiver perceives the situation in the external (e.g., a busy road) or internal (e.g., the mother's personal opinion of danger) environment, examining the signals of the dependent's distress, and in turn, this perception activates the caregiving system. Using previous knowledge and experience, the caregiver assesses the situation and calls upon a repertoire of 'solutions' to reduce the impending danger for the dependent. Deactivation of the caregiving system occurs when proximity is achieved, and the signs of distress are reduced or removed completely. The activation and deactivation of the caregiving system is associated with and regulated by emotions (George & Solomon, 1999). The caregiver experiences positive and negative emotions with his or her ability, or inability, to satisfy the infant's attachment needs. Mothers feel strong positive emotions when appropriate caregiving has led to the satisfaction of their child's needs (Simpson & Rholes, 2000).

As with the attachment system, there are individual differences in the expression of caregiving behaviours, and in the activation of the caregiving system itself. Personal experiences of caregiving will influence how a person determines whether a caregiving situation has arisen, and which attachment signals will activate and deactivate the caregiving system. People have systematic differences in how they attend to attachment-related information (see Fuendeling, 1998), such that, that which may be a sufficient cue to activate the caregiving system for person A may not be sufficient for person B. Each person may have differing 'thresholds' for recognition of a caregiving situation, associated with the sensitivity of the caregiver (see Ainsworth, 1969). A 'sensitive' caregiver will

evaluate the situation and respond promptly and appropriately to the child's needs. Caregiving behaviour is more dependent on the internal organization of the caregiver's caregiving system than on the attachment cues from the child: attachment signals activate the caregiving system but the caregiving response is strongly determined by the organization of the caregiving system (George & Solomon, 1999).

Variations in caregiving behaviours can be expected due to the situation (e.g., context of caregiving), and the age and experience of the person providing the care (George & Solomon, 1999). George and Solomon (1999) discuss how a parent has access to more information about the environment than the child, based on his or her evaluation of the context and past experience, being *cognitively more mature* than the child. In adult relationships, the imbalance between access to information is reduced. Both partners may be capable of evaluating and solving their own attachment needs. It follows that individual differences in the perception and recognition of the attachment needs of one's partner are affected by (a) the experiences of the caregiver, and (b) the experiences of the attached person. In adulthood, these two factors may lead to conflict or disharmony within the relationship similar to the parent-adolescent child's attachment. In the parent-adolescent attachment, the parent wants to protect the child, as he or she has done previously, but this is hampered by the child's desire to not have the parent show protective behaviours towards him or her (George & Solomon, 1999).

1.5 Caregiving from Childhood to Adulthood

Solomon and George (1996) describe three caregiving strategies used by mothers towards their infants: flexible, distal, and close. The *flexible* strategy is used by mothers who aim to raise their child to be a fully functioning independent adult. Flexible caregiving involves doing what is necessary to protect the child and nothing more. The mother provides appropriate and sensitive responses (e.g., Ainsworth et al., 1978), is attentive to her child's cues, and recognizes when protection is and is no longer required (Solomon & George, 1996). High levels of protection are provided in the early stages of childhood, followed by a gradual decrease as the child develops. At pre-school age, the mother's caregiving has a focus on socialization and discipline (see Silverman, 1990). In middle childhood, the child is expected to be more competent and autonomous, and protection from the mother is in the form of teaching and guidance (e.g., non-emergency situations).

According to Solomon and George (1996) this strategy is characteristic of the mothers of secure middle-class children in Western cultures.

The *distal* strategy involves protecting the child from a distance, which allows the child to be more autonomous. Mothers using this strategy may deem it appropriate for their child to be precociously independent (George & Solomon, 1999), although this is likely to put a young child at risk (Solomon & George, 1996). This strategy ties in closely with the avoidant attachment pattern, which is seen in infants whose mothers tend to rebuff their requests for close physical contact (Solomon & George, 1996). The *close* strategy involves the mother keeping the child physically and psychologically close; therefore, the child develops a great dependence on his or her mother. George and Solomon (1999) believe that this strategy is advantageous when the child's maturity needs to be delayed.

There are advantages and disadvantages with the use of these caregiving strategies. Possible disadvantages, such as a mother using a distal strategy when the child requires physical proximity, may be mitigated by the availability of additional caregivers (George & Solomon, 1993), such as in African American families (e.g., Jackson, 1993). Further, what might at first seem a disadvantage may become an advantage later in the child's life. For example, being able to under-emphasize the importance of attachments (e.g., avoidant attachment and distal caregiving strategy) may provide a distinct advantage to individuals who have to leave the family at a young age, for work or education (Solomon & George, 1996). Nevertheless, research suggests that in Western cultures, the distal and close caregiving strategies are not damaging to the child. In response to danger and threats to physical safety, Solomon, George, and Wallerstein (1995) found that the protection provided by mothers of avoidant infants did not differ from that of mothers of secure infants. In addition, although mothers of ambivalent children show inconsistent responses to their child's distress and encourage close tracking between themselves and their child (Slade et al., 1995), these mothers also encourage dependency in their preschool children (see Solomon et al., 1987).

Although cross-cultural research suggests that the majority of children are securely attached (Sagi, 1990), there are cultural differences in the distribution of avoidant and ambivalent attachment patterns. Avoidant attachment is most common in the United States and Western Europe, whereas the ambivalent attachment is most common in Israel and Japan (Sagi, 1990). Accordingly, caregivers may adopt a caregiving strategy that is

appropriate for their cultural or societal conditions. For example, in societies that rely on children to support the family (e.g., working on the farm), the close strategy may be advantageous. In a society where it is necessary that children leave the family home to find work elsewhere, the distal strategy may be most suitable. This idea of caregiving strategies defined by one's culture suggests that there is an intergenerational transmission of caregiving strategies; however, Solomon and George (1996) suggest that change from one generation to the next is possible.

One final strategy of caregiving is employed by mothers who are unable to protect their child from danger. Such mothers have psychologically abdicated their role as a caregiver or find it difficult to provide protection or maintain control over their child (Solomon & George, 1996). Mothers who use this strategy may have experienced the early loss of their own parent(s) (Main & Hesse, 1990), other early attachment-related traumas (e.g., Lyons-Ruth & Block, 1996), recent traumas with their parents (e.g., Ainsworth & Eichberg, 1991), or may be emotionally unreachable because of psychological disorders or heavy substance abuse (Howe, Brandon, Hinings & Schofield, 1999). In addition, research by Pianta and Marvin (1996) found this strategy was used in some cases by mothers whose child was suffering from a life threatening illness. Any of these circumstances could lead a mother to feel helpless, that she has no control over things in her life. The mother may question her ability to provide care and deactivate the caregiving system (Solomon & George, 1996). The children of these mothers are sometimes classified as *disorganized* in the Strange Situation (Main & Solomon, 1986); that is, they have no organized attachment pattern that allows them to maintain proximity or to receive comfort (Howe et al., 1999). In some cases, the child may take on the role of caregiver (Solomon & George, 1996); in other cases, the child may become withdrawn, depressed and evince fearful behaviours (Howe et al., 1999).

1.5.1 The Development of Caregiving From Childhood to Adulthood.

According to George and Solomon (1999), caregiving develops in childhood, as a result of biological and experiential factors. The caregiving system develops more slowly than the attachment system, as it does not have an adaptive function in the early stages of child development. The first behavioural signs of the caregiving system tend to be "immature, isolated and incomplete" (George & Solomon, 1999, p.657), and non-functional (e.g., towards a toy doll), such as those evidenced in play mothering (Pryce,

1995). Young children play at being mummy or daddy, looking after toys and younger siblings (George & Solomon, 1999). The child's own experiences of receiving care from his or her mother act as a cue for the immature play caregiving the child exhibits towards a toy or younger sibling (Pryce, 1995). Indeed, Sroufe and Fleeson (1986) and Bretherton (1985) suggest that one's own experience of caregiving, and models of caregiving are developed from experiences with the mother. As an example, rhesus macaques monkeys who were isolated from their mothers in the first year of life did not show evidence of play-mothering (Pryce, 1995).

By middle childhood (approximately 5-11 years old), the caregiving system is gradually beginning to develop in children who are not primarily responsible for the protection and care of other siblings or parents (e.g., in role reversed relationships) (George & Solomon, 1999). When cultural or personal demands require that a child cares for his or her siblings or parent, then the child's mother will typically guide the child in providing care (George & Solomon, 1999). However, further research is necessary to understand early caregiving experiences and their influence on the development of the caregiving system. For example, it is not known whether these experiences are sufficient to lead to a mature, fully-developed, and organized caregiving system (George & Solomon, 1999).

In adolescence, the caregiving system begins its transformation to maturity (George & Solomon, 1999), coinciding with the biological changes, (i.e., puberty) of this developmental period. In this period, experiences of caregiving will influence the maturation of the caregiving system (George & Solomon, 1999). For example, some older adolescent girls (aged 17 - 19 years) desire to become mothers and have the intellectual ability to do so, despite societal and cultural opinions of teenage pregnancy (George & Solomon, 1999). The largest transformation in the caregiving system occurs in the transition to parenting: during the pregnancy, the birth, and post-natally (George & Solomon, 1999). For example, during this period, there is an increase in thoughts about the self and one's spouse as a parent (e.g., Ammaniti, 1994).

This thesis focuses on the caregiving system in young adulthood; that is, the participants consist mainly of individuals under the age of 30 who do not have their own children. Below, I review empirical research that has focused on caregiving behaviours in adulthood towards peers and romantic partners.

1.5.2 Empirical Research into Adult Attachment and Caregiving.

Research examining caregiving in adult relationships have examined caregiving as support giving (e.g., Collins & B. C. Feeney, 2000), caregiving in marital relationships (e.g., J. A. Feeney, 1996), and caregiving in dating relationships (e.g., Carnelley et al., 1996; Kunce & Shaver, 1994). These studies have found systematic differences in caregiving patterns associated with an individual's attachment orientation.

Self-report research. In romantic relationships, the provision of appropriate caregiving is a fundamental component of the relationship (Kunce & Shaver, 1994). A partner is often faced with situations in which the partner is in distress, pain, or simply in need of comfort or support. His or her ability to caregive satisfactorily is associated with his or her ability to recognize and be attentive to the needs of his or her partner. In adult relationships, both partners play the role of caregiver and attached person. The adult's caregiving system is activated when either he or she perceive a threatening situation to be occurring (which could happen before the attached partner notices) or the attached partner makes a behavioural request (e.g., verbal or nonverbal) for help or support, in the same way as a child's attachment need will activate the parent's caregiving system.

Kunce and Shaver (1994) examined how caregiving is experienced in adult relationships. Kunce and Shaver reviewed mother-infant attachment research and derived seven elements of caregiving: sensitivity-insensitivity, acceptance-rejection, cooperative-uncooperative, accessible-inaccessible, physical contact, emotional expression and compulsive caregiving. Young adult participants in romantic relationships rated themselves on these seven elements, revealing systematic differences in their romantic caregiving based on their endorsement of one of the four adult attachment styles (Bartholomew & Horowitz, 1991). Secure adults were the most sensitive, accepting, accessible, and cooperative toward their partners. Preoccupied adults were accepting, accessible and provided physical proximity similar to secure adults, yet they were less sensitive and cooperative. Dismissing adults were the least sensitive, accepting, cooperative and accessible, and were less likely to provide physical contact. Fearful adults had the most negative caregiving pattern: they were similar to preoccupied and dismissing adults, but were less sensitive, accepting, cooperative and accessible than secure adults. Fearful adults also showed higher levels of compulsive caregiving. Compulsive caregiving refers to the level of intrusive attention and control, or over-involvement in a partner's life. Bowlby

(1979) described compulsive caregiving as being due to a fear of rejection for providing insufficient care, a development from early experiences of providing care to a parental figure(s). These attachment style differences in caregiving remained after controlling for relationship satisfaction, suggesting that the differences were not dependent on how satisfied the participants were with their current relationship (Kunce & Shaver, 1994).

Kunce and Shaver revised the initial seven-scale measure of romantic caregiving. Four new scales were deduced: proximity vs. distance, sensitivity vs. insensitivity, cooperation vs. control, and compulsive caregiving. Once again, attachment style differences were found in young adults ratings on these four scales. Secure adults provided physical and psychological proximity, were sensitive, co-operative, but reported low scores on compulsive caregiving. Preoccupied adults provided physical and psychological proximity and compulsive caregiving, but were less sensitive and cooperative than secure adults. Dismissing adults were the least compulsive in their caregiving, and provided the lowest levels of physical and psychological proximity and sensitivity. Fearful adults also provided low levels of physical and psychological proximity and sensitivity, but like preoccupied adults, they were compulsive caregivers (see also Carnelley et al., 1996). Notably, the different caregiving patterns of dismissing and fearful adults are consistent with Bartholomew and Horowitz's (1991) distinction between the two types of avoidance of attachment.

Following Kunce and Shaver's work, the study of romantic caregiving gradually began to increase. Relevant to this thesis, the two studies described next, focused on the influence of received parental care on romantic caregiving. That is, romantic caregiving should reflect the early caregiving experiences with primary caregivers. J. A. Feeney's (1996) and Carnelley et al.'s (1996) studies demonstrate the link between early caregiving experience and romantic caregiving in adulthood.

J. A. Feeney (1996) used Kunce and Shaver's (1994) 4-scale measure of romantic caregiving; yet found that the items could be reduced to two main scales. The *responsive caregiving* scale incorporated the sensitivity vs. insensitivity; cooperative vs. controlling and proximity vs. distance scales. The *compulsive caregiving* scale was the same as in the original Kunce and Shaver measure. J. A. Feeney asked married couples to describe their romantic caregiving on the two scales, their marital attachment orientation and the care received from their parents. Results showed that received maternal and paternal care

predicted adults' attachment and caregiving toward their spouse. Further, J. A. Feeney found support for viewing attachment and caregiving working models as distinct, yet linked, constructs. Whereas the strongest predictor of comfort with closeness (akin to the attachment avoidance dimension) was maternal care, the strongest predictor of romantic responsive caregiving was maternal *and* paternal care. These results demonstrate the potential link between early caregiving experiences with the primary caregiver (who tends to be mother) and adult attachment and the link between early experiences with both parents and adult caregiving (J. A. Feeney, 1996).

Carnelley et al. (1996) used a 3-scale caregiving questionnaire. *Reciprocal caregiving* assessed the way in which both partners give and receive care; *engagement in caregiving* tapped one's availability, willingness and concern for caring for one's partner; and *neglectful caregiving* tapped whether partner's needs were ignored. Two studies were conducted, one on dating couples and one on married couples. Carnelley et al. found that romantic caregiving mirrored the care received from the same-sex parent in childhood. Dating and married women who had more positive experiences with their mothers during childhood, that is, a mother who was accepting, warm, reliable, encouraged her daughter's independence and was not controlling, reported greater reciprocity and engagement and less neglect in their romantic caregiving. Married men who had positive experiences with their fathers during childhood also reported a more positive romantic caregiving style. There was no evidence that the caregiving of the opposite-sex parent was mirrored in dating adults' romantic caregiving.

Observational research. Several studies of adult caregiving have employed observational methods, echoing the early research of Ainsworth and her colleagues. These studies have tended to examine attachment style differences in caregiving behaviours; corroborating the self-report research, although some studies have also examined the effects of received care on the careseeker (sometimes referred to as support-seeker). The typical design of behavioural observations of couple interactions places romantic partners into a manipulated stressful situation, such as conflict resolution or an anxiety-provoking situation.

Collins and B. C. Feeney (2000) examined interactive social support in dating couples. One member of the couple made a personal disclosure to their partner (the *caregiver*). The expectation was that although the normative goal of caregiving is to relieve

the attached person's distress, individual differences should exist in one's ability to relieve the distress. Consistent with the self-report studies, Collins and B. C. Feeney hypothesized that caregivers who were high in avoidance and attachment anxiety would be the least effective caregivers. This hypothesis was partially confirmed: caregivers high in attachment anxiety (i.e., fearful avoidants, preoccupieds) were less responsive to their partners' requests and showed negative caregiving behaviours. Specifically, caregivers high in attachment anxiety provided more support the clearer and more direct (as opposed to subtle) that their partner's signals were. In contrast, caregivers low in attachment anxiety provided high levels of support regardless of the clarity of their partner's signals (Collins & B. C. Feeney, 2000). These attachment differences in caregiving may be due to the caregiver's attentional resources (Collins & B. C. Feeney, 2000). Because attachment anxiety is associated with a preoccupation with one's own attachment needs and heightened fear of rejection, it is possible that individuals high in attachment anxiety have difficulty in attending to their partner's attachment cues. As a result, only blatant attachment signals from their partner may activate their caregiving behavioural system.

Simpson and his colleagues (Simpson, Rholes, & Nelligan, 1992; Simpson, Rholes, Orina, & Grich, 2002; Rholes, Simpson, & Stevens, 1998) have examined attachment style differences in caregiving (and careseeking) behaviours in heterosexual dating couples using an anxiety-provoking situation format.[3] Independent observers rated careseeking and caregiving behaviours, while one member of a couple waited to experience an anxiety-provoking situation. Simpson et al. (1992) found that as their partner's anxiety increased (as rated by observers), more secure men provided greater support, whilst more avoidant men provided less support. Rholes et al. (1998) found that how supportive the men were to their partners depended upon her emotional state, rather than her actual requests for support. More supportive comments were made by the men when their partners discussed their feelings more openly. Moreover, women (especially avoidant ones) were rated as calmer when their partners made more supportive comments. A second study by Rholes et al. explored conflict resolution. The couple took part in a discussion lasting 7-10 minutes in which the aim was to resolve a major or minor problem. Ambivalent participants felt more distressed by the discussion, displayed more stress and anxiety, and felt more anger

3 At this point, only findings relating to caregiving behaviours will be described. Chapter 3 provides more detail about careseeking behaviours.

and hostility, especially when resolving a major problem. Avoidant men were less warm, supportive, and had lower quality interactions during the resolution episode, especially if discussing a major problem, yet avoidant women did not show this effect. Rholes et al. suggested that this gender effect might be due to sex roles overriding the avoidant's prototypical interaction style, since avoidant women should have displayed caregiving akin to the avoidant men.

In a more recent study, Simpson et al. (2002) assessed adult attachment orientation using the AAI (Main & Goldwyn, 1985) and the Adult Attachment Questionnaire (AAQ; Simpson, Rholes, & Phillips, 1996) to predict support giving and support seeking behaviours. As described earlier, the AAI focuses on an adult's current perspective on attachment to their mother and father in childhood (i.e., the parenting system) whereas the AAQ focuses on one's attachment in current romantic relationships (i.e., the romantic-pair bonding system) (Shaver et al., 2000). Although the parenting system, and the romantic pair-bonding system are semi-independent and could both motivate romantic caregiving, they may have different effects on romantic caregiving (Simpson et al., 2002). After completing the AAI and AAQ, heterosexual dating couples were videotaped for 5-minutes whilst taking part in the anxiety-provoking procedure. Women acted as the caregiver and the men were the support seeker. Results showed that women provided more support, as their partners sought more support. Women classified as secure on the AAI whose partners sought more support provided the most support, whereas AAI-secure women, whose partners sought less support, provided the least support. This suggests that the working model of parental attachment is influential on women's romantic caregiving. Further, this suggests that early life experiences are related to romantic caregiving patterns for women (Simpson et al., 2002). Women who were low on the AAQ's avoidance dimension provided more support than women high on avoidance did.

Using a naturalistic observation, Fraley and Shaver (1998) observed the separation behaviours of adult dating and married couples in an airport. The behaviours observed between these couples were functionally similar to those displayed in mother-child separation interactions. Both partners provided mutual caregiving to each other in the form of proximity maintenance, providing comfort, and reassurance. There was also interdependence and coordination between the partners' behaviour (e.g., avoidance, caregiving, contact maintenance, resistance, sadness, contact seeking, and sexuality) with

an average correlation of .80. The expression of caregiving, careseeking and contact maintenance behaviours was more so in separating couples than in non-separating couples. Further, attachment style moderated the expression of these behaviours. In separating couples, more avoidant women provided and sought less care and support and exhibited more withdrawal strategies (e.g., not making eye contact) than less avoidant women. In non- separating couples, more avoidant women sought care from and were less likely to avoid their partners. There were weak associations between avoidance and the men's behaviours, but more anxious men maintained contact with their partners less than less anxious men. In a demonstration of a goal-corrected partnership (phase 4 of the attachment process), fewer attachment behaviours were used the longer that the couple had been together. Couples that had been together longer may have been more certain of the availability of their partner.

Summary of Section 1.5.

Empirical research into attachment and caregiving has shown that there are systematic differences in caregiving behaviour in terms of attachment orientation, and further that adult caregiving style can be described using three scales (i.e., responsive, compulsive and neglectful). Moreover, research has supported the notion that representations of earlier caregiving and attachment experiences with parents can influence romantic caregiving behaviour in adulthood. However, several additional questions regarding adult caregiving have not been addressed adequately in the adult attachment literature. First, what is the extent of the influence of early caregiving experiences when later caregiving experiences with romantic partners and close friends or siblings are considered? Some researchers (e.g., Armsden & Greenberg, 1987; Lynch & Cicchetti, 1991) argue that parent attachment models developed in infancy will not adequately capture the social reality of adults, young adults or adolescents. Indeed, as research in Section 1.2.2 highlighted, young adults do have several available attachment figures. This thesis will examine how the care received from our parents and peers shapes our adult caregiving style. Second, developmental research highlights the way in which a parent's caregiving influences a child's view of the self and their attachment figure. Does a romantic partner's caregiving influence an adult's view of the self and their relationship? This question is important because it may highlight the way in which working models of attachment are revised over time.

Working Models of Attachment and Caregiving

1.6 Internal Working Models

As discussed briefly in Section 1.1.4, the internal working model (herein referred to as *working model* or *model*) is created from actual experiences with attachment figures and can be used to simulate and predict the responses of attachment figures to one's attachment cues. The working model is central to the attachment system. Each model is open to revision, and in a healthy attachment the model will not contain contradictions. When the quality of caregiving is consistent, the development, and content of the working model will reflect this. Working models of attachment (herein referred to as *attachment model*) are composed of mental representations of the self, interactions with significant others, and the environment, in terms of the regulation and satisfaction of attachment needs (Bowlby, 1973; Collins & Read, 1994).

When research into adults' attachment models first began (i.e. Hazan & Shaver, 1987), attachment styles were thought to reflect a trait, as opposed to a feature of each specific relationship (Hazan & Shaver, 1987). Perhaps, this idea was derived from the way in which Bowlby (1988) suggested that a child's attachment style begins as a feature of the relationship, but gradually reflects the child. Nevertheless, as developmental research discussed previously and social/personality research discussed below highlights, attachment models reflect a variety of attachment orientations and relationships. As Pierce and Lydon (2001) state, it is adaptive to have a repertoire of relational models in order to have adaptive relationships.

One development that aided this notion of multiple working models was the comparison of Bowlby's working model to a *relational schema* by Baldwin (1992). This comparison has enabled the application of social-cognitive schema theories of person perception and self-perception to the study of close adult relationships (Pierce & Lydon, 2001). Further, and of importance to this thesis, this comparison has allowed for a greater understanding of the function of multiple attachment models. Baldwin proposed a social-cognitive theory of relationship models, which expanded upon Bowlby's original conception of the working model. Baldwin proposed that a relational schema is composed of the associative network formed by a self-schema, an other-schema and an interpersonal

script. These three elements of the relational schema are described as conjoint schematic, i.e., they are mutually associated (Baldwin, 1992). Thus, a woman may have a model of self as worthy of warmth and support. Her model of other may consider her romantic partner to provide sensitive and responsive caregiving. The interpersonal scripts may contain warm, sensitive-relevant interactions, such as "When I came home crying, Tom soothed me by holding me close". Taking this social-cognitive approach, allowed for variability in working models, allowing an explanation for the differences in relational style within an individual in the different relationships they experience (Pierce & Lydon, 2001).

1.6.1 The Organisation of Working Models.

Consistent with the notion of multiple attachment figures, several different organisational structures of attachment models have been theorised (e.g., Bretherton, 1985; Collins & Read, 1994; van IJzendoorn, Sagi, & Lambermon, 1992). Bretherton (1985) suggested that attachment models are arranged hierarchically. According to Bretherton, the attachment figure who is preferentially oriented towards for the fulfilment of attachment needs (secure base, safe haven, proximity maintenance, and separation distress) is placed at the top of the hierarchy; this is usually the mother. This attachment figure is the most salient caregiver and will have the most influence on the construction of other attachment models. In this way, the security of the topmost (i.e., mother) attachment model influences the security of the models further down the hierarchy. Thus, according to this organisation, the mother-child attachment model should be the strongest predictor of attachment security in other relationships (Howes, 1999).

van IJzendoorn, Sagi, and Lambermon (1992) suggested an integrative organisation of attachment models. This organisation has only one attachment model that is formed by integrating all of the available attachment models. In contrast to Bretherton's (1985) hierarchy, all attachment figures predict the quality of the attachment model (Howes, 1999). That is, one model does not have a greater weight than any other model in the network, unlike Bretherton's does. Therefore, this integrative organisation allows for the attachment models in the network to differ in their level of security. That is, the valence of each relationship is independent of the valence of other models (Howes, 1999).

Collins and Read's (1994) hierarchical organisation of attachment models takes into account elements of Bretherton's and van IJzendoorn et al.'s organisations (see Figure

1).[4] In Collins and Read's hierarchy there are multiple attachment models, models that vary in their level of security and valence (i.e., containing positive, negative or mixed experiences), and all models are interconnected in that they have shared elements, associations and links (Collins & Read, 1994). In addition, models can vary on a qualitative dimension: the *specificity* of the model. According to Collins and Read, the topmost model of attachment is composed of the most general representations of the self and others with regard to attachment. This *general* attachment model is based on a person's history of experiences with a wide range of attachment figures (Collins & Read, 1994). The models lower down in the hierarchy become more specific. One level of the hierarchy houses attachment models that are specific in terms of the type of relationship (e.g., romantic, parent, peer, sibling; i.e., *domain-specific*), but contain experiences from a number of attachment figures. For example, the general parent model may contain representations of the self and mother, father, and step-father whereas the general peer model may contain representations of the self with several close friends. The attachment models on the lowest level of the hierarchy pertain to relationship-specific representations of the self and attachment figure, such as mother, husband, or grandfather.

Interconnections between the models can occur between any type of relationship (e.g., between 'mother' and 'Alex'), and between any levels of specificity (e.g., between 'mother' and the 'general peer model'). Collins and Read describe their model network as a *default hierarchy* (Collins & Read, 1994; Holland, Holyoak, Nisbett, & Thagard, 1986). The general attachment model is thought to be automatically activated when an individual is stressed or interacting with an ambiguous relationship partner (Overall, Fletcher, & Friesen, 2003). As more accurate information is gleaned from the situation, more specific models in the hierarchy will become activated (Overall et al., 2003) because although general models can be applied to a range of relationships or situations, they may not describe any of them very well (Collins & Read, 1994).

[4] Furman and Simon (1998) suggest a hierarchical model of relationship views, similar to Collins and Read's (1994). Importantly, like Collins and Read, the hierarchy can account for similarities and differences in the characteristics of the different types of attachment relationships. Furman and Simon postulate that different behavioural systems are involved in parent-child and romantic relationships: the attachment system in parent-child relationships and the affiliation, sexuality, caregiving and attachment systems in romantic relationships. Furman and Simon's hierarchy accounts for continuity in experiences across relationships. Particular relationship views and different types of relationships can influence general views of relationships that then may influence other relationship views. Furman and Simon make no comment regarding particular relationship views influencing other relationship views directly.

Collin and Read's (1994) attachment model network can vary in terms of its complexity. Network complexity is based on the network's size (i.e., the number of models within the network) and its density (i.e., the number of interconnections between all of the models in the network). An attachment model network representing a large number of attachment figures will be complex *in size*. An attachment model network with many shared elements and links between the models will be complex *in density*. However, an attachment model network that has few interconnections between the models will simply be *complex* because fewer interconnections and shared elements suggest that the models are highly differentiated.

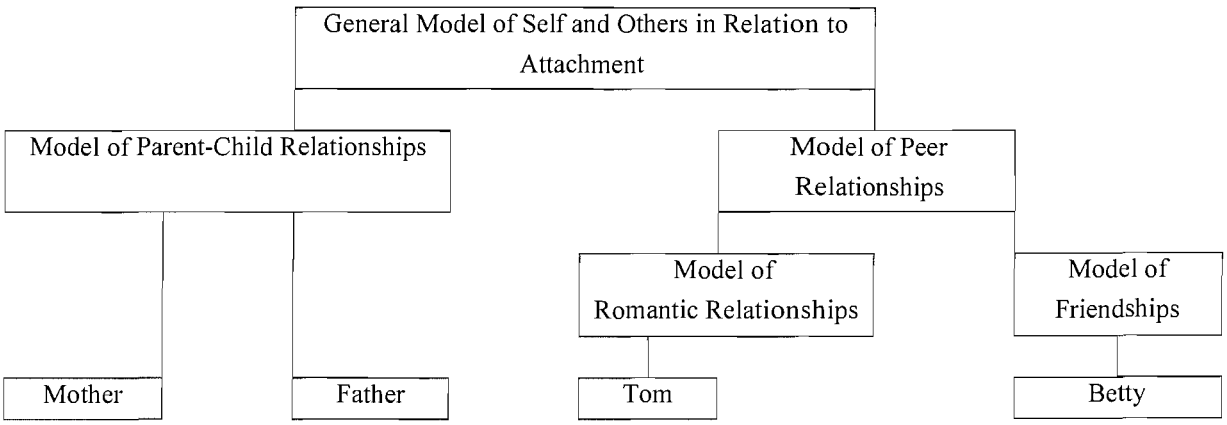

Figure 1. Collins and Read's (1994) hierarchical network of general and specific attachment models. Taken from Collins and Read (1994, p. 58).

Research has supported Collins and Read's idea of differing levels of specificity. Overall et al. (2003) assessed the organization of adults' attachment models, comparing 3 different organisations.[5] Participants described their general attachment orientation in their close family relationships, close platonic friendships, close romantic relationships, their relationship-specific attachment orientation for 3 familial relationships, 3 current or previous romantic relationships and 3 friends. Results from a confirmatory factor analysis supported Collins and Read's attachment model hierarchy. A general attachment model

[5] Model 1 consisted of one general attachment model shaped by relationship-specific models from each domain (i.e., familial, romantic and friendships). Model 2 consisted of three general attachment models, one for each domain that was shaped by relationship-specific models congruent with the relationship domain of the general model. Model 3 was the hierarchy illustrated in Figure 1.

was topmost, followed by three relationship-domain models (e.g., familial, friend, romantic) with relationship-specific attachment models at the lowest level.

Indeed, the examination and reporting of the level of specificity of attachment models in adult attachment research has been encouraged by several researchers (e.g., Pierce & Lydon, 2001). Cozzarelli, Hoekstra and Bylsma (2000) found that the relationship-specific model of current romantic partner was only modestly correlated with participants general model of attachment. Further, Cozzarelli et al. (2000) found that general and relationship-specific attachment models predicted attachment-related variables differently. Relationship-specific models of the self were related to participants' relationship satisfaction, inclusion of others in the self, and feelings of romantic love and global psychological functioning (e.g., well being, life satisfaction), whereas general models of the self were predictive of global psychological functioning, only. Cozzarelli et al. suggest that relationship-specific models may be in activation simultaneously with general mental representations, and thus are influencing responses to global psychological functioning.

Pierce and Lydon (2001) argued that little research has investigated networks of attachment models and how general and relationship-specific models are organized in these networks. Pierce and Lydon asked participants to report their general models of self and other in their close relationships, and their relationship-specific models of self and other in their attachment to mother, father, closest friend and current romantic partner. General models of the self and others only accounted for 5% of the variance in relationship-specific models of the self and others, respectively. This suggests a relatively small overlap in specific views of the self and of others and the general view of the self and of others. Further, Pierce and Lydon found that although the effect size was small to medium, relationship-specific attachment models generalized into general attachment models over a 3-4 month period (a bottom-up effect). Specifically, after controlling for Time 1 measures, relationship-specific models of self in relation to mother and closest friend, but not to father, predicted general model of self and the relationship-specific model of closest friend, but not mother or father, predicted general model of other. In contrast, the effect of general attachment models on relationship-specific attachment models (a top-down effect) over the 3-4 month period was very small (i.e., accounting for less than 1% of the variance; Pierce & Lydon, 2001). Thus, Pierce and Lydon demonstrated that general

and relationship-specific models were distinct, yet correlated constructs. This bottom-up effect is not explained by a greater stability in the specific models (Pierce & Lydon, 1996) yet could suggest some degree of accommodation of relationship-specific models to the general model.

In addition, research has supported Collins and Read's idea that the models in the hierarchy can vary in terms of attachment security. Baldwin et al. (1996) asked college-aged participants to list their ten most impactful relationships and to select one attachment-style (using the 3-category system) to describe each relationship. Findings revealed that participants generally selected two or more attachment styles to describe their ten relationships and classified the majority of their relationships as being secure, although participants reported more relationships that matched their own general attachment style. Secure participants reported more secure relationships than did avoidant and anxious ambivalent participants, avoidant participants reported more avoidant relationships than did secure and anxious-ambivalent participants, and anxious-ambivalent participants reported more anxious-ambivalent relationships than did secure and avoidant participants. Thus, although participants were securely-attached in the majority of their relationships, some participants reported that they were, in *general*, insecurely-attached. Interestingly, although there was an overweighting of secure-style relationships in the attachment model networks of these participants, the insecure models had a greater influence on the composition of their general attachment model. In other words, the secure-style models did not reflect the participants' overall conception of the self in close relationships. One explanation for this is because of people's tendency to overweight negative information when making judgements about the self (Baldwin et al., 1996). Alternatively, Collins and Allard (2001) state *"those with chronic insecure models may find it difficult to set aside their doubts and may rely on their pessimistic chronic models even when a more positive relationship-specific model is available"* (Collins & Allard, 2002, p. 70).

La Guardia et al. (2000) examined the differences in attachment security and need fulfilment *within* young adults' four primary attachment relationships (namely, mother, father, romantic partner, and best friend).[6] Attachment needs were defined as the basic

[6] La Guardia et al. (2000) also conducted analyses with six attachment figures: mother, father, romantic partner, best friend and two additional distal relationships, a roommate and an additional adult (e.g., a lecturer).

need fulfilment for supporting autonomy, competence, and relatedness. Need satisfaction in relationships with mother, father, romantic partner, and best friend was positively associated with attachment security. Furthermore, need satisfaction *varied* across the four relationships. College-aged students had the greatest need satisfaction in relationships with their best friend, followed by their mother, romantic partner, and father. This suggests high variability in attachment orientation across relationship-specific models of the self and of others.

In summary, research has highlighted how relationship-specific models influence general models within the network. Overall et al. (2003) demonstrated that the relationship-specific mother attachment model had the largest influence on the general familial attachment model, the relationship-specific current partner model had the largest influence on the general romantic attachment model and the relationship-specific model of the closest friend had the largest effect on the general friendship attachment model. This pattern suggests that salient models, such as a current romantic partner or one's closest friend, are important in the composition of a general attachment model. Whereas Collins and Read suggested that there is a top-down effect whereby general attachment models influence the construction of relationship-specific models, Pierce and Lydon (2001) demonstrated that relationship-specific models influence general models to a greater extent than vice versa. However, Collins and Read (1994) suggest that the interconnections between different levels of specificity and relationship domains are probably not as orderly as that displayed in Figure 1. Thus it is asked: how do relationship-specific models influence the development or content of other models in the network? Overall et al.'s research suggests that the saliency of a model explains the nature of the model's influence. However, they do not define salience. What is it about a model that drives its activation and application? In this thesis, I address two characteristics of a working model that could be associated with a model's salience: a model's accessibility and its structural features, which are discussed below.

1.6.2 The Function of Working Models.

Working models are bi-directional; they influence the new information that is encoded in the model (i.e., model-consistent information) and influence the interpretation and perception of novel stimuli. Thus, two people of different attachment orientations may report divergent summaries of an event despite both seeing exactly the same event (Collins

& Read, 1994). This is due to *selective attention*; a predisposition to attend to certain parts of the environment (Collins & Read, 1994). Selective attention is influenced by the attachment or caregiving goals that are activated at the time (Collins & Read, 1994). Chronically- and temporarily-activated goals can direct attention, rendering an individual highly sensitive to the parts of the environment that are related to their goals (Srull & Wyer, 1986). For example, a chronically accessible goal for avoidant individuals is striving for autonomy. Being motivated to achieve this goal, avoidant individuals may be highly sensitive to signs that a partner is being intrusive or controlling (Collins & Read, 1994). Similarly, avoidant individuals may have a goal to minimize their need for support from close others (because support-seeking could serve to alienate an unresponsive attachment figure; Kirsch & Cassidy, 1997), therefore, they would not be expected to preferentially attend to stimuli that might activate their attachment system (Collins & Read, 1994). Similarly, both child- and adult-based research has demonstrated that avoidant individuals appear to reduce attention to, or ignore, attachment-relevant information (e.g., Kirsch & Cassidy, 1997; Main et al., 1985; Fraley et al., 2000).

Main (1990) proposed that attention is one mechanism by which the attachment system is regulated; attention should also regulate the caregiving system. Each attachment style displays a specific non-conscious cognitive strategy (Kirsch & Cassidy, 1997) for achieving felt security. Similarly, non-conscious caregiving strategies (i.e., flexible, distal, close, and abdication of caregiving) determine whether internal or external perceptions of threat are attended to. Thus, the organization of caregiving should guide attention, in the same way that the organization of attachment guides attention (George & Solomon, 1999; Kirsch & Cassidy, 1997).

Bowlby (1979) suggested that when a person is in a new attachment-relevant situation, one of his or her attachment models would be used to direct and infer the behavioural, cognitive and affective response patterns of the self and the attachment figure. Each attachment model has a threshold for activation; the model that has the lowest threshold will be activated. The activation of an attachment model may be dependent upon the model's availability and accessibility (Baldwin et al., 1996). An attachment model that is *available* exists in the model network and can be used in information processing. An attachment model that is *accessible* can be activated easily and the more frequently a model is activated, the greater its accessibility. Accessibility can be manipulated by recent

activation (momentary accessibility; e.g., Higgins, Rholes, & Jones, 1977) or by frequent activation of the schema (chronic accessibility; e.g., Higgins, 1989). Momentary, or temporary, accessibility is usually achieved via a priming manipulation. Indeed, Bowlby (1982) suggested that a general attachment style may arise from a chronically accessible internal working model. Further, Baldwin et al. (1996) suggested that an individual's general attachment style is likely to be a *"combination of availability and chronic accessibility effects"* (Baldwin et al., 1996, p.101). That is, we approach new or ambiguous attachment-relevant experiences with a style of interaction that is based on (a) the frequency of previous experiences of a particular kind and (b) the ease with which previous experiences come to mind (Baldwin et al., 1996). For example, an individual with a general dismissing attachment style might reject requests for closeness and decline disclosing personal information during the first months of a new relationship because he or she has learnt in previous relationships that doing so can lead to negative consequences for the self (see Baldwin et al., 1996).

Availability and accessibility are connected because the more articulated a model is (i.e., composed of numerous experiences applicable to the current interaction), the more accessible the model will be for activation (Baldwin et al., 1996). Baldwin et al. (1996) demonstrated the effects of accessibility and availability of attachment models by priming relationship-specific attachment models. Priming temporarily heightens the accessibility of an available model.P articipants were primed with a relationship that reflected either a secure, anxious-ambivalent or avoidant attachment-style. Following the priming manipulation, participants were given descriptions of hypothetical dating partners, who matched their primed-attachment style or did not match the prime, and rated how attractive they found the hypothetical partner. Results showed that participants primed with a secure attachment style were more attracted to dating partners with secure attachment styles, than were participants primed with an insecure attachment style. Participants primed with an avoidant attachment style were more attracted to dating partners with an avoidant attachment style. Participants primed with an anxious-ambivalent attachment style did not show more attraction to an anxious-ambivalent dating partner, but they were *more* attracted to these partners than were participants primed with an avoidant style. Thus the accessibility of attachment models influenced dating preferences. Further, this suggests that relationship-specific models can be made salient through priming (Baldwin et al.,

1996).

1.6.3 The Structure of Working Models.

According to Collins and Read (1994), there are three characteristics of an attachment model that can determine whether that model is activated in a given situation: model strength, matching of features and model specificity. Model specificity was described in detail above. According to Collins and Read (1994), relationship-specific models should receive activation over general models. For example, a student may have failed an exam and turned to an available friend to discuss the situation. The potential attachment models that could guide the student's cognitions and behaviour are a relationship-specific attachment model to his best friend or a general peer attachment model. Although both models are similar, (i.e., both have a peer as the attachment figure), the relationship-specific model should receive heightened activation over the general model and govern the student's behaviour, cognitions and emotions in interacting with the friend.

Model strength. According to Collins and Read, the strength of an attachment model is based on (a) the amount of attachment-related experiences that constitutes the content of the model, (b) the number of previous applications of the model, (c) the centrality of the model in the network, and (d) the density of interconnections between the model and others in the network. Elements of this definition of model strength are consistent with the way in which cognitive psychology refers to the strength of cognitive constructs. For example, Martindale (1981; Martindale & Moore, 1988) describes how cognitive units differ in strength, which he bases on how frequently the stimuli are encountered (Martindale, 1981; Martindale & Moore, 1988). Model strength is also associated with the length of time that a model has had to develop (Collins & Read, 1994). In young adulthood, relationship-specific parent models should be the strongest models in the network because of the amount of experiences on which the models are based (Collins & Read, 1994). Further, the content of parent models should be very detailed and elaborated compared to that of relationship-specific peer models. Furthermore, undisrupted parent models (i.e., those that have involved no loss or dissolution of the relationship) should be more complex and differentiated because of the length of time that the models have had to develop (e.g., approximately between 18-25 years) compared to a romantic partner model, which is based on a shorter length of time. In cognitive terms, the strength

of a construct determines information processing. For example, Martindale and Moore (1988) suggest that stronger cognitive units facilitate the detection of stimuli associated with the unit (Martindale & Moore, 1988).

Matching of features. According to Collins and Read (1994), an attachment model is more likely to be activated if the characteristics of the current interaction, the nature of the relationship between the people in the interaction and the goal of the current interaction match the characteristics, nature and goals of the attachment model. Psychoanalytic-based research provides support for this claim. Andersen and colleagues (Andersen & Glassman, 1996; Andersen, Reznik, & Chen, 1997; Chen & Andersen, 1999) found that the mental representation of a family member (e.g., father) was used when responding to new people who resembled (i.e., physically or behaviourally) the family member. The *transference* of interaction patterns associated with one significant other onto a new person may occur when relevant cues of the current situation trigger the activation of representations of similar experiences of the same situation with a significant other (Andersen & Miranda, 2000). This pattern of transference has been found when participants desired emotional closeness with the new person (Andersen et al., 1997). Relatedly, Shaver, Collins, and Clark (1996) suggest that the similarity in views of two relationships is enhanced when aspects of each relationship are similar in function and structure. As an example, a student-counsellor relationship and parent-child attachment are similar *in structure*, as both have an authority figure (the counsellor and the parent), and are similar *in function*, as the authority figure may act as a safe haven and secure base (Larose et al., 2001).

Collins and Read (1994) proposed that model strength, specificity and matching of features might determine model activation. Based on these three features, the attachment model that is most applicable (i.e., most likely to be activated and applied to the new situation) will guide attachment behaviours in ambiguous attachment-related situations. Because parental models are the most central, elaborated, and densely connected in the network, it is likely that these models will be applied to newly developing relationships (Collins & Read, 1994). However, parental models will not be the only influences, or possible guides for attachment or caregiving behaviour in adulthood (e.g., Overall et al., 2003).

Summary of Section 1.6.

In support of Collins and Read's (1994) hierarchy of attachment models, research

suggests that adults hold attachment models that vary from general to relationship-specific and relationship-specific attachment models that vary in attachment security. The research reviewed above has highlighted the existence of multiple attachment figures and their influence on general and relationship-specific models of attachment; however, research has yet to address the way in which multiple attachment models influence general and relationship-specific models of caregiving. Further, so far there has been little explanation for why certain relationship-specific models have a greater influence in shaping young adults' attachment models than others do. Using the structural features outlined above, this thesis aims to examine whether these features can explain which models are more likely to shape young adults' attachment and caregiving experiences.

1.7 Aims of Thesis

This thesis will address the questions raised in sections 1.5 and 1.6 of this chapter. Of particular interest is caregiving in young adulthood towards romantic partners and close friends and the way in which previous and current experiences of receiving care shape the construction of working models of caregiving. The first aim (Chapter 2) is to explore the ways in which romantic caregiving may shape a support-seeker's view of the self and their relationship. This chapter builds on previous self-report and observational studies of romantic caregiving that have revealed attachment style differences in the use of attachment and caregiving behaviours by examining attachment style differences in *reactions* to receiving care. The second aim (Chapters 3 to 5) is to examine how models of received care shape models of caregiving. These chapters build on the research that has demonstrated that (a) young adults have several available attachment figures, namely parents, friends, siblings and romantic partners, and (b) relationship-specific attachment models shape general attachment models. I explore whether the structural features and strength of the relationship-specific models moderate the influence of those models on general and relationship-specific models of romantic caregiving.

CHAPTER 2

Romantic Caregiving: Its Effects on Emotional Well-Being, Self-esteem and Relationship Satisfaction

"For a relationship between any two individuals to proceed harmoniously each must be aware of the other's point-of-view, his goals, feelings, and intentions, and each must adjust his own behavior that some alignment of goals is negotiated."

(Bowlby, 1988, p. 131).

2.0 Chapter Overview

Chapter 2 addresses the effect of caregiving on young adults' emotional well-being and views of the self and their romantic relationship. As Chapter 1 has shown, caregiving from primary attachment figures plays a significant role in forming individual differences in relationship functioning. Some children receive responsive care from their attachment figures, who provide them with a secure base. Other children experience rejections, inconsistent care, or neglect and are provided with an insecure base. These children subsequently develop non-optimal strategies to obtain felt security from their attachment figures (Crittenden, 1997). Such strategies are functional in the environment in which they emerge but are less optimal in other relationships and result in maladaptive modes of interpreting their own and others' emotions. In young adulthood, romantic partners act as primary attachment figures (Hazan & Zeifman, 1994; Trinke & Bartholomew, 1997); thus, exploring the effect of their caregiving can further our understanding of how attachment orientation is maintained or changed over the lifespan. This study employs an observational method to examine behaviourally how romantic caregiving affects the emotional well-being, self-esteem and relationship satisfaction of young adults of different attachment orientations in a sample of romantic couples; this is an understudied area.

Research has shown attachment orientation differences in self-reports and observations of adults' attachment and caregiving behaviours (e.g., Carnelley et al., 1996;

Collins & B. C. Feeney, 2000; Fraley & Shaver, 1998; Kunce & Shaver, 1994; Rholes et al., 1998; Simpson et al., 1992; Simpson et al., 2002), and perceptions of others' behaviour (e.g., Collins, 1996; Mikulincer, 1998). However, despite researchers (e.g., Pietromonaco & Feldman Barrett, 1997) highlighting the need to examine individuals' immediate reactions following social interactions, research has tended to focus on retrospective, self-reports or diary studies. Relatively little research (e.g., Collins & B.C. Feeney, 2000; Simpson et al., 1992) has focused on the outcome of behavioural interactions for the support-seeker (e.g., change in positive affect, Collins & B.C. Feeney, 2000), and evidence of attachment style differences in reactions to received support is limited (cf. anxiety/fear, Simpson et al., 1992). The current study extends this research to examine other consequences of received support (i.e., evaluations of self and relationship).

The first study in this thesis addresses the following research questions: Does romantic caregiving have an effect on young adults' emotional well-being, self-esteem and relationship satisfaction? Further, does attachment orientation moderate the effect of romantic caregiving on changes in positive and negative affect, self-esteem and relationship satisfaction following a problem discussion. Two measures of caregiving were assessed: perceived support and observer-rated caregiving.

2.1 Attachment Differences in Support-Seeking

Bowlby (1982) stressed the importance of a secure attachment bond between infant and primary caregiver for establishing psychological and physical well-being; sensitive and responsive care by the attachment figure fosters a secure bond (e.g., Schaffer & Emerson 1964). Indeed, a secure attachment bond can act as a psychological buffer against negative experiences throughout the lifespan. A secure attachment bond encourages an individual to seek proximity to his or her attachment figure when ill, threatened, or distressed in order to re-establish felt security (Bowlby, 1982). Any experience that heightens negative affect is likely to activate the attachment behavioural system and the strategies used to acknowledge and regulate emotional distress, such as crying to alert the attachment figure (Kobak & Sceery, 1988). The daily stressors faced by young adults, such as interpersonal difficulties, health

problems, and financial worries, may be the kinds of experiences that heighten negative affect in adulthood. Heightened negative affect and the display of attachment behaviours should activate the attachment figure's caregiving system both in infant-parent (George & Solomon, 1999) and adult-adult relationships (e.g., Crowell et al., 2002).

Nevertheless, individual differences exist in the activation of attachment and caregiving systems (George & Solomon, 1999), and in attachment and caregiving behaviours (e.g., Collins & B.C. Feeney, 2000; B. C. Feeney & Collins, 2001). As reviewed in detail in Chapter 1, these differences are learned in early experiences with parents (e.g., George & Solomon, 1999) and are maintained within a working model (Bowlby, 1982). These models are mental representations of expectations and affect concerning the self in interaction with the attachment figure (Bowlby, 1980; Collins & Read, 1994) and the implications of the attachment figure's response to attachment needs for one's acceptance, self-worth and self-efficacy (Bretherton, 1987). These models bias the processing of relational information to guide thoughts, emotions, and behaviour in ways consistent with prior expectations (e.g., Collins, 1996). Because of this, the different attachment styles tend to regulate and express their attachment needs in systematic ways.

Secure individuals (low anxiety and avoidance) report feeling accepted and worthy of care because their attachment figures have generally been available and responsive. They acknowledge and cope with distress using internal (i.e., positive self-view) or external (e.g., their attachment figures) resources (Simpson & Rholes, 1994) and are comfortable seeking support when distressed (e.g., Mikulincer & Florian, 1995; Mikulincer, Florian, & Weller, 1993). *Dismissing* individuals (low anxiety/high avoidance; either *'secure'* or *'avoidant'* in three-category scheme) are somewhat defensive following experiences of repeated rejection by attachment figures, and report feeling uncomfortable with closeness (e.g., Bartholomew & Horowitz, 1991). They are less likely to use others for support when distressed (e.g., Mikulincer et al., 1993) and are extremely self-sufficient. Dismissing individuals deactivate their attachment systems, implying that their attachment needs are unacknowledged. Further, they appear to suppress negative emotions (Mikulincer & Florian, 1995). *Preoccupied* individuals (high anxiety/low avoidance; *'anxious-ambivalent'* in three-category scheme)

report a history of inconsistent and insensitive care (Bartholomew, 1990) and fear that attachment figures will be unavailable. Preoccupied individuals have hyper-activated attachment systems (Mikulincer & Florian, 2001; Simpson & Rholes, 1994). They acknowledge their attachment needs, have an inability to suppress negative emotions (Bartholomew, Cobb, & Poole, 1997; Mikulincer, 1998), maintain close contact with attachment figures, and are as likely as secures to seek support when distressed (e.g., Mikulincer & Florian, 1995). Finally, *fearful* individuals (high anxiety and avoidance; '*avoidant*' in three-category scheme) report experiences of repeated rejection by uncaring or unavailable attachment figures (Bartholomew, 1990). Fearful individuals report desiring closeness to others, but fear rejection, and so maintain their distance. In terms of negative emotions, fearful individuals fall between dismissing and preoccupied individuals: They defend the self from experiences that might cause distress (e.g., emotional distancing), yet are unable to suppress fully their negative emotions.

The way in which support-seekers' attachment orientation may influence their reactions to perceived support and caregiving is likely to be influenced by two further aspects of the caregiving interaction: whether the support-seekers' attachment system has been activated and the contingency between expectations of support and actual caregiving.

2.1.1 Activating the attachment system.

In order to activate the attachment system, romantic couples are placed in a manipulated stressful situation, such as a conflict-resolution task or anxiety-provoking situation. Simpson and his colleagues (Simpson et al., 1992; Simpson et al., 2002; Rholes et al., 1998) examined dating couples in an anxiety-provoking situation. Simpson et al. (1992) found that increases in observer-rated anxiety were associated with more secure women seeking more care and more avoidant women seeking less care; further, as anxiety increased more secure partners provided more care and more avoidant partners provided less care. Collins and B.C. Feeney (2000) observed dating couples as they discussed a personal concern of one partner (the support-seeker). Support-seekers high in avoidance sought low levels of support regardless of the level of their stress and used more indirect support-seeking behaviours (e.g., hinting). In contrast, support-seekers low in avoidance sought more support

when their concern was more stressful, and less support when their concern was less stressful (Collins & B.C. Feeney, 2000).

The above studies highlight the importance of considering how distressed the support-seeker is when he or she is seeking support; the level of perceived distress. One study by Simpson et al. (2002) had one member of dating couples take part in an anxiety-provoking situation, and then the couple was videotaped for 5 minutes. Results showed that, whereas female caregivers showed attachment orientation differences in support provision, there was a lack of significant results for the men's support-seeking. Simpson et al. suggested that this lack of results may have been because the 5-minute observation did not necessarily reflect a severely distressing situation; in more distressing circumstances, romantic attachment orientation may have a more direct influence on (men's) support-seeking (Simpson et al., 2002). Following this, I would expect that if attachment orientation does moderate the effect of romantic caregiving, attachment style differences would be most evident when the support-seeker is more distressed because his or her attachment system is more likely to have been activated.

2.1.2 Attachment orientation differences in expectations of caregiving.

Generally, responsive care accompanies direct support-seeking (e.g., emotional disclosure), and unresponsive care accompanies indirect support-seeking (e.g., hinting, sulking; Collins & B.C. Feeney, 2000). Despite these patterns, individuals of different attachment orientations have different expectations of their attachment figures' availability and the quality of care they are likely to receive. When attachment style expectations of caregiving and actual caregiving are not complementary, problems may arise. In a self-report study of spousal caregiving (J. A. Feeney & Hohaus, 2001), when one spouse required extra care (e.g., following a family bereavement), their attachment style influenced their reaction to the care they received. For husbands high in comfort with closeness (i.e., low avoidance), the extra care brought the couple closer together, but for husbands high in attachment anxiety, extra caregiving created further problems. Thus, it may be that for caregiving to be effective in re-establishing felt security, it should be tailored to complement the support-seeker's attachment orientation (see also Barbee & Cunningham, 1995). J. A. Feeney and Hohaus's

(2001) study suggests that responsive caregiving may sometimes aggravate rather than alleviate support-seekers' needs. Indeed, Simpson et al. (1992) suggest that different types of support may be more effective for support-seekers of different attachment styles: verbal support as opposed to physical contact may be most effective for avoidant support-seekers, and knowledge of a partner's emotional availability and responsiveness may be most effective for secure support-seekers. Individual differences in the expectations of others' availability to provide care, and the ability to manage one's own distress may imply that some individuals may prefer some types of caregiving than others. For example, Rholes et al. (1998) found that highly avoidant women were the most resistant to close bodily contact during an interaction and Simpson et al. (1992) found that highly avoidant women were more likely to pull away from their partners when facing a stressful task.

In summary, the above review highlights the attachment style differences in how individuals cope with the activation of their attachment systems. The level of distress (or anxiety) that the support-seeker is experiencing influences their support-seeking behaviour and depending upon his or her partner's attachment orientation, the care he or she receives. Further, there is evidence to suggest that caregiving has different effects on the support-seeker based on the support-seeker's level of distress and attachment orientation (e.g., Rholes et al., 1998). With this in mind, I now discuss the previous research that provides some indication of how attachment orientation may moderate responses to perceived support and caregiving. To identify these responses, research examining caregiving and other partner behaviour is reviewed.

2.2 Attachment Differences in Response to Caregiving and Other Partner Behaviours

Attachment orientation should moderate reactions to caregiving because attachment-relevant information appears to be processed consistent with previous experiences and prior expectations. For instance, individuals who have had available attachment figures report higher levels of perceived support (e.g., Kobak & Sceery, 1988). Women taking part in a high-stress task evaluated the supportiveness of reassuring notes, supposedly written by their

mothers, consistent with their prior expectations of their mothers (Pierce, Sarason, & Sarason, 1992). Although all women received exactly the same notes, women who expected their mothers to be supportive and less conflictual before the task, evaluated the notes as being more supportive than women who expected their mothers to be less supportive and more conflictual. More recently, Collins and B. C. Feeney (2004) found that secure and insecure participants perceived the same low-in-support note, supposedly written by their romantic partner, differently. Fearful and dismissing participants were more likely to perceive the note as inconsiderate, upsetting and that their partner had purposefully intended to hurt them. Preoccupied participants were more likely to perceive the note as inconsiderate and upsetting (Collins & B. C. Feeney, 2004). Indeed, individuals' expectations of others bias perceptions and influence reactions to partners. Collins (1996) demonstrated this in two self-report studies exploring reactions to hypothetical and actual dating partners' potentially negative behaviours (e.g., partner did not respond to a cuddle). Individuals high in anxiety about their relationships (akin to attachment anxiety) perceived partners' behaviour as intentional, a sign of rejection, and affecting the relationship. They were also more likely to report emotional distress and nervousness. Individuals who were comfortable with closeness (akin to low scores on avoidance) were less likely to attribute their partners' behaviour to the self or the relationship, minimized the negative impact of their partners' behaviour, had positive beliefs about the security of their relationships and were less likely to respond with strong emotions.

Attachment orientation also influences and moderates reactions to other types of partner behaviour. For example, research (e.g., Brennan & Bosson, 1998; Carnelley, Israel, & Brennan, 2005) has examined self-reports of individuals' typical reactions to self-relevant feedback from romantic partners. Generally, secure individuals report the fewest negative reactions (e.g., pain, self-doubt, vulnerability) to feedback, and highly anxious individuals (particularly fearful individuals) report the most negative reactions (Brennan & Bosson, 1998; Carnelley et al., 2005b). Secure and preoccupied individuals report the most positive reactions (e.g., happiness, acceptance, satisfaction) and dismissing individuals report indifferent reactions (e.g., downplay the importance of feedback; Brennan & Bosson, 1998). This research suggests probable responses to caregiving; few researchers have empirically explored

how attachment styles moderate reactions to caregiving in terms of evaluations of the self and relationship, and emotional well-being.

In view of the above, I sought to examine whether support-seekers' attachment orientation moderated their *reactions* to perceived support and to observer-rated measures of partners' caregiving. Reactions were assessed in terms of change between pre- and post-interaction measures of emotional well-being (positive and negative affect), evaluations of the self (self-esteem) and relationship (relationship satisfaction). Romantic couples took part in a 10-minute problem discussion (Pasch & Bradbury, 1998) in which one partner (the support-seeker) sought support for a personal problem from his or her partner (the caregiver). These interactions were videotaped and coded for caregiving. Below, I summarize how perceived support and caregiving may affect support-seekers' positive and negative affect, self-esteem and relationship satisfaction and outline the main hypotheses and further research questions.

2.2.1 Affect.

Research suggests that a supportive interaction has short-term benefits for an individual's emotional well-being, such as reducing the distress caused by a daily stressor. Collins and B. C. Feeney (2000) found that support-seekers' mood was more positive following a problem discussion when caregivers' behaviour was rated as supportive by the support-seeker, the caregiver, and a trained observer; although there were no attachment style differences in change in positive mood as a function of the type of care received (see also Mikulincer & Florian, 1997). Similarly, Simpson et al. (1992) observed that women awaiting an anxiety-provoking situation were more calmed and reassured when their partners made more supportive comments. Normatively, once felt security is re-established, emotional well-being should be ameliorated, as the attachment system should be in the process of deactivation. Thus, I expected that perceived support and observer-rated quality caregiving would predict improved emotional well-being (defined as increased positive affect or decreased negative affect) for support-seekers following a problem discussion task (*Hypothesis 1*).

Furthermore, Simpson et al. (1992) found that the calming effect, reported above, was greater for women who were more avoidant. Rholes et al. (1998) also found that attachment

orientation influenced support-seekers' emotional state. Rholes et al. observed dating couples while they discussed a major or a minor unresolved problem, a potentially conflictual interaction. Partners high on anxious-ambivalence reported more distress during the discussion, were observed to show more stress and anxiety, and more anger and hostility following the discussion, particularly those in the major conflict-resolution condition. In addition, they also reported perceptions of partner and relationship that were more negative following the discussion.

Self-report studies also provide evidence of attachment style differences in emotional well-being during daily activities. Pietromonaco and Feldman Barrett (1997) found that following their daily social interactions, preoccupied individuals reported more positive emotions compared to dismissing individuals, and dismissing individuals reported fewer positive emotions than fearful individuals, and more negative emotions than secure individuals. More specific to the present study, Collins (1996) found attachment style differences in participants' responses to a romantic partner's negative behaviour. Secure individuals were less likely to respond with strong negative emotions; preoccupied individuals reported exaggerated negative emotions, had stronger negative emotional responses and were more likely to experience distress and nervousness, (partly because they attributed the negative behaviour to the self and their relationship; Collins, 1996); and avoidant individuals denied feeling distressed, and were more likely to report feeling unemotional (Collins, 1996). Similarly, highly avoidant men reported less emotional distress following the break-up of a dating relationship (Simpson, 1990).

Thus, because of individual differences in the activation and deactivation of the attachment system, I expected support-seekers' attachment orientation to *moderate* the effect of perceived support and caregiving on change in emotional well-being. I predicted that the emotional well-being of support-seekers high in attachment anxiety (i.e., preoccupied and fearful individuals) would be most reactive (i.e., report the greatest amount of change) to perceived support and caregiving, followed by secure support-seekers, with dismissing support-seekers reporting the least amount of change in emotional well-being (*Hypothesis 2*). Fearful and preoccupied support-seekers were expected to show the greatest change in their

emotional well-being because of their inability to suppress their negative emotions once their attachment system has been activated. Dismissing support-seekers were expected to report the least amount of change in emotional well-being because of their ability to suppress their negative emotions.

2.2.2 Self-esteem.

Because self-esteem and the model of the self are overlapping constructs (see Cozzarelli, Hoekstra & Bylsma, 2000), it is probable that when caregiving confirms or disconfirms one's self-view, short-term fluctuations in self-esteem may occur; further, these fluctuations may vary by attachment orientation. To understand why and in which direction change in self-esteem should occur, it is considered useful to examine the sources of self-esteem for each attachment style.

The self-esteem of individuals low in attachment anxiety (secure and dismissing individuals) is thought to be largely internalised because these individuals feel that their acceptance by others is unconditional (Bartholomew, 1990; see also Murray, Holmes & Griffin, 2000); however, the self-esteem of secure and dismissing individuals is derived from different sources. Brennan and Bosson (1998) found that dismissing individuals derive their self-esteem from competence-based sources (e.g., autonomy and environmental mastery), but their self-esteem is not influenced by partner feedback. Thus, although perceived supportiveness and quality caregiving may challenge their autonomy (e.g., the ability to solve their problem independently), the self-esteem of dismissing support-seekers may not be affected by perceived support or caregiving. Consistent with this, Carnelley et al. (2005b) found that dismissing participants who received negative partner feedback reported similar levels of self-esteem as those who received positive feedback. However, other research suggests that dismissing support-seekers' self-esteem may decline following the problem discussion. In a diary study, Pietromonaco and Feldman Barrett (1997) found that dismissing individuals showed a tendency to report lower self-esteem than did secure individuals following high-conflict situations.

Secure individuals derive their self-esteem mainly from socially-based sources (e.g., satisfying relationships) and to a lesser extent autonomy (Brennan & Bosson, 1998). Thus,

secure support-seekers may report declines in self-esteem if they perceive their partner to be unsupportive or receive poor quality care; however, secure individuals tend not to attribute partners' negative behaviour to the self (Collins, 1996). Thus, like the dismissing support-seekers, their self-esteem may not be affected by perceived support or caregiving. Indeed, Carnelley et al. (2005b) found that secure individuals who received negative feedback reported similar levels of self-esteem as those who received positive feedback.

Individuals high in attachment anxiety are thought to rely on the ongoing acceptance of others to confirm their self-esteem (Bartholomew, 1990); however, external validation of the self is particularly distressing for these individuals. For example, they report negative reactions to partner feedback (Brennan & Bosson, 1998; Carnelley et al., 2005b). Thus, support-seekers high in attachment anxiety may use their perceptions of support and caregiving to confirm their self-esteem. However, preoccupied and fearful individuals are thought to derive their self-esteem from different sources. Brennan and Bosson (1998) found that preoccupied individuals' self-esteem is inversely related to competence-based sources (cf. Brennan & Morris, 1997). In support of this, Carnelley et al. (2005b) found that after receiving manipulated negative partner feedback (i.e., a personally threatening behaviour), preoccupied individuals reported lowered self-esteem. Fearful individuals, according to Brennan and Bosson (1998), possess low self-esteem due to their lack of positive relations with others (as well as low autonomy). Thus, like preoccupied support-seekers, perceptions of less support and poor quality caregiving may lead to reports of lower self-esteem for fearful support-seekers. However, Carnelley et al. failed to find that fearful individuals' self-esteem dropped as a function of negative partner feedback.

Even though none of the studies reported above assessed the effects of caregiving directly, based on this review of attachment style differences in the sources of self-esteem and reactions to positive or negative partner feedback, it is unclear how attachment orientation will moderate the effect of perceived support or caregiving on change in self-esteem following the problem discussion. To corroborate the above, Pietromonaco and Feldman Barrett (1997) found that preoccupied individuals reported less decline in self-esteem compared to secure, dismissing, and fearful individuals following high conflict interactions, which most likely

contain negative behaviours toward the individual. Thus, rather than make strong predictions regarding how attachment style will moderate perceived support or caregiving, I pose the following research questions. Does perceived support or caregiving have an affect on support-seekers' change in self-esteem following a problem discussion (*Research Question 2a*)? This question has not been directly addressed by previous adult attachment research. If perceived support and caregiving do have an effect, do secure and insecure (preoccupied, dismissing, fearful) support-seekers' differ in their change in self-esteem (*Research Question 2b*)? Based on the differences in their sources of self-esteem, I would expect support-seekers of the three insecure attachment styles to show greater reactivity to perceived support and caregiving compared to secure support-seekers.

2.2.3 Relationship satisfaction.

Relationship satisfaction appears to be partially contingent upon partner's caregiving (Carnelley et al., 1996). Collins and B. C. Feeney (2000) found that partners with greater pre-interaction relationship satisfaction reported, and were observed to have, more supportive and caring interactions in a problem discussion task (Collins & B. C. Feeney, 2000). Although Collins and B. C. Feeney's result was not based on pre- and post-interaction measures, I expected that perceived support and quality caregiving would predict greater relationship satisfaction following the problem discussion (*Hypothesis 3*).

Moreover, research suggests that attachment orientation may moderate an individual's reactivity to their partner's behaviour. In a diary study, J. A. Feeney (2002) examined the impact of one spouse's positive and negative behaviours (e.g., "got angry and wouldn't tell me why") on the other spouse's marital satisfaction. Fearful husbands and wives had higher daily marital satisfaction ratings the more positive behaviours they experienced with their spouse, and preoccupied husbands, dismissing husbands and wives, and fearful wives had lower daily marital satisfaction ratings the more negative behaviours they experienced with their spouse. In comparison, preoccupied wives and secure husbands and wives had moderate fluctuations in their daily marital satisfaction based on their spouses' behaviour. That is, the marital satisfaction of insecure spouses (except preoccupied wives) showed the greatest fluctuations; their marital satisfaction was most reactive to their spouses' behaviour, with fearful spouses'

satisfaction fluctuating both positively and negatively congruent with their spouses' behaviours.

Thus, in line with J. A. Feeney's (2002) findings, support-seekers' attachment style was expected to moderate the effect of perceived support or caregiving on change in relationship satisfaction (*Hypothesis 4*). Specifically, when support-seekers perceived supportiveness or received quality care, I expected the relationship satisfaction of fearful support-seekers to be most reactive to perceived support and caregiving and that of secure support-seekers to be the least reactive. When support-seekers perceived their partner to be less supportive or received poor quality care, I expected the relationship satisfaction of fearful, dismissing and preoccupied support-seekers to be most reactive and that of secure support-seekers to be the least reactive.

2.3 Overview of Study

This study is based on the secondary analysis of data collected at Cardiff University by Dr. Carnelley and her colleagues. In conducting this analysis, I was able to address several shortfalls of previous research. First, Collins and B. C. Feeney (2000) assessed mood using a composite scale of both positive (e.g., happy) and negative items (e.g., disappointed) whereas two separate dimensions are thought to underlie emotional experience: positive and negative affect (Watson, Clark & Tellegen, 1988). The present study examined positive and negative affect separately; this is important because Mikulincer and Florian (1997) suggest that alleviating a source of upset (i.e., negative affect) may not lead to an increase in positive affect. Further, previous research failed to examine pre- and post-interaction measures of affect (e.g., Simpson et al., 1992; Rholes et al., 1998), assessed relationship satisfaction only before the couple's interaction (Collins & B.C. Feeney, 2000), assessed relationship satisfaction with retrospective self-reports (Carnelley et al., 1996; J.A. Feeney, 1996) or did not explicitly distinguish support-seeking and caregiving behaviours (J. A. Feeney, 2002). Thus, previous research was extended by the inclusion of pre- and post-interaction measures that allowed for the effect of perceived support and caregiving on change in emotional well-being, self-esteem and relationship satisfaction to be examined.

In addition to the research questions and hypotheses stated above, I also expected attachment style differences in the effect of perceived support and caregiving on change in emotional well-being, self-esteem and relationship satisfaction to be most evident when support-seekers' attachment systems were more likely to have been activated (i.e., when they discussed a problem they perceived to be distressing) (*Hypothesis 5*).

Method

2.3.1 Participants.

The original sample consisted of 80 couples who took part in a study of "couples' therapy" at Cardiff University.[1] Couples were recruited by advertisements in the university, local community, and the department's participant pool. Undergraduate psychology students received either course credits or £6 for their participation; non-psychology students received £6. It was necessary for participants to speak English during the study; four couples were excluded from further analyses for not doing so. In addition, five couples did not permit their video data to be used in the study, three couples discussed a fake problem, one couple switched roles during the interaction, two couples' videos were accidentally cut short, one couple's discussion was inaudible, and one couple did not take the discussion seriously.

The final sample consisted of 63 couples. Participants were randomly assigned to the roles of support-seekers and caregivers upon arrival. Support-seekers (31 men, 32 women) were aged 23.2 years (SD = 4.11) on average, were mainly undergraduate students (n = 35, 60%; n = 6 postgraduate students, n = 17 employed non-students; 5 participants had missing data), of European nationality (n = 58, 92%), and heterosexual (n = 60, 95%). Most (n = 40, 64%) support-seekers described their current relationship status as "dating one person seriously," 29% (n = 18) were living with their partner, and 5% were dating their partner casually. Caregivers (29 men, 34 women) were aged 22.8 years (SD = 3.31) on average, were mainly undergraduate students (n = 44, 79%; n = 3 postgraduate students, n = 9 employed non-students; 7 participants had missing data), of European nationality (n = 59, 94%), and

[1] The data presented in this chapter was not collected by the author, but is derived from a larger data set collected by Dr. K. Carnelley. The secondary data analysis, behavioural coding and results presented in this chapter were

heterosexual (n = 58, 92%). The mean length of the couples' relationships was 18.4 months (range = 1 month to 4 years, 10 months; SD = 14.70; 1 couple had missing data).

2.3.2 Pre-interaction Measures.

Participants completed self-report measures and a videotaped interaction as part of a wider research project (see Carnelley et al., 2005b for details). Only those measures and videotaping relevant to the current hypotheses and research questions will be described here.[2]

Demographics. Participants reported their age, gender, relationship status, and sexual orientation.

Attachment. The 36-item Experiences in Close Relationships measure (Brennan et al., 1998) assessed general romantic attachment orientation. The measure has two 18-item dimensions. *Avoidance* (*alpha* = .89) assesses avoidance of intimacy (e.g., "I prefer not to be too close to romantic partners"), and *attachment anxiety* (*alpha* = .89) assesses fear of rejection (e.g., "I worry about being abandoned"). Dimensions were approximately normally distributed (see Table 1), and consistent with previous research (e.g., MacDonald, 1999) were not correlated (r (63) = -.03, *n.s.*). Participants responded on a 7-point scale from 1 (*disagree strongly*) to 7 (*agree strongly*).

2.3.3. Affect, Self-esteem and Relationship Satisfaction.

Participants were instructed to complete the following materials based on how they felt "right now...at the present moment." Descriptions of measures taken will be referred to as those taken *pre-interaction* or T1 (i.e., Time 1) and those taken *post-interaction* or T2 (i.e., Time 2).

Affect. The Positive and Negative Affect Scale (Watson et al., 1998) is composed of two 10-item scales. *Positive affect* is associated with enthusiasm and activeness (e.g., excited), and *negative affect* is associated with distress and unpleasurable engagement (e.g., hostile; Watson et al., 1988). Participants rated each item on a 5-point scale, from 1 (*very slightly / not at all)* to 5 (*extremely*). Alphas for positive affect were .83 (T1) and .84 (T2), and for negative affect were .77 (T1) and .81 (T2). Watson et al. found a weak negative correlation between the

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all conducted by the author.

[2] See Appendix A for all measures used in Chapter 2.

two scales (r = -.09), and the current study replicated this (T1 r = .04, *n.s.*; T2 r = -.01, *n.s.*).

Self-esteem. Global self-esteem was assessed using the Rosenberg (1965) 10-item self-esteem inventory that has high reliability (internal consistency and test-retest) and validity (convergent and discriminate). Participants rated each item (e.g., On the whole, I am satisfied with myself) on a 4-point scale from 1 (*strongly agree*) to 4 (*strongly disagree*). Item ratings were averaged; alphas were .90 (T1) and .93 (T2).

Relationship satisfaction. The relationship satisfaction subscale of the Perceived Relationship Quality Component Inventory (Fletcher, Simpson, & Thomas, 2000) consists of three items (e.g., How satisfied are you with your relationship?) to which participants responded on a 7-point scale from 1 (*not at all*) to 7 (*extremely*). Item responses were averaged; alphas were .91(T1) and .89 (T2). Fletcher et al. found an alpha of .91.

2.3.4. Post-interaction Measures.

Nature of problem discussed. Support-seekers were asked to identify a recent personal problem that did not concern their current relationship. Problems were mainly academic- (19%), interpersonal- (29%), or employment-related (29%), with the remainder being related to health, money or living arrangements. Support-seekers' gender was not associated with the nature of the problem discussed (χ^2 (6) = 6.20, *n.s.*). Consistent with Collins and B. C. Feeney (2000), there was no association between the nature of the problem and support-seekers' avoidance, F (6, 56) = 0.87, *n.s.*; however, there was a marginal association between support-seekers' (higher scores on) attachment anxiety and the discussion of interpersonal-, health- or money-related problems, F (6, 56) = 2.15, $p < .10$.

Support-seekers indicated whether they had discussed the problem previously with their partner (87% had), and the number of times it had been discussed (M = 6.36 times; SD = 8.25; range: 1 - 50 times). On a 7-point scale from 1 (*not at all*) to 7 (*extremely*), support-seekers rated the degree of importance (M = 5.46, SD = 1.19), distress (M = 4.65, SD = 1.51), positive-ness (M = 3.65, SD = 1.73) and negativity (M = 4.33, SD = 1.74) of their problem. Support-seekers' reports of the personal distress caused by their problem were used as an indicator of whether the attachment behavioural system had been activated during the

interaction.[3] Following Collins and B. C. Feeney's (2000) assumption, I rationalized that the support-seekers' problem would be more distressful when they reported higher values for negativity, distress, and importance of the problem. An index of *perceived distress* was computed by summating the ratings of distress, importance and negativity; higher values indicated greater distress ($M = 4.81$, $SD = 1.10$). This index was not expected to show internal consistency (*alpha* = .58),[4] because high values on one indicator are not necessarily accompanied by high values on the other two indicators. The perceived distress of the problem was not related to the support-seeker's avoidance ($r = .02$, *n.s.*) or attachment anxiety ($r = .22$, *n.s.*). Men ($M = 4.64$) did not differ from women ($M = 4.99$) in their level of perceived distress, $t\ (44) = -1.07$, *n.s.*

Support-seekers' perceptions of support. Using eight specially created questions (Carnelley et al., 2005b), support-seekers' evaluated the overall supportiveness of their partner (the caregiver) during the problem discussion. The questions addressed the caregivers' supportiveness (i.e., How supportive was your partner during the discussion?), understanding of the problem, empathy, listening/attentiveness, responsiveness, understanding of feelings, and usefulness of discussion, and future availability. Item ratings were averaged. After dropping one item (future availability), perception of support had an alpha of .92. High scores on *perceived support* indicate that the support-seeker felt their caregiver was supportive during the problem discussion.

Filler items. To corroborate the cover story, participants completed two questionnaires assessing the usefulness of the therapy task, which are not relevant to the current study.

2.3.5. Procedure.

Couples were taken to a room with two chairs and a small table, on top of which were several magazines and small toys. The video camera was hidden within a stereo speaker, positioned at a raised level. A microphone was hidden behind a plant behind the chairs.

The researcher informed the couple that the goal of the study was to test a new form of

[3] Seventeen participants had missing data on perceived distress.

[4] The correlations between the three indicators of perceived distress were: importance x distress, $r = .69$, $p < .001$, importance x negativity, $r = .05$, *n.s.*, distress x negativity, $r = .29$, $p < .05$. When negativity was removed from the index of *perceived distress*, the alpha was .81.

couple's therapy that would entail an interaction between the couple members. Participants completed an informed consent form. The researcher left the room and the couple was videotaped for approximately one minute to provide a base-line of the couple's interaction. Participants completed the pre-interaction measures and then began the therapy task, as devised by Pasch and Bradbury (1988). One partner (the support-seeker) discussed the personal problem that he or she had described earlier for 10 minutes, whilst the other partner (the caregiver) provided support.

Following the therapy task, the couple was separated to complete the post-interaction measures and spent a few minutes noting the positive aspects of their partner and relationship. Each participant was initially debriefed separately. It was emphasized that the tasks they completed did not constitute therapy, and if required, the researcher could provide information if they wished to pursue therapy. Finally, the couple was reunited and debriefed. Participants were asked for their consent to use the videotapes for research purposes; if they declined, the tape was erased.

2.4. Behavioural Coding of The Couple Interaction

An adapted version of the Interactive Coping Behavior Coding System (ICBCS; Barbee et al., 1993; cited in Barbee & Cunningham, 1995) was used to code caregiving behaviours. This system is one of a pair (the other being the Support Activation Coding Behaviour System) that assesses interactive coping: "*the dynamic behavioral process in which one individual responds verbally and nonverbally, in either helpful or unhelpful ways, to another individual's problem or emotion*" (Barbee & Cunningham, 1995, p. 386). The ICBCS was adapted to include several of the physical behaviour codes of Simpson et al. (1992) in order to capture similar behaviours. Coders first observed the baseline video to get an idea of the couple's typical behaviour. Then each videotaped problem discussion with its transcript was viewed three times to code verbal and nonverbal behaviours. Coders were blind to the attachment styles of the support-seeker and the caregiver. Inter-rater reliability was based on a subset (15%) of the tapes.

2.4.1 Caregiving behaviour.

The ICBCS has two dimensions (problem vs. emotion-focused and approach vs. avoidance of the problem or emotion) that are crossed to create four types of caregiving behaviour (Barbee & Cunningham, 1995). *Approach* behaviours are those that focus on the problem and support-seekers' emotions: *solve* behaviours (problem-focused) include making suggestions and offering new perspectives on the problem; *solace* behaviours (emotion-focused) include paying compliments and empathizing with the support-seeker. *Avoidance* of the problem or emotion behaviours are: *dismiss* behaviours (problem-focused) that include minimizing the support-seeker's problem and making sarcastic comments and *escape* behaviours (emotion-focused) that include showing irritation to the support-seeker or the problem or behaving meanly. Solve and Solace are the most effective helping behaviours and are seen as positive, whereas Dismiss and Escape behaviours are seen as negative (see Barbee & Cunningham, 1995). Observers assigned one tally for each behaviour that was used by the caregiver.

Previous intra-class correlations (ICC) for these four categories of caregiving behaviour ranged from .77 - .95 (Collins & B.C. Feeney, 2000; Gulley, 1993, cited in Barbee & Cunningham, 1995). In this study, ICC for the categories ranged from .96 to .99; however, some of the ICC for individual codes *within* the categories were not high ($n = 3$) and some codes were never used ($n = 7$) or rarely used ($n = 3$; see Appendix B for further details). These codes were dropped from the system. Of the remaining 20 individual codes, 16 had ICC greater than .60.

It was not possible to create the four main categories for the ICBCS because of the small number of remaining codes; however, a way of organizing the behavioural codes was necessary. I considered factor analysing the remaining codes, for each system individually. The individual codes were not expected to hang together well within the factors because they were not designed to be highly correlated with each other (see Collins & B.C. Feeney, 2000); instead the codes represent indicators of an underlying latent structure (Collins & B.C. Feeney, 2000). Following the recommendations of Tabachnick and Fidell (2001), the data was considered inappropriate for factor analysis. The sample size of 63 was small, there were few

sizeable correlations (r = .30) between the valid behavioural codes, and Kaiser's measure of sampling adequacy was not greater than .60, which Tabachnick and Fidell recommend is required for factor analysis.[5, 6]

Therefore, the remaining behavioural codes were used to re-create the two major dimensions: *approach*-based (based on 8 codes) and *avoidant-based* (8 codes) caregiving (from the ICBCS). To prevent confusion with the attachment avoidance dimension, *avoidant*-based caregiving was renamed *escape*-based caregiving. The tallies for each behavioural dimension were summated and averaged. High values for *approach*-based care demonstrate a positive caregiving response: the caregiver asks questions of the support-seeker, offers perspective and solutions to their problem, shows physical affection, is empathic, gives the support-seeker compliments, shows reassurance and faces the support-seeker whilst speaking and listening (demonstrating attentiveness). High values for *escape*-based care demonstrate a negative caregiving response: the caregiver avoids talking about the problem, criticizes the support-seeker or their problem, minimizes the importance of the problem, makes sarcastic comments, acts distracted (e.g., by reading magazines), escapes discussion nonverbally (e.g., by looking around the room) and shows irritation to the support-seeker or his or her problem. Hence, references to quality caregiving imply higher levels of *approach*-based care and lower levels of *escape*-based care.

Results

2.5 Preliminary Analyses

2.5.1 Data cleaning.

All variables were examined for outliers, missing data and skew. Outliers were defined as the mean of the variable ± 3 *SD* (Tabachnick & Fidell, 2001). Where less than 5% of data points were missing, they were replaced with the mean of the variable. Unless otherwise reported, variables had less than 5% missing data. T1 and T2 negative affect were negatively

[5] Correlations between the behavioural codes ranged from r = -.25 to r = .43, $p < .01$. Nine percent of the correlations between the codes were greater than .30.
[6] Kaiser's measure of sampling adequacy was .47.

skewed and were log-10 transformed. T1 and T2 relationship satisfaction were positively skewed and were reflected then log-10 transformed. Because of this, I will refer to the relationship satisfaction measure as *relationship dissatisfaction*. The descriptive statistics of these variables are shown in Table 1.

Table 1

Descriptive statistics for study variables

Variable	*Minimum*	*Maximum*	*Mean (SD)*
Pre-interaction Measures			
1 Positive affect	1.00	4.20	2.86 (0.66)
2 Negative affect	1.00 [0.46]	2.20 [1.00]	1.34 (0.29) [0.78 (0.15)]
3 Self-esteem	1.70	4.00	3.11 (0.52)
4 Relationship dissatisfaction [1]	2.00 [0.00]	7.00 [0.78]	5.87 (1.03) [0.29 (0.19)]
Post-interaction Measures			
5 Positive affect	1.30	4.30	2.93 (0.77)
6 Negative affect	1.00 [0.43]	2.30 [1.00]	1.34 (0.34) [0.79 (0.17)]
7 Self-esteem	1.40	4.00	3.09 (0.59)
8 Relationship dissatisfaction [1]	1.33 [0.00]	7.00 [0.82]	5.93 (1.19) [0.26 (0.21)]
Attachment			
9 Support-seekers' avoidance	1.11	4.72	2.46 (0.89)
10 Support-seekers' anxiety	1.61	5.94	3.56 (0.97)
Observer-rated Caregiving			
11 Approach-based	4.13	30.38	15.42 (5.07)
12 Escape-based	0.00	16.43	6.66 (4.13)
Support-seekers' Perceptions			
13 Perceived support	3.13	7.00	5.66 (0.72)
14 Perceived distress	2.00	7.00	4.81 (1.10)

Note. Transformed values are in square brackets. [1] High log-10 values indicate greater relationship dissatisfaction.

2.5.2 Zero-order Correlations.

To aid interpretation of the hierarchical regression analyses all study variables were correlated (see Table 2). Collins and B. C. Feeney (2000) found that higher post-interaction positive affect was associated with perceived supportiveness and observer-ratings of quality caregiving. Likewise, in this study, support-seekers who reported higher post-interaction

positive affect and lower relationship dissatisfaction were more likely to report greater perceived support, but these outcome variables were not related to observer-rated caregiving. Attachment anxiety and avoidance were not related to perceived support, again, consistent with Collins and B. C. Feeney; however, support-seekers' avoidance was inversely related to *approach*-based caregiving. The partners of support-seekers who were high in avoidance (i.e., dismissing and fearful support-seekers) were observed to employ a less positive style of caregiving.[7]

Table 2

Zero-order correlations of study variables

Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1 T1 Pos.	--	.04	.09	-.09	**.66**	.02	.14	-.11	.03	.08	.09	-.12	.09	-.26
2 T1 Neg.		--	.09	-.15	-.18	**.55**	.12	-.21	**-.25**	**-.26**	-.03	.00	.18	-.09
3 T1 Self-est.			--	-.18	**.29**	**.29**	**.89**	**-.27**	-.06	-.20	.00	.13	.05	**-.51**
4 T1 Rel. Dis.				--	-.21	**-.34**	**-.27**	**.88**	**.47**	-.12	-.05	-.08	**-.44**	.12
5 T2 Pos.					--	-.01	**.39**	**-.29**	.03	.07	.17	-.21	**.29**	**-.39**
6 T2 Neg.						--	**.31**	**-.41**	-.24	-.14	.06	.07	.22	**-.34**
7 T2 Self-est.							--	**-.41**	-.13	-.07	.11	.06	.04	**-.51**
8 T2 Rel. Dis.								--	**.48**	-.19	-.16	-.02	**-.43**	.25
9 Avoidance									--	-.03	**-.34**	.17	-.11	.02
10 Anxiety										--	.01	-.16	.00	.22
11 Approach											--	**-.28**	-.03	-.03
12 Escape												--	-.18	-.09
13 P. Support													--	-.01
14 P. Distress														--

Note. Pos. = Positive affect. Neg. = Negative affect. Self-est. = Self-esteem. Rel. Dis. = Relationship Dissatisfaction. Anxiety = Attachment anxiety. Approach = *Approach*-based caregiving. Escape = *Escape*-based caregiving. P. Support = Perceived support. P. Distress = Perceived distress. Values in bold are significant at $p < .05$ or lower (two-tailed).

[7] The following preliminary analyses are ancillary to the current study. In keeping with other observational research on support-seeking and caregiving, it is useful to examine the consistency of results for perceived support and observer-rated caregiving. Consistent with Collins and B. C. Feeney (2000), support-seekers' attachment anxiety and avoidance were not related to perceived support. Insecure support-seekers were not more likely than secure support-seekers to perceive their partner as supportive or unsupportive. This finding is, however, inconsistent with other self-report research (e.g., Collins, 1996; Collins & B. C. Feeney, 2004; Kobak & Sceery, 1988; Pierce et al., 1992), which has demonstrated that individuals' perceptions of others are related to their prior expectations of others' availability and responsiveness. In addition, perceived support and observer-rated caregiving were not related. That is, support-seekers' perceptions of support were independent of the objective behaviours of their partner. This is inconsistent with Collins and B. C. Feeney (2004) who reported a bottom-up, data-driven process in their participants' reports of perceived support.

2.5.3. Overview of Analyses

The research questions and hypotheses were addressed with hierarchical regression analyses (HRA). The criterion variables were *change* in the measures of support-seekers' positive affect, negative affect, self-esteem and relationship dissatisfaction. To assess *change* in these outcome variables, I predicted the post-interaction (T2) value controlling for the pre-interaction (T1) value, which was entered at Step 1. At Step 2, support-seekers' avoidance and attachment anxiety, and either perceived support, *approach*-based caregiving or *escape*-based caregiving were entered. At Step 3, I entered the two-way interactions between each of the variables in Step 2 (e.g., avoidance X anxiety, avoidance X perceived support, anxiety X perceived support). At Step 4, the three-way interaction between all Step 2 variables was entered. Because of the small sample size ($n = 63$), there was the likelihood of reduced power in the HRA; thus, where the F of change for Steps 5 or 4 was not significant, the HRA was interpreted at Step 4 or 3, respectively. The predictor variables were centred by subtracting the mean from the raw score in order to reduce the effects of multicollinearity between the interaction variables and the variables that create them (Aiken & West, 1996). Simple effects of each predictor variable (relevant to the hypothesis being tested) were computed for significant and marginally significant interactions ($p < .10$) when the change in R^2 and the F of change for the step were both at least marginally significant. For these interactions, the simple slopes of one predictor variable were plotted onto the criterion variable one standard deviation above and below the mean of the other predictor variable (Aiken & West, 1996). A summary of the HRAs is presented below and the betas and t-values for each HRA can be found in Appendix C.

2.5.4. The inclusion of perceived distress as a predictor.

Because of the relatively small sample size, I was hesitant to include perceived distress as a predictor and moderator into the HRAs; its inclusion would increase the number of predictor variables to 15, as opposed to 8 variables. These analyses would potentially be non-significant due to low power; however, the majority of observational studies reviewed earlier, have manipulated, or measured, the severity, anxiety, or distress that the support-seeker

experienced during the couple interaction. Consequently, it was imperative for the analyses in this study to include the perceived distressfulness of the support-seekers' problems as a moderator to ensure that the results held for the different levels of stress in the sample. To be consistent with previous research, and take into account the sample size, I conducted two sets of analyses: one including perceived distress as a moderator, and one without.

2.6 Moderating Effect of Attachment Orientation (Excluding Perceived Distress)

Before discussing the moderating affect of attachment, it is noteworthy to examine the stability between the pre- and post-interaction measures of affect, self-esteem and relationship dissatisfaction. The Step 1 statistics presented in Table 3 show that support-seekers' self-esteem and relationship dissatisfaction remained relatively stable across the interaction, with approximately 80% of the variance in the post-interaction values being accounted for by the pre-interaction levels. In contrast, emotional well-being was more labile, with approximately 50% of the variance in post-interaction positive affect and negative affect accounted for by pre-interaction levels. [8]

[8] See Appendix C Tables 1 to 3 for full details.

Table 3

Summary of hierarchical regression analyses excluding perceived distress

Criterion	Step 1		Step 2		Step 3		Step 4		F of model (Step 4)
	ΔR^2	F of change	ΔR^2	F of change	ΔR^2	F of change	ΔR^2	F of change	
				Perceived Support					
T2 Pos	.43	46.18***	.06	2.16	.00	0.05	.00	0.08	6.49***
T2 Neg	.30	26.34***	.02	0.67	.01	0.16	.01	0.38	3.41**
T2 SE	.78	221.61***	.02	1.82	.01	1.32	.01	2.23	31.45***
T2 RDis	.78	217.14***	.02	1.82	.01	1.06	.00	0.17	28.99***
				Approach-based Caregiving					
T2 Pos	.43	46.18***	.02	0.54	.04	1.29	.03	3.07+	7.05***
T2 Neg	.30	26.34***	.01	0.36	.01	0.19	.02	1.48	3.48**
T2 SE	.78	221.61***	.03	2.65+	.01	0.69	.00	1.21	30.97***
T2 RDis	.78	217.14***	.02	2.33+	.01	1.31	.00	0.41	30.48***
				Escape-based Caregiving					
T2 Pos	.43	46.18***	.02	0.61	.03	0.99	.00	0.26	6.21***
T2 Neg	.30	26.34***	.02	0.52	.01	0.38	.00	0.24	3.42**
T2 SE	.78	221.61***	.02	1.92	.01	1.15	.00	0.34	30.00***
T2 RDis	.78	217.14***	.02	1.39	.01	1.03	.00	0.04	28.12***

Note. T2 Pos = Post-interaction positive affect. T2 Neg = Post-interaction negative affect. T2SE = Post-interaction self-esteem. T2 RDis = Post-interaction relationship dissatisfaction. Step 1 = T1 measure of criterion ($df = 1, 61$). Step 2 = Avoidance, Anxiety, Interaction Feature (i.e., perceived support, observed caregiving, observed support-seeking) ($df = 3, 58$). Step 3 = Avoidance X Anxiety, Avoidance X Feature, Anxiety X Feature ($df = 3, 55$). Step 4 = Avoidance X Anxiety X Feature ($df = 1, 54$). Degrees of freedom of model at Step 4 = 8, 54.
*** $p < .001$. ** $p < .01$. + $p < .10$.

2.6.1 Perceived support.

The HRA predicting change in positive affect, negative affect, self-esteem and relationship dissatisfaction revealed no significant main effects of perceived support (*Hypotheses 1 and 3, Research Question 2a*) or evidence that avoidance or attachment anxiety moderated the effect of perceived support on these outcome variables (*Hypotheses 2 and 4, Research Question 2b*).

2.6.2 Caregiving.

***Approach*-based caregiving.** No support was found for *Hypothesis 1* that observed caregiving would predict support-seekers' emotional well-being. The HRA predicting change

in positive affect did not reveal a main effect of *approach*-based caregiving; however, there was a marginally significant avoidance X anxiety X *approach*-based caregiving interaction at Step 4 (β = .19, t = 1.75, p < .10), providing support for *Hypothesis 2*. Simple effects analysis indicated no significant effect of support-seekers' attachment style (avoidance X anxiety) at low levels of *approach*-based caregiving, (β = -.03, t = -0.26, *n.s.*), but there was an effect at high levels of *approach*-based caregiving (β = .34, t = 1.99, p < .05). Figure 2 shows that fearful support-seekers (high anxiety, high avoidance) reported more positive affect than did preoccupied (high anxiety, low avoidance; $\beta_{avoidance}$ = .59, t = 2.21, p < .05) and dismissing support-seekers (low anxiety, high avoidance; $\beta_{anxiety}$ = .64, t = 2.38, p < .05) after receiving more of this positive style of care. Secure support-seekers (low anxiety, low avoidance) reported similar levels of positive affect to dismissing ($\beta_{anxiety}$ = -.04, t = -0.22, *n.s.*) and preoccupied ($\beta_{anxiety}$ = -.09, t = -0.44, *n.s.*) support-seekers.

An alternative way to interpret this interaction is to examine the effect of caregiving at each attachment style. Fearful support-seekers who received high levels of *approach*-based care reported more positive affect than fearful support-seekers who received lower levels ($\beta_{approach}$ = .68, t = 2.86, p < .01). Secure ($\beta_{approach}$ = .04, t = 0.21, *n.s.*), preoccupied ($\beta_{approach}$ = .07, t = 0.31, *n.s.*) and dismissing ($\beta_{approach}$ = -.11, t = -0.55, *n.s.*) support-seekers reported similar levels of change in positive affect regardless of whether they received high or low levels of *approach*-based care. Succinctly, the positive affect of fearful support-seekers was reactive to the quality of care received, whereas secure, preoccupied and dismissing individuals' positive affect appears to be relatively independent of the caregiving quality during the problem discussion.

Consistent with the results for perceived support, the HRA predicting change in negative affect and change in relationship dissatisfaction revealed no main effects of *approach*-based caregiving, nor moderating effects of avoidance or attachment anxiety. In the HRA predicting change in self-esteem, increased self-esteem was reported by support-seekers high in attachment anxiety (β = .11, t = 1.95, p < .10; ΔR^2 Step 2 = .03, p < .10; F of model at Step 2 (4, 58) = 61.89, p < .001). However, no main effect of *approach*-based caregiving or

moderating effect of avoidance or attachment anxiety was found (*Research Questions 2a and b*).

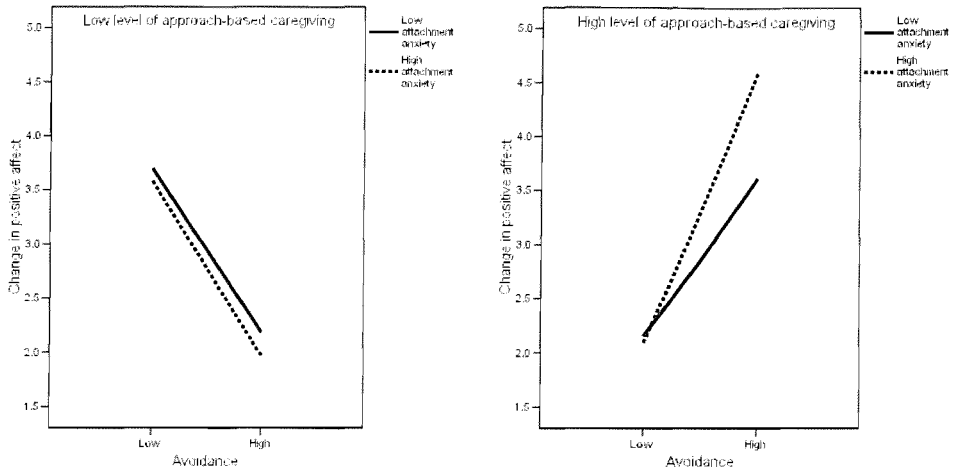

Figure 2. Relationship between support-seekers' avoidance, attachment anxiety and change in positive affect for support-seekers who received high and low levels of *approach*-based caregiving.

***Escape*-based caregiving.** Consistent with the findings reported for perceived support, the HRA predicting change in positive affect, negative affect, self-esteem and relationship dissatisfaction revealed no significant main effects or interactions of avoidance, attachment anxiety and *escape*-based caregiving.

2.6.3 Summary of Moderating Effect of Attachment Orientation (Excluding Perceived Distress)

The above analyses provided little conclusive evidence to address whether perceived support and romantic caregiving has an effect on change in negative affect, self-esteem and relationship dissatisfaction. In addition, there was little evidence to address whether support-seekers' attachment orientation would moderate the effect of perceived support and caregiving on change in negative affect, self-esteem or relationship dissatisfaction. There was evidence of attachment style differences in change in positive affect, but only when support-seekers

received high levels of *approach*-based care (i.e., caregivers were helpful in discussing ways to solve the problem, physically affectionate, empathic, reassuring and attentive). Compared to secure, preoccupied and dismissing support-seekers, fearful support-seekers reported a temporary improvement in their emotional well-being. In addition, there was a within-attachment style effect of *approach*-based caregiving in that fearful support-seekers who received high levels of *approach*-based care reported greater positive affect than did fearful support-seekers who received low levels of this style of care. In contrast, the emotional well-being of secure, dismissing and preoccupied support-seekers was not influenced by the quality of care they received. One possible explanation why attachment orientation failed to moderate perceived support and caregiving is because support-seekers' perceived distress was not taken into account. As summarized in section 2.1.1, support-seekers' level of perceived distress is a proxy for attachment system activation; the greater perceived distress, the more likely that the attachment system has been activated, and hence, the greater likelihood of observing attachment orientation differences in reactions to perceived support and caregiving.

2.7 Moderating Effect of Attachment Orientation and Perceived Distress

An initial problem with including perceived distress as a moderator was that 27% (n = 17) of the support-seekers did not complete the measure to assess perceived distress. By not including these support-seekers, the sample drops to n = 46 creating further problems with low power. Thus, I conducted the set of analyses reported below on the smaller sample and on the larger sample (n = 63) by substituting the mean of perceived distress into the 15 missing data points. In these HRAs, the criterion variables were the same as in Section 2.6. At Step 1, the pre-interaction value of the criterion variable was entered. At Step 2, anxiety, avoidance, perceived support or one of the caregiving values and perceived distress were entered. Step 3 included the 6 two-way interactions, Step 4, the 4 three-way interactions and Step 5 included the four-way interaction of avoidance X anxiety X perceived support *or* caregiving X perceived distress. The results in both sets of analyses were highly comparable (see Appendix E for the results using n = 46); hence, the mean-replaced data will be reported in Table 4. These analyses would address *Hypothesis 5*, which predicted that attachment style differences

in changes in positive affect, negative affect, self-esteem and relationship dissatisfaction would be most evident when the attachment system was likely to have been activated.

Table 4

Summary of hierarchical regression analyses with perceived distress

	Step 1		*Step 2*		*Step 3*		*Step 4*		*Step 5*		*F of model*
Criterion	ΔR^2	*F of change*	ΔR^2	*F of change*	ΔR^2	*F of change*	ΔR^2	*F of change*	ΔR^2	*F of change*	*(Step 5)*
						Perceived Support					
T2 Pos	.43	46.18***	.09	2.57*	.07	1.38	.02	0.59	.01	1.10	4.58***
T2 Neg	.30	26.34***	.09	2.06+	.05	0.81	.01	0.25	.01	0.85	2.49**
T2 SE	.78	221.61***	.03	1.86	.02	1.25	.03	2.35+	.00	0.07	17.88***
T2 RDis	.78	217.14***	.04	3.51*	.05	2.89*	.02	1.82	.01	3.94*	24.59***
						Approach-based Caregiving					
T2 Pos	.43	46.18***	.04	1.19	.08	1.46	.04	1.11	.00	0.07	4.16***
T2 Neg	.30	26.34***	.08	1.77	.07	1.14	.03	0.73	.00	0.04	2.71**
T2 SE	.78	221.61***	.03	2.48*	.02	1.27	.02	1.62	.01	3.61+	19.19***
T2 RDis	.78	217.14***	.05	3.73**	.03	1.87	.02	1.39	.00	0.41	19.88***
						Escape-based Caregiving					
T2 Pos	.43	46.18***	.05	1.38	.07	1.34	.01	0.33	.00	0.09	3.73***
T2 Neg	.30	26.34***	.08	1.86	.05	0.79	.06	1.33	.00	0.03	2.79**
T2 SE	.78	221.61***	.03	1.95	.02	1.02	.05	4.65**	.01	4.22*	22.95***
T2 RDis	.78	217.14***	.04	2.97*	.04	2.62*	.01	0.68	.00	1.32	19.68***

Note. T2 Pos = Post-interaction positive affect. T2 Neg = Post-interaction negative affect. T2SE = Post-interaction self-esteem. T2 RDis = Post-interaction relationship dissatisfaction. Step 1 = T1 measure of criterion (df = 1, 61). Step 2 = Avoidance, Anxiety, Interaction Feature (i.e., perceived support, observed caregiving, observed support-seeking), Perceived Distress (df = 4, 57). Step 3 = Avoidance X Anxiety, Avoidance X Feature, Anxiety X Feature, Avoidance X Distress, Anxiety X Distress, Feature X Distress (df = 6, 51). Step 4 = Avoidance X Anxiety X Feature, Avoidance X Anxiety X Distress, Avoidance X Feature X Distress, Anxiety X Feature X Distress (df = 4, 47). Step 5 = Avoidance X Anxiety X Feature X Distress (df = 1, 46). Degrees of freedom of model at Step 5 = 16, 46.

*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

2.7.1 Perceived support.

In the HRA predicting change in emotional well-being, consistent with *Hypothesis 1*, support-seekers reported increased positive affect when they felt their partner was supportive ($\beta = .24$, $t = 2.63$, $p < .05$) and reported lower perceived distress ($\beta = -.18$, $t = -1.88$, $p < .10$;

ΔR^2 Step 2 = .09, $p < .05$; F of model at Step 2 (5, 57) = 12.25, $p < .001$). Decreased negative affect was also predicted by lower perceived distress (β = -.26, t = -2.47, $p < .05$; ΔR^2 Step 2 = .09, $p < .10$; F of model at Step 2 (5, 57) = 7.28, $p < .001$). Support-seekers' attachment dimensions did not moderate these main effects.

The HRA predicting change in self-esteem revealed two significant interactions (see Appendix D, Table 1). The interaction of the highest order was avoidance X perceived support X perceived distress (β = .15, t = 2.13, $p < .01$; F of model at Step 4 (15, 47) = 19.45, $p < .001$), which addresses *Research Question 2b*, of whether attachment orientation would moderate the effect of perceived support on change in self-esteem. Figure 3 displays the simple slopes of avoidance and perceived support at low and high levels of perceived distress. To examine whether avoidance moderated perceived support, I examined the avoidance X perceived support interaction when perceived distress was high (β = .21, t = 2.04, $p < .05$), and when perceived distress was low (β = -.12, t = -1.24, *n.s.*). That is, in support of *Hypothesis 5*, the effect of perceived support was evident when support-seekers' attachment systems had been activated. When problems were perceived as more distressing and support-seekers had low perceived support, support-seekers high in avoidance reported lower self-esteem than did those low in avoidance ($\beta_{avoidance}$ = -.35, t = -2.27, $p < .05$). In contrast, when problems were more distressing and support-seekers had high perceived support, avoidance did not have an effect on change in self-esteem; support-seekers high and low in avoidance reported similar levels of self-esteem ($\beta_{avoidance}$ = .12, t = 0.92, *n.s.*).

To examine the prediction that attachment differences in the outcome variables would be most evident when support-seekers attachment systems were likely to have been activated (*Hypothesis 5*), I examined the simple effect of perceived distress on avoidance and perceived support. Perceived distress did not have effect on change in self-esteem when support-seekers were high in avoidance and had high perceived support ($\beta_{distress}$ = .22, t = 1.35, *n.s.*), when support-seekers were low in avoidance and had high perceived support ($\beta_{distress}$ = -.04, t = -0.32, *n.s.*) nor when support-seekers were low in avoidance and low in perceived support ($\beta_{distress}$ = -.04, t = -0.27, *n.s.*). However, when support-seekers were high in avoidance and had low perceived support, those with more distressing problems reported lower self-esteem than

those with had less distressing problems ($\beta_{distress}$ = -.51, t = -2.88, p < .01).

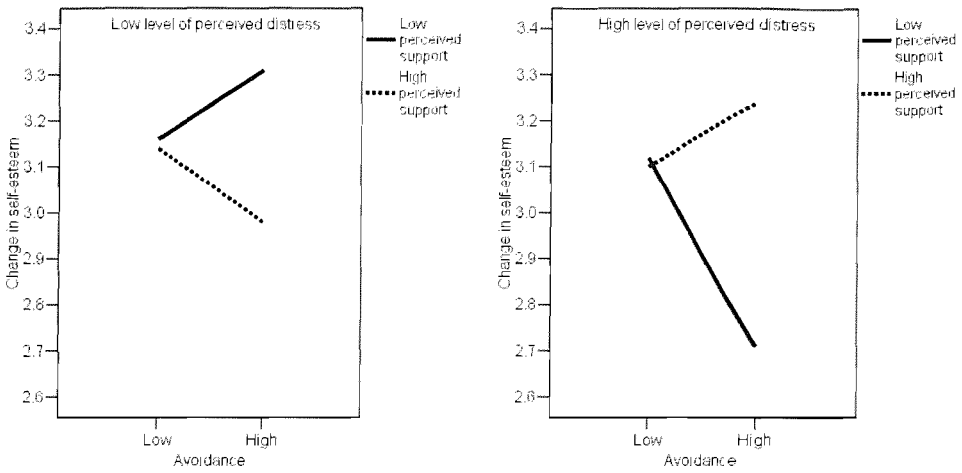

Figure 3. Relationship between support-seekers' avoidance, perceived support and change in self-esteem for support-seekers with high and low levels of perceived distress.

In addition, in predicting change in self-esteem, the avoidance X anxiety X perceived distress interaction was marginally significant (β = -.18, t = -1.79, p < .10). Although this interaction does not directly address a research question, I chose to explore its nature, nevertheless. I first examined whether each attachment orientation moderated perceived distress. Figure 4 displays the simple slopes of avoidance and attachment anxiety at low and high levels of perceived distress. I examined the avoidance X anxiety interaction when perceived distress was high (β = -.20, t = -2.05, p < .05), and when perceived distress was low (β = .07, t = 0.59, *n.s.*), providing further support for *Hypothesis 5*. When perceived distress was high, dismissing support-seekers reported similar levels of change in self-esteem to secure ($\beta_{avoidance}$ = .09, t = 0.67, *n.s.*) and fearful support-seekers ($\beta_{anxiety}$ = -.16, t = -0.99, *n.s.*); however, preoccupied support-seekers reported higher self-esteem than did secure ($\beta_{anxiety}$ = .25, t = 2.71, p < .01) and fearful support-seekers ($\beta_{avoidance}$ = -.32, t = -2.78, p < .01). This finding partially corroborates Pietromonaco and Feldman Barrett (1997) who found that preoccupied individuals reported less decline in self-esteem following high conflict interactions. Thus, it appears that discussing a highly distressing problem with their romantic

partner was a self-enhancing experience for the preoccupied support-seekers, making them feel better about the self. Further, this pattern holds across both high and low levels of perceived support.

To examine whether the attachment style differences in change in self-esteem were affected by the activation of the attachment system, I examined the simple effect of perceived distress for each attachment style. Perceived distress did not have an effect on change in self-esteem for secure ($\beta_{distress}$ = -.06, t = -0.59, *n.s.*) dismissing ($\beta_{distress}$ = .11, t = 0.58, *n.s.*) and preoccupied support-seekers ($\beta_{distress}$ = -.02, t = -0.14, *n.s.*). However, fearful support-seekers with distressing problems reported lower self-esteem than did those with less distressing problems ($\beta_{distress}$ = -.40, t = -2.98, $p < .01$). Thus, whereas the level of self-esteem of secure, dismissing and preoccupied support-seekers was maintained despite their perceived distress, when fearful support-seekers had a more distressing problem their self-esteem was more likely to diminish. Thus, an activated attachment system made the fearful individuals begin to feel bad about the self; a consequence that may be linked to the quality of previous attempts to re-establish felt security being met with rejection.

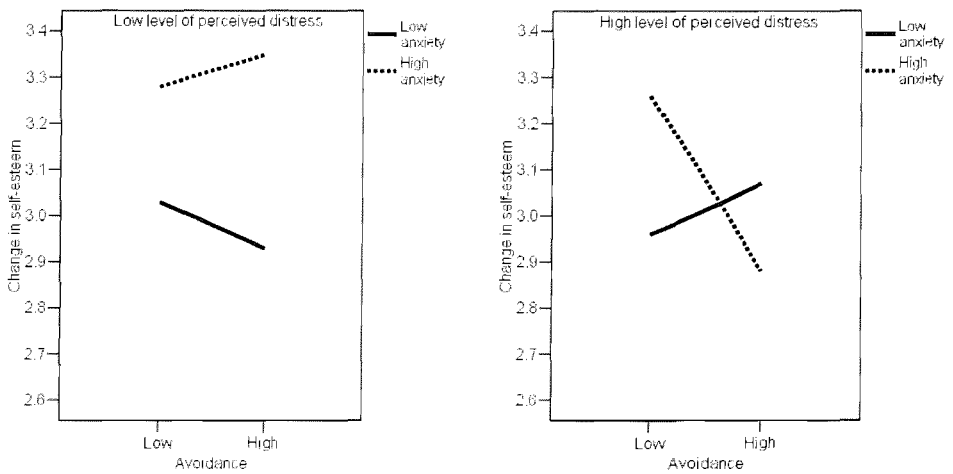

Figure 4. Relationship between support-seekers' avoidance, attachment anxiety and change in self-esteem for support-seekers with high and low levels of perceived distress.

The HRA predicting change in relationship dissatisfaction revealed four significant

interactions; the interaction with the highest order was the avoidance X anxiety X perceived support X perceived distress interaction (β = -.22, t = -1.99, p < .05), providing support for *Hypothesis 4*. I examined whether attachment moderated perceived support (i.e., the avoidance X anxiety X perceived support interaction) when perceived distress was high (β = -.25, t = -1.95, p < .10) and when perceived distress was low (β = .14, t = 1.25, *n.s.*). At high levels of perceived distress, I examined the avoidance X anxiety interaction when perceived support was high (β = -.05, t = -0.37, *n.s.*) and when perceived support was low (β = .53, t = 2.64, p < .01). Results revealed the following attachment style differences in change in relationship dissatisfaction for support-seekers with more distressing problems and low perceived support. Fearful support-seekers reported greater relationship dissatisfaction than did preoccupied ($\beta_{avoidance}$ = .71, t = 3.63, p < .001) and dismissing ($\beta_{anxiety}$ = .86, t = 2.38, p < .01) support-seekers. As Figure 5 demonstrates, fearful support-seekers were the most dissatisfied with their relationship and dismissing support-seekers were the least dissatisfied under these conditions. Change in relationship dissatisfaction for secure support-seekers did not differ from that of dismissing ($\beta_{avoidance}$ = -.36, t = -1.16, *n.s.*) and preoccupied ($\beta_{anxiety}$ = -.20, t = -1.45, *n.s.*) support-seekers.[9] Thus, partially consistent with *Hypothesis 4*, the relationship dissatisfaction of fearful support-seekers, and not dismissing and preoccupied support-seekers as expected, was reactive when their partners were perceived to be less supportive.

[9] For an alternative interpretation of the avoidance X anxiety X perceived support X perceived distress interaction, I examined the effect of perceived support on change in relationship dissatisfaction for each attachment style and level of perceived distress. Fearful support-seekers who had high perceived support reported less relationship dissatisfaction than did those who had low perceived support ($\beta_{support}$ = -.88, t = -3.41, p < .001). Similarly, preoccupied support-seekers who had high perceived support reported lower relationship dissatisfaction than those who had less perceived support ($\beta_{support}$ = .53, t = 2.64, p < .01). Perceived support did not have an effect on change in relationship dissatisfaction for secure ($\beta_{support}$ = -.18, t = -0.90, *n.s.*) and dismissing ($\beta_{support}$ = .40, t = 1.06, *n.s.*) support-seekers.

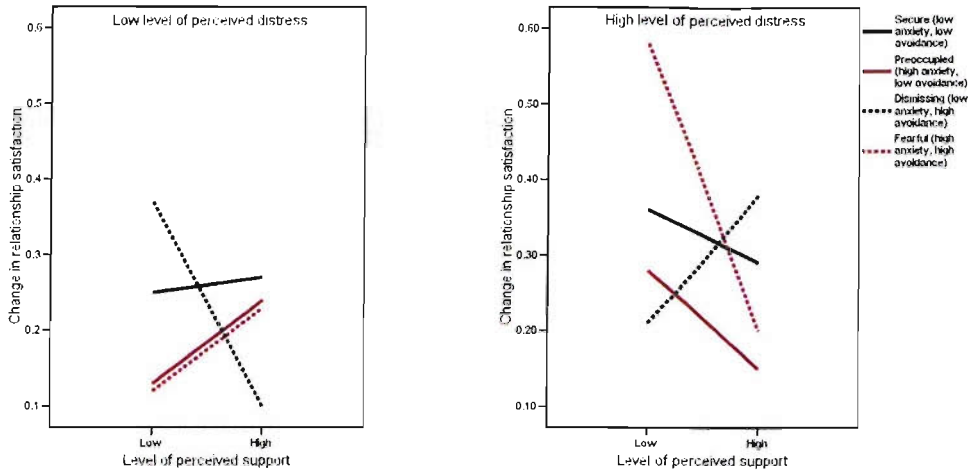

Figure 5. Relationship between support-seekers' avoidance, attachment anxiety, perceived support and change in relationship dissatisfaction for high and low levels of perceived support.

To examine whether attachment style differences at low perceived support were most evident when support-seekers' attachment systems were likely to have been activated (*Hypothesis 5*), I examined the simple effect of perceived distress for each attachment style. Fearful support-seekers with low perceived support reported significantly greater relationship dissatisfaction at high perceived distress than did fearful support-seekers at low perceived distress ($\beta_{distress}$ = 1.09, t = 4.19, $p < .001$). Preoccupied support-seekers with low perceived support reported significantly greater relationship dissatisfaction at high perceived distress than did preoccupied support-seekers with low perceived distress ($\beta_{distress}$ = .34, t = 2.27, $p < .05$). The change in relationship dissatisfaction of secure and dismissing support-seekers with low perceived support did not differ between those who had high or low perceived distress ($\beta_{distress}$ = .26, t = 1.25, *n.s.*; $\beta_{distress}$ = -.36, t = -0.94, *n.s.*, respectively).[10]

[10] For exploratory purposes, I examined whether attachment style differences at high perceived support were evident when support-seekers' attachment systems were likely to have been activated. The simple effect of perceived distress at high perceived support for each attachment style revealed the following: Change in relationship dissatisfaction of fearful and secure support-seekers with high perceived support did not differ between those who had high or low perceived distress ($\beta_{distress}$ = -.06, t = -0.46, *n.s.*; $\beta_{distress}$ = .06, t = 0.4, *n.s.*, respectively). Dismissing support-seekers with high perceived distress showed a tendency to report greater relationship dissatisfaction compared to those with low perceived distress ($\beta_{distress}$ = .66, t = 1.97, $p < .10$). Preoccupied support-seekers with high perceived distress tended to report less relationship dissatisfaction than those with low perceived distress ($\beta_{distress}$ = -.19, t = -1.66, $p < .10$).

2.7.2 Caregiving

***Approach*-based caregiving.** The HRA predicting change in positive affect and negative affect revealed no main effects of *approach*-based caregiving or moderating effects of avoidance, attachment anxiety or perceived distress. For change in positive affect, these findings are inconsistent with those reported in the HRA that excluded perceived distress.

The HRA predicting change in self-esteem revealed two significant interactions (see Appendix D, Table 1), addressing *Research Question 2b*. The interaction of the highest order was avoidance X anxiety X *approach*-based caregiving X perceived distress ($\beta = .34$, $t = 1.90$, $p < .10$; F of model at Step 4 (15, 47) = 19.45, $p < .001$). As before, I examined whether attachment style moderated caregiving (i.e., the avoidance X anxiety X *approach*-based caregiving interaction) at high levels of perceived distress ($\beta = .33$, $t = 1.84$, $p < .10$) and at low levels ($\beta = -.35$, $t = -1.74$, $p < .10$). When perceived distress was high, the avoidance X anxiety interaction was marginally significant at low levels of *approach*-based caregiving ($\beta = .33$, $t = 1.91$, $p < .10$), but not at high levels ($\beta = -.36$, $t = -1.33$, *n.s.*). Similarly, when perceived distress was low, the avoidance X anxiety interaction was marginally significant at low levels of *approach*-based caregiving ($\beta = -.27$, $t = -1.92$, $p < .10$), but not at high levels ($\beta = .38$, $t = 1.41$, *n.s.*). Figure 6 plots the simple slopes of avoidance, anxiety, perceived distress and change in self-esteem at low levels of *approach*-based caregiving. When their problems were less distressing, the self-esteem of fearful support-seekers was most reactive to caregiving. Specifically, fearful support-seekers reported higher self-esteem than did dismissing support-seekers ($\beta_{anxiety} = .65$, $t = 2.24$, $p < .05$), but change in self-esteem did not differ between dismissing and secure support-seekers ($\beta_{avoidance} = -.30$, $t = -1.39$, *n.s.*) and secure and preoccupied support-seekers ($\beta_{anxiety} = -.02$, $t = -0.11$, *n.s.*). When their problems were more distressing, the self-esteem of preoccupied support-seekers was most reactive to caregiving. Preoccupied support-seekers reported higher self-esteem than did secure ($\beta_{anxiety} = .46$, $t = 2.88$, $p < .01$) and fearful support-seekers ($\beta_{avoidance} = -.33$, $t = -1.72$, $p < .10$), but change in self-esteem did not differ between dismissing and fearful support-seekers ($\beta_{anxiety} = -.09$, $t = -0.41$, *n.s.*) and dismissing and secure support-seekers ($\beta_{avoidance} = .23$, $t = 1.28$, *n.s.*).

To examine whether these attachment style differences were most evident when support-seekers' attachment systems were likely to have been activated, I examined the effect of perceived distress on change in self-esteem for each attachment style at low levels of *approach*-based caregiving. Fearful support-seekers with low perceived distress reported higher self-esteem than those with high perceived distress ($\beta_{distress}$ = -.32, t = -2.17, $p < .05$). Perceived distress did not have an effect on change in self-esteem for secure ($\beta_{distress}$ = -.12, t = -0.95, *n.s.*), preoccupied ($\beta_{distress}$ = .37, t = 1.42, *n.s.*) and dismissing ($\beta_{distress}$ = .42, t = 1.19, *n.s.*) support-seekers. Thus, when the attachment system of fearful support-seekers was less likely to have been activated, their self-esteem was enhanced, or at least maintained, despite their partner providing less optimal care. This compares to the analysis reported above which suggested that when fearful support-seekers have an activated attachment system, their self-esteem is likely to diminish.

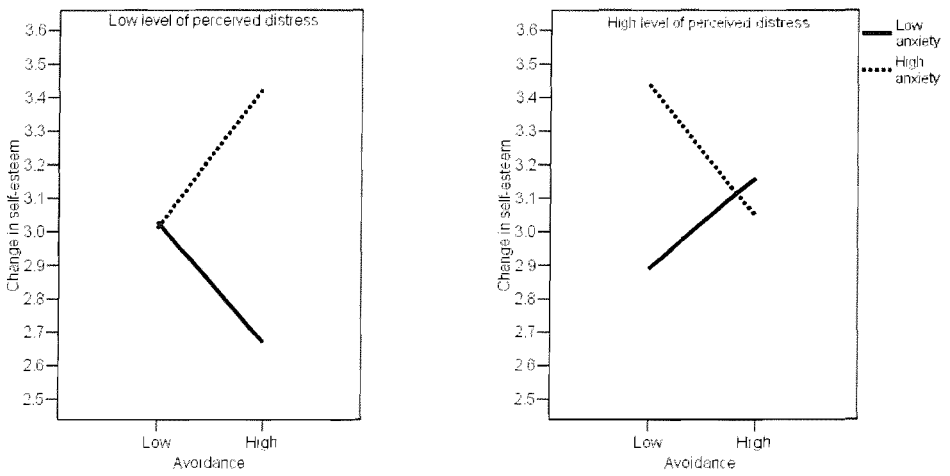

Figure 6. Relationship between support-seekers' avoidance, attachment anxiety, low level of *approach*-based caregiving and change in self-esteem for high and low levels of perceived distress.

In the HRA predicting change in relationship dissatisfaction, although there was no main effect of caregiving, support-seekers' reported lower relationship dissatisfaction when

they perceived their problem to be less distressing ($\beta = .15$, $t = 2.68$, $p < .01$) and were higher in attachment anxiety ($\beta = -.12$, $t = -2.09$, $p < .05$; F of model at Step 2 (5, 57) = 54.19, $p < .001$).

***Escape*-based caregiving.** Consistent with the HRA excluding perceived distress, *escape*-based caregiving did not predict change in positive affect or negative affect as a main effect, furthermore neither attachment anxiety nor avoidance moderated the effect of *escape*-based caregiving. In the HRA predicting change in self-esteem, three interactions were significant, with the highest order interaction being avoidance X anxiety X *escape*-based caregiving X perceived distress ($\beta = .40$, $t = 2.05$, $p < .05$). I examined whether attachment style moderated *escape*-based caregiving (i.e., the avoidance X anxiety X *escape*-based caregiving) at high levels of perceived distress ($\beta = .29$, $t = 2.42$, $p < .05$) and at low levels ($\beta = -.21$, $t = -1.25$, *n.s.*), providing further support for *Hypothesis 5*, that the effect of caregiving will be most evident when the attachment system has been activated. At high levels of perceived distress, I examined the avoidance X anxiety interaction at high levels of *escape*-based caregiving ($\beta = .17$, $t = 0.88$, *n.s.*) and at low levels ($\beta = -.42$, $t = -3.59$, $p < .001$).

As shown in Figure 7, the following attachment style differences were revealed in change in self-esteem when support-seekers had high perceived distress and received low levels of *escape*-based care. Fearful support-seekers reported lower self-esteem than preoccupied ($\beta_{avoidance} = -.86$, $t = -4.70$, $p < .001$) and dismissing support-seekers ($\beta_{anxiety} = -.76$, $t = -3.35$, $p < .01$). Change in self-esteem did not differ between secure and dismissing support-seekers ($\beta_{avoidance} = -.02$, $t = -0.12$, *n.s.*) nor between secure and preoccupied-support-seekers ($\beta_{anxiety} = .08$, $t = 0.78$, *n.s.*). To examine whether these attachment style differences were most evident when support-seekers' attachment systems were likely to have been activated, I examined the effect of perceived distress for each attachment style at low level of *escape*-based care. Because predicted means for each attachment style at low perceived distress are not represented graphically, I report these in brackets. Fearful support-seekers who had high perceived distress reported lower self-esteem ($M = 1.88$) than did those with less perceived distress ($M = 3.31$) ($\beta_{escape} = -1.21$, $t = -4.67$, $p < .001$). Perceived distress did not have an effect on change in self-esteem for secure ($M_{high\ distress} = 2.79$; $M_{low\ distress} = 2.79$;

$\beta_{distress}$ = -.01, t = -0.06, *n.s.*), preoccupied ($M_{high\ distress}$ = 2.90; $M_{low\ distress}$ = 2.81; $\beta_{distress}$ = .07, t = 0.73, *n.s.*) and dismissing ($M_{high\ distress}$ = 2.77; $M_{low\ distress}$ = 2.52; $\beta_{distress}$ = .21, t = 0.74, *n.s.*) support-seekers.[11]

Thus, fearful support-seekers with distressing problems began to feel worse about the self when their partner had a *less* negative caregiving style. That is, the partner was less likely to avoid, minimize or criticize the support-seeker or his or her problem, make sarcastic comments or show irritation, and try to escape the problem discussion. Because this pattern was unexpected, I explored the change in self-esteem of fearful support-seekers with activated attachment systems when caregiving quality was *more* negative, i.e., high levels of *escape*-based caregiving. I examined the effect of *escape*-based caregiving on change in self-esteem for each attachment style when support-seekers had distressing problems. Fearful support-seekers who received high levels of *escape*-based care reported greater self-esteem (M = 3.80) than did those who received low levels (M = 1.88; β_{escape} = 1.02, t = 3.96, p < .001). This suggests that the nature of *escape*-based caregiving may explain its unexpected effect. A partner who encourages the discussion of a distressing problem would make it more difficult for the fearful support-seeker to distance him or herself from the emotionally distressing problem. In turn, the fearful support-seeker may be forced (by his or her partner's behaviour) to focus on the self and ruminate upon the negative aspects of his or her problems damaging their fragile self-views. Further, the activated attachment system is likely to heighten the accessibility of fearful individuals' negative models of the self. In contrast, *escape*-based caregiving did not have an effect on change in self-esteem for secure (M_{low} = 2.79; M_{high} = 3.42; β_{escape} = -.08, t = -0.64, *n.s.*), preoccupied (M_{low} = 2.90; M_{high} = 3.73; β_{escape} = -.35, t = -1.35, *n.s.*) and dismissing (M_{low} = 2.77; M_{high} = 3.09; β_{escape} = .11, t = 0.58, *n.s.*) support-seekers.

[11] For exploratory purposes, I examined the effect of perceived distress for each attachment style at high level of *escape*-based care. Perceived distress did not have an effect on change in self-esteem for secure ($M_{high\ distress}$ = 3.42; $M_{low\ distress}$ = 3.48; $\beta_{distress}$ = -.04, t = -0.23, *n.s.*), preoccupied ($M_{high\ distress}$ = 3.73; $M_{low\ distress}$ = 3.51; $\beta_{distress}$ = .19, t = 0.49, *n.s.*), fearful ($M_{high\ distress}$ = 3.80; $M_{low\ distress}$ = 3.47; $\beta_{distress}$ = .28, t = 1.45, *n.s.*) and dismissing ($M_{high\ distress}$ = 3.09; $M_{low\ distress}$ = 3.67; $\beta_{distress}$ = -.49, t = -1.38, *n.s.*) support-seekers.

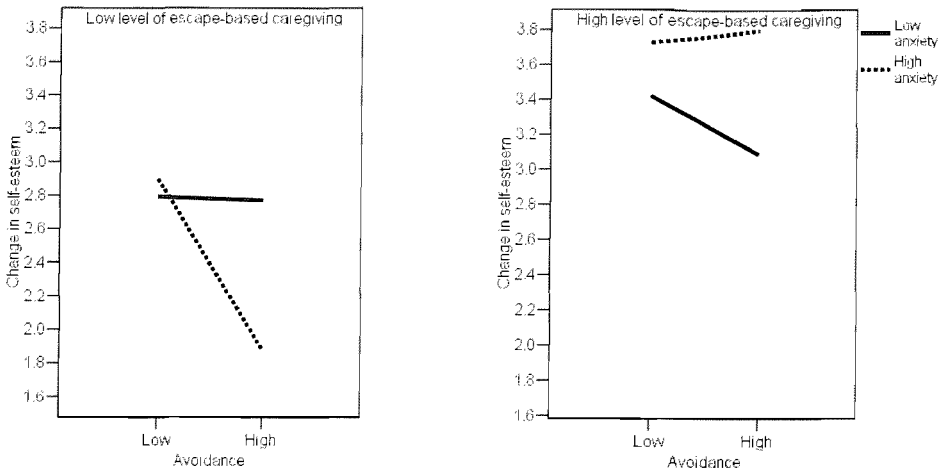

Figure 7. Relationship between support-seekers' avoidance, attachment anxiety, level of *escape*-based caregiving and change in self-esteem for high levels of perceived distress.

In the HRA predicting change in relationship dissatisfaction, the *escape*-based caregiving X perceived distress interaction was significant at Step 3 ($\beta = .18$, $t = 2.56$, $p < .01$; F of model at Step 3 (11, 51) = 28.79, $p < .001$). Quality of caregiving had a marginally significant effect on change in relationship dissatisfaction when perceived distress was high ($\beta_{escape} = .18$, $t = 1.96$, $p < .10$), but not when perceived distress was low ($\beta_{escape} = -.11$, $t = -1.43$, *n.s.*). When support-seekers' problem was distressing and they received high levels of *escape*-based care, they reported greater relationship dissatisfaction than did those who received low levels of this style of care. Thus, for all support-seekers, a particularly negative caregiving response is not conducive to relationship functioning, at least temporarily.[12]

2.7.3 Summary of Moderating Effect of Attachment Orientation (Including Perceived Distress).

Results provide partial support for *Hypothesis 1*. Perceived support, but not observer-rated caregiving, predicted change in emotional well-being. Support-seekers reported

[12] An alternative interpretation of this interaction is found by examining the effect of perceived distress on change in relationship dissatisfaction when *escape*-based caregiving is high ($\beta_{distress} = .33$, $t = 4.05$, $p < .001$) and low ($\beta_{distress} = .04$, $t = 0.52$, *n.s.*). That is, support-seekers who received care that was more negative and had higher perceived distress reported greater relationship dissatisfaction than those who had lower perceived distress.

increased positive affect when they perceived their partner to be supportive, and showed a tendency for increased positive affect and decreased negative affect when they had discussed a less distressing problem during the interaction. No support was found for *Hypothesis 2*; that attachment orientation would moderate the effect of perceived support or caregiving on support-seekers' emotional well-being.

Evidence was found to address *Research Question 2a* and *2b* that addressed attachment style differences in change in self-esteem. Support-seekers' attachment orientation moderated the effect of perceived support and caregiving on the change in their self-esteem. In addition support was found for *Hypothesis 5*, in that differences in attachment orientation were most evident when perceived distress was high, i.e., when the attachment system was likely to have been activated. Specifically, when their problems were distressing, support-seekers high in avoidance with low perceived support reported decreased self-esteem compared to support-seekers low in avoidance, whereas when perceived support was high, support-seekers' avoidance did not have an effect on change in self-esteem. Further, fearful support-seekers reported lower self-esteem when their attachment systems were activated (i.e., had high perceived distress) and increased self-esteem when their attachment systems were likely to not have been activated (i.e., had low perceived distress).

The moderating effect of attachment style on perceived support was mirrored in the analyses that included observer-rated caregiving. When partners were observed to employ a less positive caregiving style (i.e., low *approach*-based caregiving), fearful support-seekers with less distressing problems reported increased self-esteem, and preoccupied support-seekers with distressing problems reported increased self-esteem. Caregiving of this quality is not likely to resume felt security or reassure the support-seeker that their partner is available, sensitive or responsiveness to their attachment needs. However, in the analyses including *escape*-based caregiving, the moderating effect of attachment style differed.[13] When their partners were observed to employ a less negative caregiving style (i.e., low *escape*-based caregiving), fearful support-seekers with distressing problems reported lower self-esteem. In

[13] Although *approach*-based care is referred to as a positive style of caregiving and *escape*-based care is

contrast, fearful support-seekers whose partners had a more negative caregiving style, that is, when their partners were more likely to have encouraged avoidance of the problem (i.e., *escape*-based caregiving is composed of avoiding the problem *on*-task and *off*-task), fearful support-seekers reported greater self-esteem following the interaction.

Support was found for the predictions regarding the effect of perceived support and caregiving on change in relationship dissatisfaction. In support of *Hypothesis 3*, caregiving quality predicted support-seekers' change in relationship dissatisfaction when their attachment systems were likely to have been activated (i.e., high perceived distress). All support-seekers who received high levels of *escape*-based care reported an increase in relationship dissatisfaction. These support-seekers were temporarily more dissatisfied with their relationship when their partner employed a negative style of caregiving. In support of *Hypothesis 4* and *5*, there was evidence that support-seekers' attachment style and perceived distress moderated the effect of perceived support on change in relationship dissatisfaction. When their attachment systems were likely to have been activated, fearful support-seekers who had low perceived support reported increased relationship dissatisfaction, whereas secure, preoccupied and dismissing support-seekers' reported little change in relationship dissatisfaction across the interaction.

Discussion

In this study, I examined the effects of perceived support and observer-rated caregiving on support-seekers' change in emotional well-being and evaluations of the self and their relationship following a problem discussion with their romantic partner. Results demonstrated attachment style differences in support-seekers' reactions to their partner's romantic caregiving, especially when their attachment systems were likely to have been activated, and most markedly for support-seekers high in attachment anxiety (i.e., preoccupied and fearful).

2.8 Emotional Well-Being

Consistent with Collins and B. C. Feeney (2000), when partners were perceived to be

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described as a negative style of caregiving, the two styles are only weakly correlated (see Table 1).

more supportive during the problem discussion, all support-seekers reported an improvement in their positive affect. There was also evidence that support-seekers' attachment orientation moderated the influence of *approach*-based caregiving on change in positive affect. Specifically, fearful support-seekers who received better quality caregiving reported more positive affect compared to dismissing and preoccupied support-seekers who received the same style of caregiving. Further, increased positive affect following quality caregiving was only demonstrated by fearful support-seekers. Secure, dismissing and preoccupied support-seekers reported similar levels of positive affect regardless of the quality of their partner's caregiving. These attachment style differences in positive affect support the criticism, made earlier, regarding Collins and B. C. Feeney (2000) failure to distinguish between positive affect and negative affect. In addition, although previous research has found attachment style differences in emotional well-being following a caregiving interaction (Rholes et al., 1998; Simpson et al., 1992), these studies did not control for pre-interaction emotional state. The present study is novel in that it examined support-seekers' affective state before and after the problem discussion. This variation from previous research enabled the investigation of how the quality of romantic caregiving contributes to an individual's emotional well-being. Present results reveal that, especially for fearful individuals, a supportive romantic partner can alleviate a less positive mood.

Notably, there was no effect of perceived support or caregiving on support-seekers' change in negative affect, even when partners were perceived to be less supportive or provided low quality care. This lack of significant results is inconsistent with those from self-report studies (e.g., Collins, 1996; Pietromonaco & Feldman Barrett, 1997) and may be explained by the nature of the laboratory setting. Support-seekers were not likely to be upset before they began the problem discussion with their partner, indeed pre-interaction levels of negative affect were relatively low (see p. 68). This is probably because support-seekers had discussed their problem with their partner several times previously, suggesting that it may have been solved effectively at another time. Furthermore, it is also likely that several days may have lapsed between the situation that provoked the problem and the discussion of the problem. In everyday life, romantic partners may be sought immediately after or close to the time that the

problem-provoking situation occurred. For example, upon discovering that he or she has failed an important exam, a person may telephone their romantic partner. When a problem is discussed in close proximity to the time the problem arose, negative affect is likely to be at its highest level; at this point, attachment style differences in reactions to caregiving may be most evident. Consequently, an important area for future research is to examine the extent of *change* in negative affect following caregiving interactions. For example, couples could be observed in a natural or manipulated setting as one partner receives self-relevant information (e.g., exam results). Having collected pre- and post-interaction measures of emotional well-being, analyses could examine how the responsiveness, sensitivity and availability of the other partner influences the partner's change in emotional well-being.

2.9 Self-esteem

Attachment orientation moderated the effect of caregiving and perceived support on change in self-esteem. The change in self-esteem of secure and dismissing support-seekers was not contingent upon the quality of partner's caregiving or whether their attachment system had been activated. The (lack of) change in the self-views of secure support-seekers is consistent with Collins' (1996) research. That is, these secure support-seekers were able to minimize the impact of their partners' poor quality caregiving and did not attribute their partner's caregiving to the self. Further, the positive views of self and others that characterize the attachment models of secure individuals should help to protect the self from the negative effects of poor caregiving. However, because secure individuals use socially-based experiences as sources of their self-esteem (Brennan & Bosson, 1998), it is noteworthy that the secure support-seekers in this study did not report even slight increases in their self-esteem following positive interactions. The self-esteem of secure individuals appears to be less labile than that of fearful or preoccupied individuals. In support of this, recent research conducted by Brandt and Vonk (2005) revealed that, over eight experimental sessions, secure individuals had greater stability in self-esteem compared to preoccupied and avoidant individuals.

The (lack of) change in the evaluation of the self for dismissing support-seekers is inconsistent with Pietromonaco and Feldman Barrett's (1997) diary study in which dismissing

individuals reported declines in their self-esteem (compared to secure individuals) following high conflict situations. Rather, the current result is in line with Brennan and Bosson's (1998) finding that dismissing individuals report indifference to partner feedback. That is, their self-esteem was relatively stable regardless of their partner's (caregiving) behaviour.

Preoccupied support-seekers reported higher self-esteem than secure and fearful support-seekers when their attachment systems were likely to have been activated but their partners provided less positive care; however, the change in self-esteem of preoccupied support-seekers was not contingent upon the quality of partner's caregiving when their attachment systems were less likely to have been activated. That is, when their attachment systems were activated but the quality of caregiving was presumably less effective at restoring felt security, preoccupied support-seekers reported enhanced self-views. There are several explanations for this result that centre around the notion that preoccupied individuals have a strategy to preserve their relationship or their self-views. First, the enhancement of self-esteem may be a self-protection strategy. That is, as part of a defensive process, preoccupied support-seekers may have failed to fully encode their partner's behaviour. In this way, all levels of romantic interaction with a partner suggest self-worth or acceptance of the self by others. Research does suggest that preoccupied individuals use their relationships with others to verify their self-esteem (Bartholomew, 1990; Brennan & Bosson, 1998). Potentially, this may lead to such individuals remaining in relationships with partners who are unkind. Further research is required to address this. Alternatively, this self-enhancing outcome is consistent with findings from Pietromonaco and Feldman Barrett's (1997) daily-diary study: preoccupied individuals reported less decline in self-esteem following high conflict interactions, compared to secure, dismissing, and fearful individuals. That is, even high-conflict interactions boosted the self-esteem of preoccupied individuals. Pietromonaco and Feldman Barrett suggest that, although conflicts may contain negative elements (e.g., anger, verbal abuse), they are nonetheless engaging for preoccupied individuals because they involve self-disclosure from both partners, and thus provoke high levels of intimacy and closeness.

An alternative explanation is that the preoccupied support-seekers may have been motivated to be inaccurate in their evaluation of the self (Simpson, Ickes & Grich, 1999).

According to Simpson et al. (1999), when a person's reaction to their partner's behaviour could lead to relationship instability or dissolution, he or she has two defensive strategies. The first would involve removing oneself from the situation. When this strategy is impossible, the second strategy, involves a motivation to be inaccurate, either consciously or unconsciously, in interpreting his or her partner's negative, relationship-threatening, behaviour (Simpson et al., 1999) to ensure the relationship is maintained. This second strategy appears to fit with the current results, because preoccupied support-seekers' increased self-esteem was in reaction to partner's poor quality caregiving as rated by the observers. Thus, preoccupied support-seekers were motivated to be inaccurate in their evaluation of the self in order to convey to the experimenters or the self that, despite their partners' poor quality caregiving, they were happy with their relationship and partners' caregiving to the extent that the interaction was a positive experience.

The self-esteem of fearful support-seekers was most labile, fluctuating based on the quality of care received. This is consistent with Butler, Hokanson and Flynn's (1994) definition of self-esteem lability as the "*excessive reactivity of state self-esteem to daily threats and boosts*" (Butler et al., 1994, p. 166). When their attachment systems were less likely to have been activated, fearful support-seekers reported greater self-esteem, than did dismissing support-seekers, when their partner was less likely to be physically affectionate, reassuring, helpful in solving the problem and empathic. Moreover, whether their attachment system was activated determined their reaction to this less positive caregiving style. Fearful support-seekers with activated attachment systems reported a decline in their self-esteem, whereas those whose attachment systems were not activated reported enhanced self-esteem. When partner's caregiving was not able to successfully deactivate their attachment system, fearful support-seekers' self-esteem appears to be most vulnerable.

However, on the contrary, compared to preoccupied and dismissing support-seekers, fearful support-seekers reported a decline in self-esteem when their attachment systems were activated and their partner's caregiving was less negative (i.e., low *escape*-based caregiving). As Figure 6 shows, when highly distressed, fearful support-seekers' self-esteem increased when their partner's caregiving was more negative but decreased when partner's caregiving

was less negative. It may be that fearful support-seekers' who have partners with avoidant-based caregiving strategies, are able to deactivate their attachment systems and feel better about themselves as such partners enable them to employ their own emotion regulation strategies successfully. For example, if their partner ignores the problem, then they too can create emotional distance between the problem and the self. When partner's caregiving is less avoidant-based, it is more difficult for fearful support-seekers' to employ their own avoidant strategies. As mentioned earlier, a partner who does not ignore, but encourages, the fearful support-seekers' highly distressing problem may cause them to ruminate.

Overall, these results demonstrate the high lability of the self-esteem of fearful individuals based upon whether their attachment system is active and whether their partner provides the "right" style of care. It is noteworthy that fearful support-seekers' self-esteem appears to be vulnerable to relatively minor interpersonal disappointments (i.e., a 10-minute caregiving interaction). The vulnerability of their self-esteem to what could be everyday occurrences may have serious implications for the psychological well-being of fearful individuals. Fearful individuals tend to have low trait self-esteem (Brennan & Bosson, 1998), which itself is linked to a range of negative behaviours (e.g., substance abuse, anxiety, depression; Berk, 2003). Butler et al. (1994) found that self-esteem lability was higher in those individuals that had been previously depressed compared to individuals who had never been depressed. Further, high self-esteem lability and the occurrence of major life events (e.g., death of a spouse) predicted a greater risk for a future depressive episode (Butler et al., 1994). Carnelley et al. (1994) reported that depressed participants were characterized by greater fearful avoidance (as well as greater preoccupation) with relationships. Taken together, there may be an association between fearful avoidance, self-esteem lability and the onset of depression. Further research is required to examine whether this association is present.

2.10 Relationship Dissatisfaction

Attachment style differences were found in the effect of perceived support, but not caregiving, on change in relationship dissatisfaction. When attachment systems were likely to have been activated, the change in relationship dissatisfaction of support-seekers with positive

views of others (i.e., secure, preoccupied support-seekers) was not contingent on perceived support, whereas that of support-seekers with negative views of others (i.e., fearful, dismissing) was. Secure support-seekers reported moderate levels of relationship dissatisfaction. This result is in accord with the notion that secure individuals are less likely to attribute single episodes or partner behaviours to their relationship (Collins, 1996). Preoccupied support-seekers reported relatively low levels of dissatisfaction, although their dissatisfaction was lowest when they felt their partner was supportive. In contrast, when their attachment systems were likely to have been activated, fearful support-seekers reported greater relationship dissatisfaction compared to dismissing and preoccupied support-seekers when they felt their partner was unsupportive. Further, fearful support-seekers who had perceived supportiveness reported lower relationship dissatisfaction than those who perceived their partner to be less supportive. Thus, consistent with J. A. Feeney's (2002) findings regarding the daily marital satisfaction of fearful spouses, fearful support-seekers' relationship dissatisfaction was most reactive to perceived support. Described another way, when partners were perceived to be less supportive, dismissing support-seekers reported less relationship dissatisfaction and fearful support-seekers reported greater dissatisfaction. Dismissing support-seekers were more content with their relationship when they felt that their partner was unsupportive. This result is inconsistent with J. A. Feeney (2002) who found that dismissing spouses (as well as preoccupied husbands and fearful wives) reported lower daily marital satisfaction the more negative behaviours their partner engaged in. However, the main difference between the current study and that of J. A. Feeney's may explain this inconsistency. Feeney's study did not directly assess the effect of caregiving, thus it is not possible to distinguish whether the lower marital satisfaction was the consequence of seeking support or providing support, or indeed, if attachment and caregiving were involved in the partners' negative behaviours. In the current study, the focus has been solely on the effect of caregiving and the likelihood of attachment system activation.

In understanding the affect regulation strategies of dismissing support-seekers, their atypical reaction in the current study may be better understood. Dismissing individuals have attachment histories in which an activated attachment system and the expression of attachment

needs have been met with mainly negative responses. To avoid such responses and remain close to their attachment figure, such individuals learn to avoid such situations via detachment and do not process attachment-relevant information (Fraley, Garner & Shaver, 2000). When dismissing support-seekers felt that their partner was unsupportive, this perception was congruent with their perception of the self as autonomous and self-sufficient. For example, a dismissing woman may be satisfied with a boyfriend who is unresponsive or unsupportive because she is able to maintain her self-perception of being self-sufficient in coping with her emotional distress.

Dismissing individuals may prefer to have their expectations of others confirmed. On the one hand, confirmation of expectations may allow predictability and consistency in their close relationships. On the other hand, confirmation of expectations would serve to reinforce a negative view of others, including the romantic partner, ensuring the continuity of their insecure attachment orientation. Further, perceiving a partner to be unsupportive over long periods will not lead, presumably, to effective relationship functioning. For dismissing individuals, optimal relationship functioning may exist when their negative expectations of others are confirmed to some extent. Although this interpretation is unusual, previous research (e.g., Barbee & Cunningham, 1995; Bartholomew et al., 1997; J. A. Feeney & Hohaus, 2001) suggests that caregiving should be tailored to the support-seekers' needs. Consequently, responsive, visible caregiving (e.g., instrumental support, tangible support) would not confirm dismissing individuals' expectations of others as rejecting and unavailable. However, Bolger, Zuckerman and Kessler's (2000) notion of *invisible support* may be relevant here. Invisible support involves helping without the individual being aware that he or she has received support, such as indirectly offering a suggestion to the individual in such a way that he or she believes he or she found the solution (Bolger et al., 2000). Invisible support would confirm dismissing individuals expectations of others and would explain why they may perceive their partner to be unsupportive. Such an idea follows Simpson et al.'s (1992) suggestion that the effectiveness of support may be dependent upon the support-seeker's attachment style. It may be that the partners of dismissing individuals are more likely to provide invisible support. Experience may have taught these partners that their relationships function better when their

dismissing partner is able to demonstrate their ability to (independently) cope with their emotional distress. Future research is required to establish whether the partners of dismissing individuals employ a caregiving style that confirms their expectations of others and whether these relationships function better than those in which dismissing individuals' expectations are disconfirmed. Moreover, confirming their negative expectations of others is unlikely to enable dismissing individuals to move from attachment insecurity to attachment security. Thus, it is also of interest to examine the process behind dismissing individuals who are able to replace their negative expectations of others with more positive expectations. Future research could extend the present study by examining the intra- and interpersonal factors involved in determining reactivity to perceived support and romantic caregiving. For example, dismissing individuals who are more invested in their relationships or committed to their partners may have a greater motivation to alter their prior expectations of others.

2.11 Strengths and Limitations

This study has several strengths. It examines important questions in a sample of couples and focuses on behavioural measures of caregiving. Further, it has highlighted several ways in which support-seekers high in attachment anxiety differ from those low in attachment anxiety in an observation; other attachment researchers have reported few, if any, attachment anxiety effects (e.g., Collins & B. C. Feeney, 2000; Simpson et al., 1992).

Readers may have doubts over whether support-seekers' attachment systems were activated during the problem discussion or that the proxy of activation, perceived distress, was appropriate. Support-seekers were asked to speak about a non-relationship problem, whereas other researchers suggest that attachment differences are evident when the problem is of great importance to the couple's relationship (e.g., Rholes et al., 1998) or involves heightened distress (e.g., Bowlby, 1980; Simpson et al., 1992). Given the moderate-to-high levels of perceived distress and that participants had spoken about these problems to their partner previously, there is some confidence that most support-seekers' attachment systems were activated; however, future research might examine these questions in another more objectively stressful context.

In hindsight, the therapy cover story may have been open to different interpretations by the participants. Participants may have realized that unsupportive or negative partner behaviour during the interaction might have suggested that their relationship was troubled. Because of this, some participants may have been motivated to act in a protective manner toward their relationship, perhaps those high in attachment anxiety. However, the support-seeker and caregiver roles were not self-selected; that is, no participant was initially aware of their contribution to ensuring a positive presentation of their relationship.

The relatively small sample size ($N = 63$) meant that power of the analyses to detect attachment differences was restricted. Although the results presented above are mainly consistent with previous research, some results did not reach statistical significance. In addition, the low power made it difficult to detect significant interactions between variables in the regression analyses. As stated earlier, these analyses were conducted on an existing data set. It is anticipated that I may need to acquire a larger sample size when preparing this study for publication. Observational research in adult attachment would generally benefit from larger samples of couples.

A further concern was the use of caregiving behavioural indices. Several researchers (e.g., Roberts, 2000) suggest that individual codes are more informative than indices based upon grouping similar codes together. Although the caregiving dimensions used in this study are meaningful, using the individual codes may have clarified how specific caregiving responses generate particular reactions in support-seekers. For example, Jacobson et al. (1982) found that although distressed couples were more reactive to spouses' positive and negative behaviour than non-distressed couples were, some partners were reactive to positive behaviours, whereas others were reactive to negative behaviours, and some were reactive to both. However, because of the relatively low statistical power it was not possible to explore the effect of each individual caregiving code on the support-seekers' reactions.

2.12 Conclusions

The present results illustrate that consistent with research discussed in Section 2.2 (e.g., J. A. Feeney, 2002), young adults with insecure attachment orientations reported significant

changes in evaluations of the self and their relationship based on perceived support and romantic caregiving. Importantly, both positive and negative changes in these evaluations were found. Consistent with these results, Jacobson, Follette and McDonald (1982; see also J. A. Feeney, 2002) explored reactivity in daily satisfaction ratings following negative and positive spouse behaviour in a sample of distressed and non-distressed couples. The satisfaction of distressed spouses was enhanced by positive spouse behaviours, and was reduced by negative spouse behaviours (Jacobson et al., 1982). Thus, it is important to examine how insecure support-seekers use specific episodes of caregiving to evaluate the self and the relationship in the long-term as this may help to understand continuity and change in attachment models. Working models develop via a feedback loop (Fraley & Waller, 1998) whereby early, initial caregiving experiences shape working models (Ainsworth et al., 1978), which in turn shape attachment-relevant contexts by predicting, guiding and influencing the interpretation of the interaction (Collins, 1996; Collins & Read, 1994). That is, although repeated experiences of positive changes in evaluations of the self and relationship may foster changes toward attachment security, repeated experiences of *negative* changes are detrimental for the self (in terms of low self-esteem) and the success of the relationship (see also Kobak & Hazan, 1991). This detrimental effect is perhaps greater for insecure individuals because they do not have the personal resources available (i.e., positive self-models, a secure base) to reject the repercussions of poor quality caregiving (cf. Wilson, Simpson, Rholes & Campbell, 2003 who found that perceptions of less supportive husbands was associated with post-natal wives becoming more ambivalent).

For infants and children it is nearly impossible to exit from unsatisfactory attachment-caregiving interactions; moreover, these unsatisfactory interactions are sometimes the only option they have. In contrast, young adults do have choices, they can leave partners, and have more opportunities to replace attachment figures, and hence confirm or develop positive self- and relationship-views.

CHAPTER 3

Features and Functions I: Model Strength and the Influence of Received Care from Parents and Peers on Romantic Caregiving

"Because...children tend unwittingly to identify with their parents and therefore adopt, when they become parents, the same patterns of behaviour that they themselves have experienced during their own childhood, patterns of interaction are transmitted more or less faithfully from one generation to the next."

(Bowlby, 1969, p. 323).

3.0 Chapter Overview

Chapter 2 examined the effects of caregiving on the self- and relationship-views of the *support-seeker*. The focus of Chapters 3, 4, and 5 changes, somewhat, by addressing adult caregiving in terms of the *caregiver*. Chapter 2 highlighted the negative effects of ineffective or poor quality caregiving. One way in which to avoid these negative consequences is to address the source of caregiving. That is, how does an individual become an effective caregiver? For example, are parents solely responsible for teaching their offspring how to be effective caregivers? What roles do adults' other attachment figures play? Chapter 3 addresses these and other important questions.

The aim of this study was to examine the way in which models of received care from parent and peer attachment figures shape the romantic caregiving style of young adults. In an attempt to understand why certain models are influential, I examined whether the structural properties of a relationship-specific model moderate its influence on romantic caregiving. The structural properties examined were model strength, model specificity, and matching of features between models (Collins & Read, 1994), as described in Chapter 1. To my knowledge, no previous research has examined how multiple models of received care shape adult caregiving styles. Further, although numerous studies have examined the influence of parent-child attachment experiences on adult attachment styles (e.g., Collins &

Read, 1990; Hazan & Shaver, 1987), only a few studies have explored their influence on adult *caregiving* styles (e.g., Carnelley et al., 1996; J. A. Feeney, 1996). Furthermore, little research examines the influence of multiple attachment figures on adult caregiving styles. This is especially important given the existence of multiple attachment figures in young adulthood (Hazan & Zeifman, 1994; Rowe & Carnelley, 2003b; Trinke & Bartholomew, 1997), of which several may be peers, that is, close friends, siblings, and romantic partners. Indeed, young adults may derive their romantic and peer caregiving styles from experiences with both peers and parents (Furman et al., 2002; Furman & Wehner, 1994).

3.1 Attachment and Caregiving Models

As stated previously, attachment and caregiving experiences are maintained in working models; models of the self and other(s). In this chapter, the focus is on the models of others (i.e., individuals' perceptions of received care from their attachment figures; herein referred to as *model of received care*) and the model of relationship-specific romantic caregiving. Models of received care form part of the attachment model within the attachment behavioural system (Bowlby, 1969/1982). To recap from Chapter 1, *attachment* models represent the self in terms of one's worthiness of protection and acceptance and represent others in terms of their availability, sensitivity, and responsiveness (Bowlby, 1973/1998; Collins & Allard, 2002). Such models are activated when an individual require protection from danger or threat (George & Solomon, 1999) and typically encourage proximity seeking. Many theorists (e.g., Bowlby, 1969/1982; Kunce & Shaver, 1994; Solomon & George, 1996) view caregiving as an independent behavioural system linked, developmentally and behaviourally, to the attachment behavioural system. In contrast, Crowell et al. (2002) suggest that, at least for young adults, the provision of a secure base and the use of a romantic partner as a secure base are both organized by one overarching system. Attachment models develop before caregiving models because the attachment system is the first socially relevant system to emerge (Shaver & Hazan, 1988). Consequently, caregiving models are derived from a person's attachment models (e.g., George & Solomon, 1989; Kunce & Shaver, 1994). *Caregiving* models represent the self as an attachment figure in terms of one's availability, sensitivity, and responsiveness in

providing care to others (e.g., willingness to respond, ability to read and understand attachment signals, effectiveness of care; George & Solomon, 1989). Models of others are in terms of whether they are worthy of being protected and accepted (George & Solomon, 1989). These models are activated when an individual perceives physical or psychological danger to the other (Solomon & George, 1996). Taking into account these descriptions of attachment and caregiving working models, Figure 8 represents a conceptualisation of an individual's romantic attachment and caregiving working models. The upper level of the diagram represents a relationship-specific romantic attachment model: the individual's attachment style and the perception of his or her partner's caregiving style (i.e., model of received care). The lower level of the diagram represents a relationship-specific romantic caregiving model: the individual's caregiving style and the perception of his or her partner's attachment style. The models to the left of the diagram represent the model of self, whereas those to the right represent the model of the other.

Attachment Model

Model of Self	Romantic attachment style	Partner's caregiving style	Model of Romantic Partner
	Romantic caregiving style	Partner's attachment style	

Caregiving Model

Figure 8. Conceptualisation of a young adult's romantic attachment and caregiving working models.

Associated with each working model is an attachment or caregiving style or orientation that reflects the content of each model. Like adult attachment, adult caregiving styles have been measured along dimensions (e.g., B. C. Feeney & Collins, 2001; Kunce & Shaver, 1994). The current study employed J. A. Feeney's (1996) adapted 2-scale version of Kunce and Shaver's (1994) measure. *Responsive caregiving* involves providing physical and psychological proximity, noticing and interpreting attachment needs sensitively, and cooperating (as opposed to controlling) in problem solving attempts (Kunce & Shaver, 1994). *Compulsive caregiving* is an over-involvement in providing care for the partner, to

the extent of neglecting one's own attachment needs (J. A. Feeney & Hohaus, 2001).

3.2 How Might Models of Received Care Shape Romantic Caregiving?

In an attempt to understand how models of received care shape romantic caregiving, it is postulated that the structural features of the representation will have a determining role in the process. According to Fiske and Taylor (1991), the structural features of a mental representation have an important role in understanding the way in which that representation influences social information processing (see also Martindale & Moore, 1988). In this chapter, I focus upon how the structural features of available models of received care shape models of caregiving within the model network. *Availability* is whether a model is present in memory for use in processing information (Baldwin et al., 1996). Research suggests that young adults have several *available* attachment models, demonstrating a range of interpersonal experiences and different views of the self (Baldwin et al., 1996; Rowe & Carnelley, 2003b).

Collins and Read (1994) proposed three additional features of a working model that may direct whether that model influences thoughts, emotions and behavior in a given attachment or caregiving situation: *Model strength* refers to characteristics such as the number of attachment and caregiving experiences on which the model is based, the number of previous applications; both of which are indicative of the frequency of the activation and application of the model, centrality in the model network, and density of connection of the model (Collins & Read, 1994). For example, in most cases, parental models should be more detailed, elaborated, complex, and densely connected, i.e., stronger than peer models that are likely to be based on fewer interactions (Collins & Read, 1994). *Matching of features* is concerned with the characteristics of the interaction (e.g., goals) and the nature of the relationship (Collins & Read, 1994). When the features of the model match those of the nature (e.g., adult-child) and function (e.g., receiving care) of the interaction, model activation should be more likely (see Shaver et al., 1996). *Model specificity* is concerned with Collins and Read's proposition that working models are organised in a hierarchical structure. *Specific* models relate to particular attachment figures (e.g., mother) and are positioned at the lowest level, whereas more *general* models (e.g., relating to all peers) are

towards the top of the hierarchy. Collins and Read suggested that a specific model would be activated and applied over a general model.

The three model features are proposed to "trade off with one another" (Collins & Read, 1994). That is, a strong model may be activated over a weak, yet specific model, or a specific model may be activated over a strong, yet general model (Collins & Read, 1994). Consistent with Fiske and Taylor (1991) and Collins and Read (1994), I refer to model strength, model specificity and matching of features as *structural* features of a working model.

To operationalize Collins and Read's (1994) concept of model strength, I focused on the *number of previous applications* of the model of received care because this was the most amenable to self-report measurement. It was reasoned that the longer the duration of the attachment bond, the greater the preference for using an attachment figure to fulfil attachment needs, and the more frequently an attachment figure is contacted, then the greater the possibility that the model was not only available and accessible, but also that it had been activated and applied.

Having outlined how a model of received care might shape romantic caregiving, it is next important to consider whether there is a systematic way in which models of received care from parents and peers shape romantic caregiving.

3.3 How Might Parents and Peers Influence Romantic Caregiving?

In adolescence, romantic partners and friends are usually *affiliative* figures as opposed to *attachment* figures (see Furman & Wehner, 1994), and parents and close friends are mainly attachment figures (Hazan & Zeifman, 1994). By young adulthood, individuals begin to use their peers as a safe haven, and maintain proximity to them early in their relationship (Fraley & Davis, 1996; Hazan & Zeifman, 1994). Peers may also become full-blown attachment figures (i.e., fulfilling all features of an attachment bond: proximity maintenance, safe haven, and secure base; Hazan & Zeifman, 1994), a process that takes approximately two years for romantic partners and approximately five years for friends (Fraley & Davis, 1996). The primary attachment figure (i.e., the one whom individuals prefer to turn to for satisfaction of their attachment needs) is generally the mother;

however, young adults with romantic partners use partners as primary attachment figures (Trinke & Bartholomew, 1997). Thus, in understanding the specific influences upon young adults' romantic caregiving style, it would seem relevant to examine the influence of their peer attachment figures. Indeed, Furman and Wehner (1994) propose that attachment theorists have neglected the role of peer relationships in understanding the development of romantic relationships. Below, I review relevant research that suggests the specific patterns of influence, from parents and peers, on romantic caregiving.

3.3.1 Peer attachment figures.

Close friendships and romantic relationships are composed of collaboration, affiliation, and symmetrical interchanges (Furman & Wehner, 1994). Because these relationships tend to be egalitarian (i.e., one person is not entirely dependent upon the other, as in parent-infant relationships), there is reciprocal exchange of support-provision and support-seeking (Furman & Wehner, 1994) over time. Further, within their peer relationships, individuals have the opportunity to develop intimacy in reciprocal and mutual relationships (Furman & Wehner, 1994). It follows that peers and romantic partners may have an important influence on young adults' caregiving. Indeed, Furman, Simon, Shaffer and Bouchey (2002) report that the working models of friends are similar to, and may shape, working models of romantic relationships.

Furman and Wehner (1994) correlated the general relationship style (composed of attachment, caregiving, and affiliative behaviours) of four relationships (mother, father, romantic partner, and friend) in a sample of middle-adolescent females. Notably, there were moderate positive correlations between mother-father, father-friend, and friend-romantic partner relationships across the three relationship styles (secure, dismissing, and preoccupied; based on a version of the Adult Attachment Interview). Furman and Wehner suggest that there is high consistency in what they term relationship *views* (similar to an attachment/caregiving style) *within* a type of relationship (e.g., romantic), and moderate consistency *between* different types of relationships (e.g., peer and parental). Furman et al. (2002) examined the concordance between the relationship styles of working models between parents (mother and father combined), friends and romantic relationships in a sample of late adolescents. Over 50% of the participants had matching classifications between parent-friend relationship models, less than 50% matched on parent-romantic

relationship models, yet over 60% matched for friend-romantic relationship models. Furthermore, only the classifications of friends, not parents, predicted the romantic relationship model classification. Thus, based on Furman and his colleague's research, received care from peers and romantic partners may have a direct effect on romantic caregiving. This is because, as highlighted above, the models of received care from peer and romantic partner will match the features of the relationship-specific model of romantic caregiving (Collins & Read, 1994). [1]

Hypothesis 1. Relationship-specific romantic caregiving responsiveness and compulsiveness should be predicted by participants' perceptions of received care from their peer and current (or most recent) romantic partner. The more responsive individuals perceive their peer and romantic partner to be, the more responsive their caregiving toward their current (or most recent) romantic partner.

3.3.2 Parental attachment figures.

Weiss (1991) suggests that when selecting a potential attachment figure, individuals will opt for a person who matches their other attachment figures. This is because the attachment behavioural system has over time, developed recognised emotional regulation strategies. Because of the primacy of parent-child attachment, it is possible that these relationships will influence an individual's choice of peers and romantic partners. Matching of *attachment* styles often occurs between a mother and her infant (e.g., Fonagy, Steele, and Steele, 1991), which can be explained by the concept of identification (Bowlby, 1973). Identification is the process in which a self-regulation function, which may belong to another person, is reorganised and adopted or identified as one's own (Moretti & Higgins, 1999). Likewise, caregiving strategies are likely to be established from the parent-child attachment (Bretherton, 1985). On the one hand, there is evidence that received care from mother and father will shape romantic caregiving. In a study examining how parental bonding variables predict spousal caregiving, J. A. Feeney (1996) found that husbands' maternal and paternal care predicted their responsive caregiving towards their wives and maternal overprotection predicted their compulsive caregiving. Wives' maternal and paternal care predicted responsive and compulsive caregiving to their husbands. Thus, it

[1] By direct it is implied that the received care in question will not be mediated by the received care from any other attachment figure in shaping romantic caregiving responsiveness and compulsiveness.

may be that received care from mothers and fathers has a direct effect on romantic caregiving.

Hypothesis 2. Relationship-specific romantic responsiveness and compulsiveness should be predicted by a main effect of received care from mother and father. That is, the more responsive individuals perceive their mother and father to be, the more responsive their caregiving toward their current (or most recent) romantic partner.

On the other hand, evidence suggests that only care received from the same-sex parent will shape romantic caregiving. Carnelley et al. (1996), found that women who reported positive caregiving experiences with their mothers during childhood reported more positive caregiving activity (e.g., greater reciprocity and engagement, and less neglect of the partner) in their dating and marital relationships. Likewise, men who reported positive caregiving experiences with their fathers during childhood also reported a more positive romantic caregiving style. Adult children may 'identify' the caregiving strategies of their same-sex parents. Thus, the gender of the participant may determine which parental model of received care shapes romantic caregiving. That is, the received care from mother may have a direct effect on women's romantic caregiving, and the received care from father may have a direct effect on men's romantic caregiving.

Research Question 1. Does received care from the same-sex parent have a greater influence upon relationship-specific romantic caregiving responsiveness and compulsiveness than received care from the opposite-sex parent? A *greater* effect of the same-sex parent would be evident if in predicting romantic caregiving, for women, the magnitude of the effect of received care from mother is greater than that of received care from father and, for men, the magnitude of the effect of received care from father would be greater than that for received care from mother.

Additionally, on another hand, evidence suggests that only care received from father will shape romantic caregiving. Steele and Steele (1994) report that child-based research shows father-child attachment to influence a child's social relationships whereas mother-child attachment to influence a child's developing autonomy and competence. Indeed, attachment to father has been found to be a more important predictor of social competence than attachment to mother (Rice, Cunningham, & Young, 1997; see also Berlin & Cassidy, 1999 for a review of similar research). Research suggests that the father-child attachment

may more easily generalize to relationships outside of the family, i.e., peer relationships, than the mother-child relationship (Ducharme, Doyle, & Markiewicz, 2002). For example, because adolescents are typically closer to their mothers and more distal with their fathers (Youniss & Ketterlinus, 1987), fathers are often seen as playmates (e.g., MacDonald & Parke, 1984). Moreover, Furman and Wehner (1994) found an association between general relationship style between fathers and friends, but not between mothers and friends. Thus, as above, it may be that received care from fathers has a direct effect on romantic caregiving. Alternatively, received care from father may have an *indirect* effect on romantic caregiving because fathers appear to shape an individual's relationships with his or her peers, and in turn, peers shape the individual's relationships with romantic partners (Furman et al., 2002). That is, received care from peers, including romantic partners, may mediate the received care from father in shaping romantic caregiving.

Research Question 2. Does received care from father have an indirect effect on relationship-specific romantic caregiving responsiveness and compulsiveness? An *indirect* effect of father would be evident if received care from romantic partner or peer mediates the relationship between received care from father and romantic caregiving responsiveness and compulsiveness.

3.4 Overview of Study

From the above review, it is clear that there are unresolved issues regarding parental and peer influences on romantic caregiving styles. Firstly, although Furman et al. (2002) examined the influence of both parents and peers on adolescents' working models of romantic relationships, which is consistent with other research on late adolescent participants (see Kenny & Donaldson, 1991), their research is limited because of this combined model. In the current study, participants reported on the care received from four attachment figures: mother, father, current or previous romantic partner and a peer, separately. This would allow for the individual influence of received care from mother and father to be examined, allowing for the exploration of opposite- and same-sex parent influences (e.g., Collins & Read, 1990; J. A. Feeney, 1996). Furthermore, in Furman et al.'s studies there is no report of whether the close friends and romantic partners were

attachment figures (see also Pierce & Lydon, 2001) whereas in the present study peers were selected who were currently, or likely to become, attachment figures. Furman and Wehner (1994) state that parental attachment figures will have the strongest influence on romantic partners as *attachment* figures (see also Bowlby, 1969), and that peers will have the strongest influence on romantic partners as *affiliative* figures. In addition, I suggest that because young adults will use peers as attachment figures (e.g., Trinke & Bartholomew), peer attachment figures may also shape models of romantic caregiving because of the shared features (e.g., reciprocity).

Finally, previous research has tended to focus upon the match between relationship-specific attachment styles (or views) for mother, father and romantic partner (e.g., Baldwin et al., 1996; Furman et al., 2002). This type of analysis ignores other potentially important factors (e.g., the structure or content of the model); I examine how different experiences with multiple attachment figures influence romantic caregiving rather than only focusing on pairs of attachment relationships or congruence between specific patterns of caregiving (i.e., responsive and compulsive). Thus, the final hypothesis addresses the structural properties of the model of received care:

Hypothesis 3. Strength of model should moderate the effect of received care from each attachment figure on romantic caregiving. That is, the stronger the model of received care, the more that romantic caregiving will reflect the nature of that model. For example, participants with strong models of received responsiveness from their mother should report more romantic responsiveness than should participants with weaker models of their mother.

Method

3.4.2 Participants.

Participants were 248 volunteers from the University of Southampton. Psychology undergraduates received course credits for participating and non-psychology students received a £5 payment. Participants aged 3 *SDs* greater than the mean of the sample ($n = 4$) were dropped. Participants without any romantic relationship experience (i.e., either a current or previous, the most recent, romantic partner) were dropped ($n = 22$), as were

those who had been involved with their current or previous partner for less than 3 months (n = 17).[2] Participants who did not report any peer relationships (defined as romantic partners, friends, or siblings; n = 16), who reported on a person who did not fit the definition of a peer (n = 13), or whose peer was judged to not be an attachment figure (n = 16) were also dropped.

The final sample consisted of 159 participants, who were mainly female (n = 116, 73%), heterosexual (n = 151, 95%), white European (n = 145, 93%), and single (n = 157, 99%). The average age was 20.5 years (SD = 2.42; *range*: 18 to 30 years). The average relationship length of participants who reported on a current partner (n = 102) was 20.9 months (SD = 16.59; *range*: 3 months – 7 years, 3 months) and on a previous partner (n = 57) was 19.6 months (SD = 19.09; range: 3 months – 7 years 5 months).[3] Most participants' biological parents were married to each other (n=124, 78%).

3.4.3 Measures.

Participants completed a large set of measures as part of a wider research project. Only measures relevant to this study are reported.[4]

Demographics and relationship background. Participants recorded their age, gender, current and past relationship status, ethnic origin, and the marital status of their biological parents.

Defining attachment figures. Participants were instructed to list and describe up to ten persons with whom they had a strong emotional tie, whether this tie was of a positive, negative, or mixed valence. These relationships could be of any nature. Participants listed on average 7.6 persons (SD = 2.11; *range*: 3 to 10). Participants used their list to complete the Attachment Network Questionnaire (ANQ; Trinke & Bartholomew, 1997) that assesses the attachment hierarchies of young adults and can be used to identify persons who function as attachment figures. The ANQ consists of 8-items that assess safe haven (2 items) and secure base (2 items) functions, proximity maintenance, hypothetical mourning (separation distress), conflictual emotions, and emotional connection with significant others. Participants ranked their list of persons on

[2] One participant was dropped because he or she did not indicate his or her romantic status.
[3] There was no significant difference in the length of relationship between participants with current or previous romantic partners, t (157) = 0.37, *n.s.*
[4] See Appendix F for all measures used in Chapter 3.

items relevant to each person. For example, if the participant used four of his or her persons as a secure base, then each person would be given a rank from 1 to 4, with 1 representing the person who the participant most preferred to use as a secure base. For the emotional connection item, participants had to rank all of their persons.

A person was judged an attachment figure if he or she was ranked on at least one secure base and one safe haven item and on the hypothetical mourning and emotional connection items (Trinke & Bartholomew, 1997). The individual item ranks for each person listed were summated and averaged to create an attachment rank value; the smaller the value, the more the participant preferred to use that person as an attachment figure. On average, participants had 6.9 attachment figures ($SD = 2.37$; range: 1 to 10), which is higher than the 5.4 attachment figures in Trinke and Bartholomew's sample. Based on the ANQ criteria, the mothers of 21 participants and the fathers of 44 participants were not judged to be attachment figures; however, it was reasoned that these parents were likely to have served as attachment figures in the past, even if they may not function as them now, and therefore may still be an important influence on caregiving.[5] Sixty-one current romantic partners were not judged attachment figures; however, only participants who were in their current or most recent romantic relationship for 3 months or longer were included. These romantic partners may have once served as attachment figures (i.e., previous partners) or may serve as full-blown attachment figures in the future.

Rather than having participants report on the quality of care received from all peers in their list, for reasons of expediency one peer caregiver was selected for reporting. This peer was a person judged an attachment figure and was not a parent (i.e., biological, step-, or grand-parent) or current or most recent romantic partner.[6] The majority of peer attachment figures were friends (61.6%) and siblings (27.7%), with the remainder being flat-mates (8.2%), cousins (1.3%), and ex-romantic partners (1.3%). The average attachment rank for peers was 3.17 ($SD = 1.17$). Participants had known their peer attachment figure on average 10.7 years ($SD = 7.44$).[7]

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[5] Chi-square analyses indicated that when participants' biological parents were married to each other, these participants were more likely to have mothers ($\chi^2(1) = 4.42$, $p < .05$) and fathers ($\chi^2(1) = 6.58$, $p < .01$) judged an attachment figure.

[6] When more than one peer caregiver was available, the peer with the smallest attachment rank value was selected.

[7] Six participants had data missing on this variable.

Assessing strength of model. Three different relationship features were used to operationalise strength of model. Participants reported the length of time they had known each attachment figure (in years) and frequency of contact (visit, write/email, telephone) with each attachment figure, rated on an 8-point scale from 1 (*daily/almost daily*) to 8 (*less than once per year*). The attachment rank value, which indicates the preference for using each person as an attachment figure, was also used. Thus, strong models were associated with high values on time known, and low values on preference for use and frequency of contact.

Caregiving and received care. The caregiving questionnaire (Kunce & Shaver, 1994; see also Feeney, 1996) is a 32-item measure that assesses individual differences in the provision of care and support in adult romantic relationships. To assess romantic caregiving toward current (or most recent) partner, its two scales of *Responsive care* (24-items; e.g., "When my partner wants or needs a hug, I am glad to provide it") and *Compulsive care* (8-items; e.g., "When I help my partner with something, I tend to want to do things 'my way'") were rated on a 6-point scale from 1 (*not at all descriptive*) to 6 (*extremely descriptive*). The questionnaire was also reworded to be relevant to the care received from mother, father, and current or most recent romantic partner.[8] These four questionnaires were presented in a random order. Participants then completed an additional questionnaire reworded for the peer attachment figure.[9] All questionnaires were presented on a PC using the Authorware 5 software package.

Cronbach's alphas for responsive care (> .85; .91, Feeney 1996) and compulsive care (> .69; .80, Feeney, 1996) were all satisfactory. The two scales were not correlated (*rs* = -.13 to .13, *n.s.*; r = -.15, Feeney, 1996) for any version. This corroborates J. A. Feeney and Hohaus' (2001) suggestion that compulsive care does not necessarily imply poor caregiving. For each attachment figure, the distributions of caregiving scores were

[8] Independent sample t-tests revealed that current romantic partners were described as more responsive (M = 4.78, SD = .71) than previous partners (M = 4.36, SD = .72), t (157) = 3.64, p < .001, but there was no difference between current (M = 3.24, SD = .92) and previous (M = 3.14, SD = .89) partners on compulsive care, t (157) = 0.67, *n.s.* Participants currently in a romantic relationship provided more responsive care (M = 4.74, SD = .54) to their partners than participants reporting on a previous partner (M = 4.54, SD = .54), t (157) = 2.27, p < .05, but there was no difference between compulsive caregiving to a current (M =3.41, SD = .94) or previous partner (M = 3.43, SD = .81), t (157) = -0.18, *n.s.*

[9] Participants completed the caregiving questionnaire reworded for the peer attachment figure last because the experimenter needed sufficient time to work out which peers on the participants' lists were attachment

approximately normally distributed (see Table 5). Throughout the analyses, participants' caregiving toward their romantic partner will be referred to as romantic responsiveness or romantic compulsiveness.

3.4.4 Procedure.

Participants sat in a small cubicle containing a desk and a computer. They were given an overview of the experiment, and a consent form to read and sign. They then completed the demographic and relationship background questions and the ANQ, followed by the caregiving questionnaires on the computer. Participants were given a verbal and written debriefing, and received either course credits or payment.

Results

3.5 Preliminary Analyses

3.5.1 Missing data.

Because less than 5% of participants were missing data on the caregiving questionnaires, all missing data points were replaced with the mean appropriate for the specific attachment figure (see Tabachnick & Fidell, 2000).

3.5.2 Gender differences in received care and romantic caregiving.

Independent t-tests indicated several gender differences in participants' perceptions of received care and romantic caregiving (see Table 5). Women reported receiving more compulsive care from their fathers than did men, and more responsive and compulsive care from their peers than did men. These gender differences were accounted for by analysing data for men and women separately; [10] although caution is advised in interpreting the men's analyses because their sample was small (n = 43).

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figures.

[10] Ideally, gender differences in the effects of received care on romantic caregiving should have been tested by conducting regressions on the entire sample and using gender as a moderator of the received care variables on romantic caregiving. Although this would have been the optimal analysis strategy, it was not possible to do due to the low power of the analyses.

Table 5

Gender differences in reports of received care and romantic caregiving

	Men (*n* = 43)		*Women* (*n* = 116)		*t-test* (*df* = 157)
	M	*SD*	*M*	*SD*	
1 Responsive	4.58	0.57	4.69	0.53	-1.18
2 Compulsive	3.26	0.97	3.48	0.86	-1.36
3 Mum Resp	4.55	0.94	4.82	0.84	-1.75
4 Mum Comp	3.47	0.91	3.41	0.97	0.35
5 Dad Resp	3.94	0.96	4.05	0.89	-0.68
6 Dad Comp	3.07	1.03	3.53	1.05	-2.48*
7 Partner Resp	4.52	0.82	4.67	0.70	-1.16
8 Partner Comp	2.98	0.90	3.29	0.89	-1.89
9 Peer Resp	4.41	0.74	4.73	0.76	-2.33*
10 Peer Comp	2.81	1.26	3.59	1.18	-3.68***

Note. Partner = Romantic Partner; Resp = Received Responsive Care; Comp = Received Compulsive Care; Responsive = Responsive caregiving; Compulsive = Compulsive caregiving
*** $p < .001$. * $p < .05$.

3.5.3 Zero-order correlations.

Table 6 shows the correlations between received care from each attachment figure and romantic caregiving. Men who were responsive caregivers toward their romantic partners reported receiving more responsive care from their romantic partners and receiving less compulsive care from their partners and peers. Men who were compulsive caregivers reported receiving compulsive care from all of their attachment figures and receiving less responsive care from their fathers. Women who were responsive caregivers toward their romantic partners reported receiving responsive care from their mothers, fathers, and partners. Women who were compulsive caregivers reported receiving more compulsive care from their mothers, fathers, and partners. There was no evidence of multicollinearity between the four (i.e., mother, father, partner, peer) measures of received care for men or women.

Table 6

Zero-order correlations between romantic caregiving and received care from parents, romantic partners and peers

Styles	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1 Responsive	--	-.02	.22*	.18	.27**	.13	.51***	-.12	.18	.09
2 Compulsive	-.41**	--	.04	.27**	-.05	.18	.06	.41***	-.10	.07
3 Mum Resp	.17	.18	--	.18	.23*	.15	.28**	.11	.02	.19*
4 Mum Comp	.05	.29	.02	--	.06	.21*	.15	.24**	-.03	.18*
5 Dad Resp	.29	-.44*	.03	-.19	--	.19*	.31***	.09	.17	.13
6 Dad Comp	-.22	.47***	.03	.24	-.17	--	.14	.37***	.14	.49***
7 Partner Resp	.41**	.23	.49***	.18	.15	.14	--	.02	.16	.06
8 Partner Comp	-.33*	.40**	-.09	.15	.10	.18	-.04	--	-.05	.48***
9 Peer Resp	-.03	-.07	-.15	-.18	.11	-.34*	-.06	-.12	--	.08
10 Peer Comp	-.32*	.34*	-.11	.13	-.16	.52***	.04	.48***	-.19	--

Note. Bottom diagonal refers to men; top diagonal refers to women. Partner = Romantic Partner. Resp = Received responsive care. Comp = Received compulsive care. Responsive = Responsive caregiving. Compulsive = Compulsive caregiving.
*** $p < .001$. ** $p < .01$. * $p < .05$.

3.6 Relationship-specific Influences on Relationship-specific Romantic Caregiving

Hierarchical regression analyses (HRAs) examined the influence of models of received care from parents, partners and peers on romantic caregiving. To address the research questions and *Hypotheses 1* and *2*, received responsive and compulsive care from mother and father were entered at Step 1. At Step 2, received responsive and compulsive care from romantic partner and peer were entered in order to assess the potential mediation of received care from father on romantic caregiving (*Research Question 2*). The criterion variables were romantic responsiveness and romantic compulsiveness.

3.6.1 Men.

Partially consistent with *Hypothesis 1*, at Step 2, men who reported receiving more responsive care from their partner, described their own romantic caregiving as more responsive, and men who reported receiving more compulsive care from their partner, described their romantic caregiving as more compulsive. However, received care from peer had no significant effect on romantic responsiveness or compulsiveness. No support was found for *Hypothesis 2*, in that romantic responsiveness was not significantly predicted by

received care from mothers and fathers (see Table 7). This is also inconsistent with previous research findings (e.g., J. A. Feeney, 2002). Addressing *Research Question 1*, the significant predictors of romantic compulsiveness provided evidence of a same-sex parent influence at Step 1: Men who reported receiving more compulsive care and less responsive care from their father, described their romantic caregiving as more compulsive. Further, the effects of received care from mother were smaller in magnitude than those from father and were not significant. No evidence was found to address *Research Question 2*; that is, received care from romantic partner or peer did not mediate the effect of received care from father on men's romantic responsiveness or compulsiveness.

Table 7

Hierarchical regression analyses predicting men's romantic caregiving

	Step 1		Step 2		F of change (df)
	β	t	β	t	
			Romantic Responsive Caregiving		
Mum Resp	.16	1.09	-.09	-0.64	1.84 (4, 38)
Mum Comp	.15	0.95	.10	0.70	
Dad Resp	.28	1.84	.25	1.72	
Dad Comp	-.21	-1.36	-.19	-1.18	
Partner Resp			.42*	2.61	3.62 (4, 34)*
Partner Comp			-.29	-1.87	
Peer Resp			-.15	-1.01	
Peer Comp			-.11	-0.61	
	F (8, 34) = 2.98*; *Total* R^2 = .41; ΔR^2 *Step 2* = .25*				
			Romantic Compulsive Caregiving		
Mum Resp	.17	1.36	.12	0.98	6.28 (4, 38)***
Mum Comp	.12	0.93	.03	0.29	
Dad Resp	-.36**	-2.76	-.49***	-4.26	
Dad Comp	.37**	2.85	.39**	2.93	
Partner Resp			.22	1.71	4.86 (4, 34)**
Partner Comp			.49***	3.84	
Peer Resp			.18	1.54	
Peer Comp			-.14	-0.99	
	F (8, 34) = 6.85***; *Total* R^2 = .62; ΔR^2 *Step 2* = .22**				

Note. Partner = Romantic Partner; Resp = Received Responsive Care; Comp = Received Compulsive Care
(n = 43)
*** $p < .001$. ** $p < .01$. * $p < .05$.

3.6.2 Women.

As Table 8 shows, partially consistent with *Hypothesis 1*, at Step 2 women who

received more responsive care and less compulsive care from their partners described their own romantic caregiving as more responsive. Consistent with the analyses for men, received care from peer did not shape romantic responsiveness. In addressing *Research Question 1*, results suggested that received care from the *opposite*-sex parent had a greater influence (in terms of magnitude of the effect) on romantic responsiveness than did received care from the same-sex parent. That is women's romantic responsiveness was significantly predicted by received responsive care from their fathers at Step 1. Moreover, there was evidence that received care from father had an indirect effect (i.e., mediation) on romantic responsiveness (*Research Question 2*). According to Baron and Kenny (1986), three conditions are necessary for mediation. First, the independent variable (IV) and the mediator (M) should be associated. Second, M should be associated with the dependent variable (DV), and third, when IV and M are regressed onto DV, the association between the IV and DV is no longer significant (Baron & Kenny, 1986). Following this definition, received care from romantic partners mediated the effect of received responsive care from fathers ($\beta = .22$, $p < .05$ at Step 1, $\beta = .11$, *n.s.* at Step 2) on romantic responsiveness (Sobel's test statistic = 2.42, $p < .05$; Goodman (I) test statistic = 2.38, $p < .01$). This result suggests that received care from father is associated with that from romantic partners, which in turn, is reflected in women's romantic responsiveness.

In terms of women's romantic compulsiveness, consistent with *Hypothesis 1*, romantic partners' compulsive care was reflected in women's romantic compulsiveness. Support was also found for *Hypothesis 2*: greater romantic compulsiveness was predicted by more received compulsive care from mother. Further, this finding also provided evidence to address *Research Question 1*: received care from the *same*-sex parent had a greater influence on romantic compulsiveness than did received care from the opposite-sex parent. There was also evidence that received care from romantic partners mediated the effect of received compulsive care from mothers ($\beta = .25$, $p < .01$ at Step 1, $\beta = .18$, $p < .05$ at Step 2) on romantic compulsive caregiving; however, this mediation effect was not significant (Sobel's test statistic = -0.95, *n.s.*; Goodman (I) test statistic = -0.89, *n.s.*).

Table 8

Hierarchical regression analyses predicting women's romantic caregiving

	Step 1		Step 2		F of change (df)
	β	t	β	t	
			Romantic Responsive Caregiving		
Mum Resp	.14	1.52	.05	0.63	3.83 (4, 111)**
Mum Comp	.13	1.44	.13	1.59	
Dad Resp	.22*	2.39	.11	1.24	
Dad Comp	.04	0.46	.05	0.48	
Partner Resp			.42***	4.83	8.65 (4, 107)***
Partner Comp			-.25**	-2.63	
Peer Resp			.07	0.88	
Peer Comp			.11	1.12	
	F (8, 107) = 6.76***; *Total* R^2 = .34; ΔR^2 *Step 2* = .22***				
			Romantic Compulsive Caregiving		
Mum Resp	-.01	-.09	-.01	-0.15	3.09 (4, 111)*
Mum Comp	.25**	2.69	.18*	2.04	
Dad Resp	-.09	-0.95	-.09	-1.07	
Dad Comp	.15	1.59	.11	1.13	
Partner Resp			.07	0.74	5.04 (4, 107)***
Partner Comp			.42***	4.25	
Peer Resp			-.07	-0.83	
Peer Comp			-.20	-1.94	
	F (8, 107) = 4.29***; *Total* R^2 = .24; ΔR^2 *Step 2* = .14***				

Note. Partner = Romantic Partner; Resp = Received Responsive Care; Comp = Received Compulsive Care
(n = 116)
*** $p < .001$. ** $p < .01$. * $p < .05$.

Overall, these analyses indicate that, for both men and women, received care from romantic partners shapes romantic caregiving to the extent that the quality of care that is received is also that which is provided. This suggests that caregiving styles in romantic relationships may be matched between partners. Further, parental models also shaped relationship-specific romantic caregiving and received care from fathers appears to influence the style of care received from romantic partners (for women, only).[11] This suggests that the caregiving styles of young adults' parents are an important influence on

[11] To examine whether received care from father was suppressing the effect of received care from mother, I compared the correlation coefficient between the IVs (i.e., received responsiveness from mother and that from father) and the DV (i.e., romantic responsiveness) and the beta weights for each IV (Tabachnick & Fidell, 2001). Tabachnick and Fidell (2001) advise that a suppressor variable is present in the analyses if the value of r is substantially lower than the value of β or if r and β have opposite signs. Based on this recommendation, there was no evidence that received responsiveness or compulsiveness from father was suppressing the effect of received care from mother (or, indeed, vice versa) for women or men.

their romantic caregiving. Notably, received care from the peer attachment figure had no significant influence on romantic caregiving; this will be discussed later. I know turn to exploring whether the strength of the model moderates the influence of models of received care.

3.7 Strength of Model Analyses

Three indicators for strength of model were used: length of time known, preference for use as an attachment figure and frequency of contact. Conceptually, the content features (i.e., responsive or compulsive received care) and structural features (i.e., the strength indicators) of a model should be independent of each other; however, zero-order correlations suggested that there were several associations between model content and structure (see Table 9). Participants who had a greater preference for using their parents as attachment figures, and who were in frequent contact with their parents reported that they received responsive care from both parents, and compulsive care from mother (in terms of frequency of contact, only). The longer participants had known their peer caregiver, the less responsive and less compulsive care they received from that peer; and a greater preference for using the romantic partner as an attachment figure, the more responsive care participants received from their partners. Although content and structure (or strength) variables were associated, these associations were relatively weak (-.15 to -.32) and good caregiving did not always indicate a stronger model.

Table 9

Descriptive statistics and zero-order correlations of strength variables

Strength Variable	*N*	Mean (*SD*)	Attachment Figure's Responsive Care	Attachment Figure's Compulsive Care
		Preference for Use		
Mother	138	2.09 (1.07)	-.32***	.01
Father	115	3.01 (1.09)	-.21*	-.11
Romantic Partner	98	2.01 (1.09)	-.22*	.19
Peer	159	3.17 (1.17)	-.01	.15
		Length of Time Known		
Mother	139	20.51 (2.41)	-.13	-.02
Father	119	20.39 (2.99)	-.05	-.14
Romantic Partner	92	2.68 (1.82)	.02	-.09
Peer	159	10.72 (7.29)	-.15*	-.25***
		Frequency of Contact		
Mother	140	4.77 (0.83)	-.30***	-.17*
Father	120	3.54 (1.20)	-.20*	-.07
Romantic Partner	99	2.38 (1.11)	-.09	.16
Peer	159	3.10 (1.19)	-.09	.10

N.B. Size of *N* varies across attachment figure; mean-substitution was not used for mother, father, and romantic partner as more than 5% of participants had data missing on the strength variables (Tabachnick & Fidell, 2000). Mean substitution was used to replace 6 missing data points for Peer's length of time known.

N.B. Values for frequency of contact are 1 = *daily/almost daily*, 2 = *at least once a week*, 3 = *at least once a month*, 4 = *6-10 times per year*, 5 = *3-4 times per year*, 6 = *twice a year*, 7 = *once a year*, 8 = *less than once a year*.

*** $p < .001$. * $p < .05$.

To assess whether strength of model would moderate the influence of received care on romantic caregiving (*Hypothesis 3*), two hierarchical regression analyses were conducted for each attachment figure, separately. The predictor variables were centred by subtracting the mean from the raw score to reduce multicollinearity between the predictor variables and the interaction terms (Aiken & West, 1996). At Step 1, received responsive care, received compulsive care, and one of the three strength indicators were entered. At Step 2, the interactions of strength X received responsive care and strength X received compulsive care were entered. Table 10 shows that there was little evidence that the strength indicators moderated received care in predicting romantic caregiving with one exception: frequency of contact moderated the effect of received responsive care from peer

on romantic compulsiveness. [12]

Table 10

Summary of strength interactions predicting relationship-specific romantic caregiving

Attachment Figure	ΔR^2 Step 2	β Strength X Responsive Care	β Strength X Compulsive Care	Total R^2	F of model at Step 2 (df)
Romantic Responsive Caregiving					
			Preference for Use		
Mother	.02	.09	.18	.09	2.58 (5, 132)*
Father	.01	.00	.12	.11	2.82 (5, 109)*
Romantic Partner	.02	-.01	-.16	.25	6.21 (5, 92)***
Peer	.00	-.01	.00	.04	1.27 (5, 153)
			Length of Time Known		
Mother	.00	-.04	.02	.08	2.32 (5, 133)*
Father	.04	-.05	-.19*	.18	5.11 (5, 113)***
Romantic Partner	.01	.11	.03	.22	4.97 (5, 86)***
Peer	.01	.03	-.07	.03	0.82 (1, 153)
			Frequency of Contact		
Mother	.02	-.15	-.07	.08	2.21 (5, 134)
Father	.03	-.14	.19	.14	3.80 (5, 114)**
Romantic Partner	.01	.07	-.03	.24	5.83 (5, 93)***
Peer	.02	.05	-.15	.05	1.57 (5, 153)
Romantic Compulsive Caregiving					
			Preference for Use		
Mother	.01	-.07	-.09	.09	2.68 (5, 132)*
Father	.01	.09	.06	.10	2.50 (5, 109)*
Romantic Partner	.01	-.11	.01	.33	9.18 (5, 92)***
Peer	.02	-.09	-.10	.06	2.09 (5, 153)
			Length of Time Known		
Mother	.01	-.08	-.08	.11	3.26 (5, 133)**
Father	.02	-.08	.12	.11	2.88 (5, 113)*
Romantic Partner	.03	.08	.17	.34	9.02 (5, 86)***
Peer	.01	-.09	-.01	.06	1.87 (1,153)
			Frequency of Contact		
Mother	.00	-.03	-.04	.09	2.77 (5, 134)*
Father	.00	.03	-.07	.09	2.29 (5, 114)*
Romantic Partner	.01	-.03	-.11	.35	10.07 (5, 93)***
Peer	.08**	-.29***	.05	.12	3.98 (5, 153)**

*** $p < .001$. ** $p < .01$. * $p < .05$.

Figure 9 illustrates the simple slopes of received responsive care for weak and strong models of the peer attachment figure. The predictor variable, strength of model, is plotted against the criterion variable, romantic compulsiveness, one standard deviation above and below the mean (Aiken & West, 1996). Partially consistent with *Hypothesis 3*,

[12] The significant received care from father X time known interaction was not examined further because the

participants with a strong model (i.e., more frequent contact) of a *responsive* peer caregiver reported more romantic compulsiveness than did participants with a weaker model of a responsive peer ($\beta_{strength}$ = -.26, t = -2.57, $p < .05$). In other words, participants who regularly received responsive, sensitive care from a peer were more compulsive toward their romantic partner. Participants with a strong model of an *unresponsive* peer caregiver reported less romantic compulsiveness than did participants with a weaker model of an unresponsive peer ($\beta_{strength}$ = .31, t = 2.62, $p < .01$). That is, participants who regularly received unresponsive care from a peer were less likely to be concerned, intrusive, and obsessive in providing care to their romantic partner. One interpretation is that when an individual has a close friend or sibling who frequently neglects, is insensitive toward or mistreats him or her, he or she may view others as unworthy of more optimal caregiving, too. As this result demonstrates, the reflection (i.e., how the quality of caregiving of on model is mirrored in another model) of a relationship-specific attachment model on to a relationship-specific caregiving model is not necessarily consistent with examining the concordance between styles of caregiving. Here, received responsive care predicts compulsive caregiving. Although this solitary result is of interest, there was no decisive evidence to support *Hypothesis 3* regarding strength of model. One potential reason for this is based on the operationalisation of strength, as is raised in the discussion.

change in R^2 at Step 2 was not statistically significant.

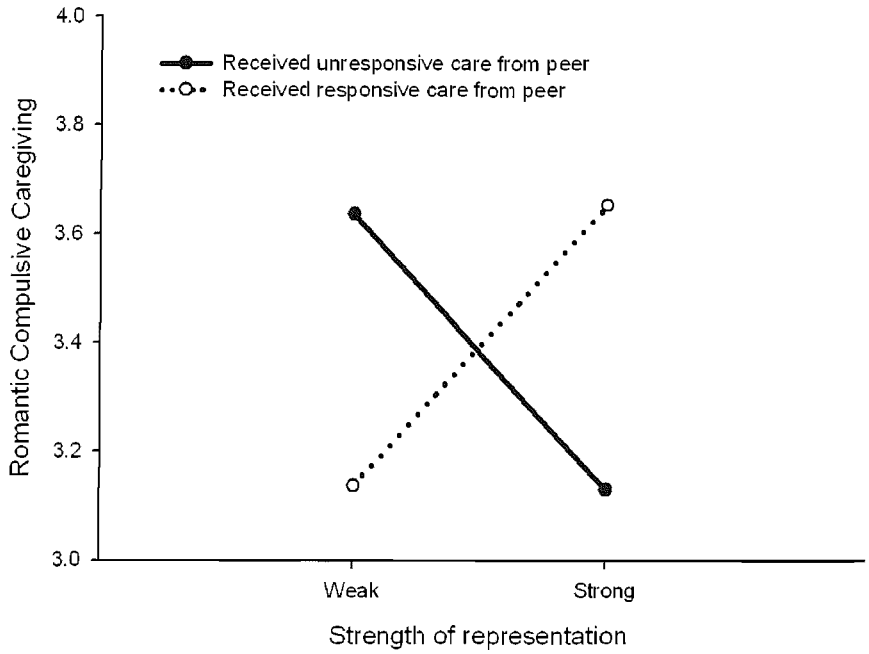


Figure 9. Relationship between peers' responsive care and romantic compulsive caregiving for individuals with strong and weak models of received care from peer.

Discussion

3.8 Overview of Results

Several clear patterns in how care received from parents and romantic partners shapes romantic caregiving emerged. I begin by discussing the way in which perceptions of received care from romantic partners and peers are reflected in romantic caregiving. For both men and women, their perceptions of received responsive care and received compulsive care from their romantic partners were reflected in their romantic responsiveness and compulsiveness, respectively. This pattern of influence could be due to the reciprocity within the relationship. For example, a young man may provide care to his girlfriend in the same way in which his girlfriend provides care to him. This pattern would conform to the norm of reciprocity, supported by the adage do unto others as you expect others to do unto you. Additionally, this finding is consistent with the notion of matching features between two models (Collins & Read, 1994): the type of relationship (adult-to-adult dyad) and the nature of the caregiving (i.e., romantic). Thus, a specific model of

received care from a romantic partner is an ideal match for guiding caregiving toward a partner.

Despite adolescent-based research (e.g., Furman et al., 2002; Furman & Wehner, 1994) suggesting that peer attachment figures should be included in the analysis of adolescent and young adult attachment relationships, little evidence was found that received care from a peer (friend, ex-partner, or sibling) was reflected in romantic caregiving. Although peer relationships have shared characteristics with romantic relationships (Furman & Wehner, 1994), they may not involve the high level of intimacy that romantic pair-bonds and parent-child attachment share (e.g., ventral-ventral contact, intimate touching; Shaver & Hazan, 1987). Alternatively, in hindsight, it was perhaps inappropriate to combine siblings and friends in the same category of 'peer'. Necessarily, there may be a greater inter-relatedness between parents, siblings, and the participant due to the shared living environment and experiences. Nevertheless, because of the similarities between friends and romantic partners, it is intriguing that peer attachment figures did not influence romantic caregiving.

Regarding the reflection of received care from parents, there were patterns of same-sex and opposite-sex parent influences on romantic caregiving. Beginning with the same-sex parent influences, mothers' care was reflected in their daughters' romantic compulsiveness and fathers' care was reflected in their sons' romantic compulsiveness. The matching features of the parent-child attachment model and the partner-participant caregiving model may explain this finding. Received care from fathers may be a guide for how men provide care to close others, and received care from mothers may be a guide for how women provide care to close others. Alternatively, this pattern of reflection suggests that young adults may model, or identify, the compulsive caregiving style of their same-sex parent, a finding partially supported by Carnelley et al. (1996). Why might same-sex parent identification be important in determining romantic compulsive caregiving, in particular? Compulsive caregiving involves a level of intrusiveness that perhaps only individuals in intimate relationships, like those between parent and child or romantic partners, could uphold.

In terms of the opposite-sex parent influence, women's romantic responsiveness was influenced indirectly by the care received from their fathers. This finding is consistent

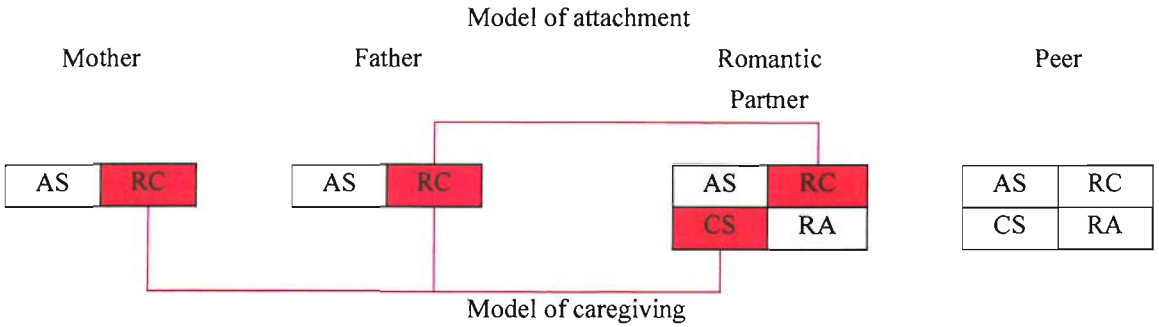
with the notion that the more distal nature of the father-child relationship influences peer relationships (e.g., Ducharme et al., 2002; Youniss & Ketterlinus, 1987). Women may seek a romantic partner with the same, or similar, style of caregiving as their fathers'. In turn, the romantic partners' style of caregiving is reflected in the women's romantic caregiving. Indeed, Weiss (1991) suggests that when selecting a potential attachment figure, an individual will opt for a person who matches their other attachment figures because their attachment behavioural system is already prepared to respond in a certain way. This may also apply to the caregiving behavioural system. The selection of new attachment figures may involve opting for those who replicate, in their behaviour and thoughts, views of others to which we have become accustomed. Working models may realise self-fulfilling prophecies, in that individuals select partners whose style of caregiving is consistent with existing models (Collins & Read, 1994). Further, seeking or opting for partners who provide care consistent with existing expectations of caregiving (i.e., received from parents) may maintain consistency in women's views of others, as well as views of self.

The continued influence of received care from mother and father in romantic caregiving demonstrates how existing expectations and views of others in terms of worthiness for receiving care, may shape the construction of new working models (Collins & Read, 1994). The working model of romantic caregiving is not based solely on reflecting experiences of care received from a current or previous romantic partner, but may initially be derived from models of care received from parents (see Collins & Read, 1994). Future research could address whether received care from a romantic partner mediates the relationship between fathers' caregiving and romantic caregiving for men. Evidence of a pattern of mediation for men would be needed before fully accepting that received care from fathers has an indirect influence on romantic caregiving because of its influence on the received care style of romantic partners. Nonetheless, this finding supports the tenet of attachment theory: that attachment relationships formed in late adolescence and young adulthood build on the foundations of attachment and caregiving developed earlier in one's life.

3.8.1 The organization of attachment and caregiving models.

The patterns discussed above enable us to draw additional interconnections in Collins and Read's (1994) hierarchical organization of attachment models. For the purpose

of this thesis, I have adapted Collins and Read's model. Figure 10 displays the lowest level of the hierarchy: relationship-specific attachment and caregiving models. To illustrate the independent, yet linked, nature of the attachment and caregiving systems, I have represented the components of an attachment model and a caregiving model in the following way. The attachment model is composed of an individual's attachment style and the perceived caregiving style of the attachment figure (i.e., received care style); see AS and RC on Figure 10. The caregiving model is composed of an individual's caregiving style and the perceived attachment style of the attachment figure (see CS and RA on Fig. 10). Hence, the mother and father models are composed of only an attachment model, whereas the romantic partner and peer models are composed of an attachment and a caregiving model to reflect the reciprocal nature of these relationships.



Note. AS = attachment style. CS = caregiving style. RC = attachment figure's caregiving style. RA = attachment figure's attachment style. Red lines represent the models of received care that shape the romantic caregiving model.

Figure 10. Interconnections between relationship-specific models of attachment and caregiving.

There was some suggestion that the structural features of a model of received care determined the influence of that model on romantic caregiving. Model specificity and matching of features both helped to explain why participants' reflected the received care style of parents and peers; however, the strength of model feature did not provide compelling support. These structural features are discussed in more detail below.

3.9 Strength of Model and Matching of Features

Collins and Read (1994) proposed three factors that should determine model activation. In this study, I explored whether these factors also determine the way in which a model of received care shapes romantic caregiving. The current findings were most consistent with the matching of features model feature because as described above, models of received care that were reflected in romantic caregiving tended to also share features with the nature of romantic caregiving. This model characteristic may have gained the most support because of the multiple ways in which working models can have matching features (e.g., same gender, type of relationship). Andersen and her colleagues (e.g., 1996, 1997, 1999, 2000), using the concept of *transference*, have also demonstrated how the cues in one situation can activate mental representations containing similar cues (see Chapter 1). Future research could examine whether certain types of matching of features (e.g., the style of caregiving, the target of care, or the role of the caregiver) differentially influence model activation and subsequent caregiving-related thoughts, feelings, and behaviour. For example, in the presence of a new romantic partner who is distressed, which model of received care would shape caregiving behaviour? A model of a past romantic partner (matched on relationship type) or a model of a father (matched on gender)?

This study did not really tap the model specificity characteristic because all models were relationship-specific; the studies reported in Chapters 4 and 5 aim to address this model feature in more depth. Analyses did examine the moderating effect of model strength on the influence of perceptions of received care on romantic caregiving; however, little support was found to suggest that stronger models of received care have a greater effect on romantic caregiving than do weaker models. One potential explanation for the lack of significant findings regarding model strength is the operationalization of the concept. Collins and Read (1994) did not provide any explicit suggestions for how model strength is best measured; thus, the exploratory nature of this study should be emphasised. The operationalisation of strength relied on self-report proxies for cognitive features, and may explain the lack of support for Collins and Read's proposition. Although relevant here, I postpone a fuller discussion of model strength to Chapter 6.

A further explanation for the lack of support for strength of model, especially in terms of parental models, may be because of another characteristic of model strength described by Collins and Read (1994) that I did not operationalize. That is, model elaboration, which is the amount and range of attachment-related experiences on which the model is based. Parental models may have such an elaborate and detailed content that they override the model's specificity or matching of features in determining the model's influence on romantic caregiving. The elaboration of a working model is the focus of the study reported in Chapter 5.

Nevertheless, strength of model, as well as model specificity and matching of features, are considered to be important features to elucidate in future research; thus I continue to explore their effects in the remaining studies of this thesis. Overall, further research is required to examine the features that determine caregiving model activation. Collins and Read (1994) suggest that how attachment (and caregiving) models are organized and structured has implications for information processing (see also Fiske & Taylor, 1991). In order to understand how individuals use models associated with several attachment figures I need to take into account the features of these models as well as to whom they are associated (i.e., parent, partner, peer, etc). These additional features of working models, strength of model, specificity, matching of features, even the emotional significance of the attachment relationship itself, should drive that model to be applied over every other model in the network. As a research aim, it would be beneficial to be better able to assess the structural and content features of working models in order to find ways to facilitate the revision of inappropriate model application.

3.10 Strengths and Limitations

Strengths of this study were that it focused on a large (n = 159) sample that is appropriate for investigating how parent, peer and romantic partner models shape romantic caregiving patterns. However, despite addressing important questions, the study had some methodological limitations. The results that examine opposite- and same-sex parent effects on romantic caregiving are based on a relatively small number of men (n = 43) and should be replicated in a larger sample. In addition, participants were required to complete the

caregiving questionnaire several times in one session. This was likely to be tedious and may have inadvertently led to fatigue and less accurate responses. Further, reports of received care from parents and previous romantic partners were retrospective and thus open to bias from current perspectives on attachment (Scharfe & Bartholomew, 1998). In Chapter 4, participants report on the care received from one peer attachment figure with whom they were currently involved and on their own general peer caregiving style (i.e., how they typically respond to peers in general) thus reducing potential participant fatigue.

Furthermore, the study was correlational in nature and assessed subjective reports of received care. Consequently, in drawing conclusions from this research, especially in terms of how early attachment experiences shape adult caregiving, cautions should be heeded. In this chapter, I have suggested that it is participants' of perceptions their attachment figures' caregiving that shapes their own romantic caregiving style. In Chapters 4 and 5, I attempt to overcome the correlational nature of this research by manipulating the accessibility of attachment and caregiving working models.

3.11 Conclusions

This study has suggested that experiences and representations of attachment relationships formed post-childhood may be an important influence on adult caregiving style; yet, the effects of parental caregiving experiences are not replaced by these new experiences. This has clear clinical implications. Perceptions of parents' caregiving may influence the peers who are selected as attachment figures in adulthood and in turn may influence an individual's own caregiving style. This pattern can help to explain the continuation of insecure attachment experiences by recognizing from which attachment figures individuals identify their caregiving styles. We appear to maintain consistency in our attachment experiences by continuing the caregiving styles of our own parents, possibly through a process of identification, and selecting romantic partners whose caregiving shows similarities to that of our parents. To help individuals to move from a cycle of negative and adverse attachment and caregiving experiences to one that is optimal and supportive, then it is necessary to understand how this cycle begins, how it is maintained, and how it can be changed.

CHAPTER 4

Features and Functions II: Model Strength & Priming a Relationship-Specific Model of Received Care

"A dependent self-schematic should, by virtue of past successful and unsuccessful interactions, also possess schemas for others as dependable or reliable (or undependable and unreliable)."

(Baldwin, 1992, p. 474).

4.0 Chapter Overview

One element of a satisfying and healthy intimate relationship is effective caregiving. Chapter 3 demonstrated that models of received care from parents and peers shaped young adults' romantic caregiving, such that those young adults with a more optimal caregiving style (i.e., high responsiveness) were more likely to describe their parents and romantic partners as also being effective caregivers. Further, Chapter 3 demonstrated that matching features between models appears to determine the way in which a relationship-specific model of received care shapes a relationship-specific model of romantic caregiving. Speculatively, this provides an insight into how ineffective patterns of caregiving may arise; that is, via an intergenerational, inter-relational transmission of maladaptive caregiving in which an individual cares for his or her close others in a way that he or she has been treated by those close others. Thus, the first aim of this study is to address the following question: Is it possible to adjust a person's caregiving responsiveness if he or she has learned non-optimal caregiving strategies? To address this important question, I concentrate on manipulating the accessibility of a model of received care.

The second aim of this study is to examine how the structural features of a working model determine its application to caregiving-relevant information processing. Examining the structural properties of models of received care may help to better predict which experiences of received care in a person's life are most likely to determine their parenting

style or caregiving to a spouse. Although strength of model was generally not found to moderate the effects of relationship-specific models of received care on romantic caregiving in Chapter 3, given that model strength was one of the three important features discussed by Collins and Read (1994) it warrants further investigation. Thus, I examined whether the strength of a temporarily activated relationship-specific model of received care moderated the effect of that model on self-reported general peer caregiving and the processing of caregiving-relevant information. Stronger primed models were expected to have more influence on these dependent measures than weaker primed models; this investigation was exploratory. This research is important as it demonstrates the processes by which caregiving and attachment models may influence thinking, emotions and behaviours in adult attachments.

4.1 Priming a Relationship-Specific Model of Received Care

As reviewed in Chapter 1, Baldwin (1992) considered attachment models to be highly similar to relational schema: both represent patterns of interpersonal relatedness, contain expectations of interpersonal experiences, direct attention to schema-consistent stimuli, enhance the processing of schema-consistent information and predict behaviour and expectations in novel interpersonal situations (Baldwin, 1992; Baldwin, Fehr, Keedian, Seidel & Thomson, 1993). Because of the similarities in structure, priming and reaction time measures from social-cognitive research (e.g., Stroop tests, lexical decision tasks, word stem completion) have crossed over into adult attachment research. Using these measures, attachment researchers can examine the way in which a model of attachment or caregiving mediates the effects of interpersonal stimuli (e.g., a crying infant, a partner requesting a hug) on an individual's thoughts and feelings about the stimuli and his or her behaviour towards the stimuli (see Bargh & Chartrand, 2000).

Priming works by lowering the model's threshold for activation, rendering the model more accessible (Baldwin et al., 1996). *Accessibility* is the ease of retrieving a model and the greater a model's accessibility, the more influential that model is in guiding an individual's behavioural, cognitive and emotional response patterns. For example, Pierce and Lydon (1998) found that women who were subliminally primed with positive

interpersonal expectations (e.g., accepting) were more likely to report seeking emotional support, and less self-denigrating coping than were control participants (i.e., no prime-condition). Women primed with negative interpersonal expectations (e.g., rejecting) reported less positive affect in response to the scenario. Thus, a recently activated schema or model is likely to influence an individual's thoughts (Whitaker, Beach, Etherton, Wakefield & Anderson, 1999).

A growing number of researchers have examined the temporary activation of attachment models (e.g., Baldwin et al., 1993, 1996; Mikulincer, 1998; Mikulincer & Arad, 1999; Mikulincer, Hirschberger, Nachmias, & Gillath, 2001; Rowe & Carnelley, 2003). Research has demonstrated that a primed attachment style can override an individual's general attachment style such that the processing of attachment-relevant information is biased by the primed attachment style. Mikulincer and Arad (1999) primed participants with a secure relationship by asking them to write about a situation in which they had an unsolvable problem, but had sensitive and responsive people available to assist them. Primed-secure participants acted in the same manner as chronically secure individuals: They were open to positive and negative information that did not match expectations about their romantic partners, and were likely to recall positive-incongruent information, compared to a control group. These results remained the same when the specific attachment style to current partner was statistically controlled. Similarly, Rowe and Carnelley (2003) found that primed attachment style influenced relationship expectations when participants' general attachment style was statistically controlled. After a 10-minute writing task to prime a relationship-specific attachment style, primed-secure participants endorsed more positive interpersonal expectations than primed-avoidant and primed-anxious-ambivalent participants did, and primed-anxious-ambivalent participants endorsed more negative interpersonal expectations than did primed-secure and primed-avoidant participants (Rowe & Carnelley, 2003).

In the current study, I primed a relationship-specific model of a peer attachment figure. Rather than focusing upon the effect of attachment style (or model of self) on attachment-relevant information processing, I focused upon the received care style (or model of other) and its effect on caregiving-relevant information processing. Although the priming manipulation may have activated the entire attachment model, for ease of

understanding I will refer to primed received care style or model. I examined whether after priming a relationship-specific model of received care, participants post-prime general caregiving would be congruent with the primed style. That is, would a generally unresponsive caregiver report that he or she is more responsive after he or she has spent time thinking about receiving responsive care?

Hypothesis 1. A primed model of received care from a peer will override participants' general peer caregiving style in predicting post-prime general peer caregiving style. That is, the primed model of received care should have a greater influence on post-prime general peer caregiving than the pre-prime general model of peer caregiving.

Further, strength of model should moderate the influence of the relationship-specific model; however given the weak effects of model strength in Chapter 3, this prediction is made tentatively.

Research Question 1. Does strength of the primed model of received care moderate the effect of that model on post-prime general peer caregiving? That is, when participants have been primed with a stronger model of responsive care, do they report greater post-prime general peer caregiving responsiveness than do participants primed with a weaker model?

4.2 The Processing of Caregiving-Relevant Information

Several studies have demonstrated the effects of primed attachment models on the processing efficiency of attachment-relevant words. These studies have demonstrated that reaction times (RTs) to attachment-related words on lexical decision tasks and on recall for attachment-relevant words. The results of these studies may reveal how a primed model of received care influences the information processing of caregiving-relevant words.

In the lexical decision task (LDT; Meyer & Schvanevedklt, 1971) participants indicate whether a presented letter string is a word or non-word. Using an LDT, several attachment-based studies (e.g., Baldwin et al., 1993; Mikulincer, 1998) have demonstrated that RTs are faster to interpersonal target words when such words are congruent with the goals and expectancies of the participants' attachment style. For example, secure participants responded faster to positive interpersonal words (e.g., help), and avoidant

participants responded faster to negative words (Baldwin et al., 1993). Mikulincer (1998, Study 4) found that secure participants responded faster to the word 'intimacy', avoidant participants responded faster to 'intimacy' and 'control', and anxious-ambivalent participants responded faster to 'intimacy' and 'security'. Furthermore, Baldwin et al. and Mikulincer both found that RTs were facilitated when target words were placed in meaningful contexts, such as a sentence stem conveying a relational context. Mikulincer et al. (2002; Study 2) subliminally primed participants with threat (e.g., failure) or neutral words, and had them complete a lexical decision task in which the target words were names of the participants' attachment figures, close others, acquaintances and strangers. Mikulincer et al. described attachment figures' names as a component of the attachment model. Participants primed with a threatening context had faster RTs to the names of their attachment figures compared to participants primed with a neutral context. That is, the threatening context heightened the accessibility of participants' attachment models.

Memory is enhanced for stimuli (e.g., words) that are congruent with the accessible attachment model. Well-established models, according to Collins and Read (1994), should bias memory towards information that is relevant to the model and consistent with the content of the model. In addition, research has repeatedly shown that schema-consistent information is processed more efficiently than schema-inconsistent information (Baldwin, 1992). In this way, model-consistent words are likely to be preferentially attended to, encoded and retrieved. This has been demonstrated in a study by Rowe and Carnelley (2003) who found that primed attachment style influenced the valence of the words participants recalled following a LDT using attachment and non-attachment words. Specifically, primed-secure participants recalled more positive attachment words than primed-avoidant participants.

Consistent with previous research, word recall should be facilitated by the primed caregiving context, such that after a priming manipulation, participants should demonstrate enhanced recall for caregiving words over non-caregiving words. In addition, recall should be enhanced for caregiving words that are congruent with the received care style of the primed model. That is, more compulsive words should be recalled when a highly compulsive person has been primed than when a less compulsive person has been primed.

Hypothesis 2a. Priming a caregiving context should facilitate the recall of

caregiving-relevant information. Specifically, it is predicted that following the priming manipulation, participants should show enhanced recall of caregiving-related words compared to non-caregiving words.

Hypothesis 2b. In addition to the above, participants should show enhanced recall for caregiving-related words that are congruent compared to incongruent with the primed received care style. For example, participants primed with a more responsive peer caregiver should recall more responsive care words than unresponsive care words.

Finally, I examined whether the strength of the model would moderate the effect of primed care on word recall, such that participants primed with a strong model of received care should recall more words that are congruent with the primed model than participants primed with a weak model.

Research Question 2. Does the strength of the primed model of received care influence the processing of caregiving-related information? That is, do participants primed with a stronger model of received care recall more caregiving words that are congruent with the received care style of that model than participants primed with a weaker model of received care?

Method

4.2.1 Participants.

Ninety-three students at the University of Southampton volunteered for the study through advertisements on the campus and the psychology research participant pool. Eligible participants were aged between 18 and 30 years old and were fluent in English. Undergraduate psychology participants received course credits for their participation; non-psychology students received either £5 or £9 payment.[1] Six participants did not return to complete the Time 2 measures, and two participants were asked not to return because one was aged over 30 years and the second had language comprehension difficulties.

Participants completed all of the measures in the priming manipulation with reference to a peer attachment figure; however, 18 participants referred to a peer who was not judged an attachment figure and 11 did not complete the full priming manipulation

[1] Data was collected at two different points in the academic year following an increase in departmental funding. Unfortunately, I do not have data on which participants received £5, £9 or course credits.

because they did not provide a written account of receiving care. Seventy participants completed the priming manipulation properly, of which 49 (70%) were female, 68 (97%) were heterosexual, and 60 (86%) were white, Europeans. The mean age of the participants was 22.03 years (*SD* = 2.73).

4.2.2 Measures for Time 1 (Pre-prime).

Participants completed a large set of measures as part of a wider research project. Only measures relevant to this study are reported. Other measures were included at Time 1 only, so as not to contaminate the priming manipulation at Time 2. The measures are listed in the order in which the participants completed them.[2]

Demographics. Participants recorded their age, gender, sexual orientation, and ethnic origin.

General peer caregiving. A 38-item version of the Caregiving Questionnaire (B. C. Feeney & Collins, 2001; Kunce & Shaver, 1994) was reworded to pertain to a general peer caregiving style. 'Peer' was defined as romantic partners, close friends or siblings. This version of the questionnaire includes *responsive care* (24-items; *alpha* = .86), *compulsive care* (8-items; *alpha* = .88), and *neglectful care* (B. C. Feeney & Collins, 2001; 6-items; *alpha* = .84). The neglectful care scale assesses failure to care (e.g., "I sometimes ignore romantic partners' and close friends' problems"). Participants responded on a 6-point scale from 1 (*not at all descriptive of me*) to 6 (*extremely descriptive of me*). The responsive and neglectful care scales were moderately correlated ($r = -.61, p < .001$) and were formed into one scale of responsive caregiving by reversing the appropriate items on the neglectful caregiving scale (30-items; *alpha* = .89). Responsive caregiving ($M = 4.85$, $SD = 0.53$) and compulsive caregiving ($M = 3.68$, $SD = 1.03$) were not correlated ($r = .07$, *n.s.*). These caregiving scales are referred to as T1 (Time 1) general peer caregiving (i.e., assessed before the priming manipulation).

Defining peer attachment figures. Participants were instructed to list up to ten persons with whom they felt they had a strong emotional tie. Participants listed on average 8.3 relationships ($SD = 2.06$; range = 1 - 10). Participants then completed the ANQ (Trinke & Bartholomew, 1997), described in Chapter 3. Attachment figures were defined according to the criteria suggested by Trinke and Bartholomew (1997); namely, any significant other

listed on at least one secure base and one safe haven item, on the hypothetical mourning and the emotional connection items. Consistent with Trinke and Bartholomew's findings, participants had on average 5.4 attachment figures (*SD* = 3.00; range: 1 to 10). For each peer attachment figure, participants listed the length of time known, and the frequency of contact had with the peer using the measures described in Chapter 3 (p. 109).

4.2.3 Measures for Time 2 (Post-prime).

Priming manipulation. The experimenter randomly selected an existing peer attachment figure from the participants' lists to be the focus of the priming manipulation. The selected peer attachment figure was a friend (*n* = 65, 75%), current romantic partner (*n* = 15, 21%), sibling (3%), or ex-partner (1%). On average, participants had known their peer attachment figure 5.99 years (range 6 months to 22 years; *SD* = 5.52), and were in contact with their peer about once per month (*M* = 3.42, *range* = 1 to 7). The average attachment rank value for the peer attachment figure was 5.50 (range: 1.50 - 13.75; *SD* = 2.94), which indicates the preference for using the attachment figure (Trinke & Bartholomew, 1997). The smaller the value, the more preferred the attachment figure. Time known, frequency of contact and preference for use as an attachment figure were used as strength of model indicators, as in Chapter 3.

Participants completed a version of the caregiving questionnaire in which the items were reworded to pertain to the peer attachment figure (e.g., "When I want or need a hug, this person is glad to provide it"). This version of the questionnaire will be referred to as the primed received care style. The responsive care and neglectful care scales were highly correlated (*r* = -.82, *p* < .001) and were combined. Primed responsive care (*M* = 4.54, *SD* = 0.81, *alpha* = .95) and primed compulsive care (*M* = 4.46, *SD* = 0.69, *alpha* = .79) were not correlated (*r* = .02, *n.s.*).

Participants then completed a 15-minute writing task. They were instructed to think about their current relationship with the peer attachment figure, and to write about a specific occasion when the peer had provided care to the participant. All participants were informed that this written description could be excluded from analysis on their request; no participants declined its inclusion. Participants wrote about a range of occasions including abortions, family bereavements, and relationship break-ups. After writing, participants

[2] See Appendix G for materials used in Chapter 4.

evaluated the care provided, by answering two questions (e.g., "Was the care provided typical of the care he/she always provides?") on a 7-point scale (1 = *not at all* to 7 = *very*). Participants were mostly happy with the care they received (M = 6.11, SD = 1.19), and stated that this care was typical of the care they always receive from the peer (M = 5.98, SD = 1.24). Participants then completed six items from the Pierce, Sarason and Sarason (1991) *Quality of Relationships Inventory* (QRI). The items were adjusted to refer to whether the participant could count on the peer for different types of help and support, and were rated on a 5-point scale (1 = *not at all/never* to 5 = *very much/very often*). [3]

Post-prime affect. The Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) described in Chapter 2, was used to assess participants' affect following the priming manipulation. Each of the scales was responded to on a 5-point Likert scale from 1 (*very slightly/not at all*) to 5 (*extremely*) in terms of how they felt "right now". Positive affect (M = 2.81, SD = 0.65, *alpha* = .85) and negative affect (M = 1.49, SD = 0.62, *alpha* = .91) were not correlated (r = -.18, *n.s.*).

Word recall memory task. To present the lists of caregiving-relevant words, participants completed an LDT. Using Inquisit software, participants were presented with 216 words, presented in two blocks with 108 words in each. There were six categories of words: responsive caregiving (e.g., affectionate; 25), compulsive caregiving (e.g., intrusive; 19), neglectful caregiving (e.g., rejecting; 24), positive non-caregiving (e.g., radiant; 19), negative non-caregiving (e.g., polluted; 21), and 108 non-words (taken from Rowe & Carnelley, 2003). All words were rated by a second set of participants (N = 20) for descriptiveness of each category. Words with the highest descriptiveness rating were selected for the task. All responsive caregiving words were rated as being positive, all neglectful words were rated as being negative, and the compulsive words tended to be rated as neither positive nor negative. Because familiar stimuli tend to be words, whilst unfamiliar stimuli tend to be non-words (Balota & Chumbley, 1984) the non-words closely resembled the structure of real words (e.g., influentic). Caregiving and non-caregiving words were matched for length with the non-words only. [4]

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[3] The QRI was not included for use in the statistical analysis but was included to extend the priming manipulation.

[4] The RT results from the LDT were not amenable for analysis because the word lists were not matched for word frequency or length between each word type (responsive, compulsive, neglectful, positive, and

Each word was presented for up to 1500 msec in the centre of a computer screen. If the participant did not respond, the word would disappear after 1500 msec. Participants were instructed to decide as fast as possible whether the letter string was a word or nonword. After each block, there was a break period, which the participant could end by pressing the space bar when ready to re-start.

After completing the LDT, participants were given a page of digits. The task was to circle as many number threes (3), embedded in the text, for 45-seconds. This acted as a filler task to prevent recency effects in word recall. Participants were then asked to list all of the words that they remembered from the computer task. Participants were given unlimited time to complete this task.

Post-prime general peer caregiving. Participants were given the same version of the caregiving questionnaire used at T1. This version of the questionnaire will be referred to as T2 (Time 2) general peer caregiving. T2 responsive caregiving ($M = 4.79$, $SD = 0.51$, *alpha* = .92) and T2 compulsive caregiving ($M = 3.75$, $SD = 0.91$, *alpha* = .89) were not correlated ($r = .17$, *n.s.*).

Manipulation check. Six questions assessed the extent of the priming manipulation (e.g., ease of responding to the questionnaires, ability to imagine the peer, etc). Responses were made on a 7-point scale (anchors varied dependent upon the question).

4.2.4 Procedure.

At Time 1 participants read an informed consent form, and signed it with regard to both testing sessions and completed the T1 measures. At least 24 hours later, participants returned to the laboratory. To disguise the priming manipulation, participants were instructed that they would take part in several tasks for members of the social psychology research group. At this second session participants were given a written debrief detailing

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negative). Bargh and Chartrand (2000) point out that factors such as word frequency and word length will influence response latencies. Nevertheless, research reviewed by MacLeod and Kampe (1996) suggests that word recall tasks should be unaffected by the frequency of the words. When there is a mixed list of high and low-frequency words and a within-subject design, as is the case here, there is no recall advantage based on word frequency (see MacLeod & Kampe, 1996). Therefore, the LDT was primarily a way of presenting the words for the memory task. The characteristics (mean length, range of length, mean frequency, mode of frequency, range of frequency) of each word type are as follows: responsive: 8.76, 4– 13, 16.88, 1, 1 – 105; compulsive: 9.68, 7 – 15, 20.81, 4, 1 – 147; neglectful: 9.75, 6 – 13, 8.91, 1, 1 – 49; positive non-caregiving: 7.53, 4 – 10, 57.32, 6, 1 – 313; negative non-caregiving: 7.19, 4 – 10, 8.71, 2, 1 – 36.

the reasoning behind the cover story.

Results

4.3 Preliminary Analyses

4.3.1 Manipulation Check.

Analysis of the responses to the manipulation check questions revealed that it was relatively easy for participants to answer the caregiving questionnaire about their peer ($M = 5.13$, $SD = 1.42$), to think how their peer would respond ($M = 5.06$, $SD = 1.36$), and to imagine the peer when writing about him or her ($M = 6.07$, $SD = 0.80$). Participants were able to focus on the writing task without feeling distracted ($M = 5.27$, $SD = 1.13$), and they felt as they typically do when with the peer ($M = 5.09$, $SD = 1.20$) during the writing task. These responses provide confidence that participants were focused on the priming manipulation task.

4.3.2 Data cleaning.

Because less than 5% of data were missing, missing data points were replaced with the mean for the appropriate measure (T1 and T2 caregiving). Three participants did not complete the PANAS, two participants did not complete the evaluation questions, and one participant did not complete the word recall task.

4.4 Post-Prime (T2) General Peer Caregiving

To test *Hypothesis 1*, which predicted that a primed relationship-specific model of received care should override the effects of T1 general peer caregiving, two simultaneous regressions were conducted to predict T2 general peer responsive and compulsive caregiving. The predictor variables were T1 general peer responsive and compulsive caregiving and primed peer responsive and primed compulsive care. There was no multicollinearity between the predictor variables (see Table 11).

Table 11

Zero-order correlations between T1 and T2 general peer caregiving and primed received care

	1	2	3	4	5	6
1 T1 Responsive	--	.07	-.08	.14	.00	-.06
2 T1 Compulsive		--	.05	-.29*	-.02	.02
3 Prime Resp			--	.02	.39***	.07
4 Prime Comp				--	.23	.25*
5 T2 Responsive					--	.17
6 T2 Compulsive						--

Note. T1 = Time 1; T2 = Time 2; Responsive = General Peer Responsive Caregiving; Compulsive = General Peer Compulsive Caregiving; Primed Resp = Primed Responsive Care; Primed Comp = Primed Compulsive Care

*** $p < .001$. * $p < .05$.

Results confirmed the hypothesis and supported research by Rowe and Carnelley (2003) (see Table 12): the primed model of received care overrode the effect of the T1 general peer caregiving model. Specifically, in predicting T2 responsive caregiving, participants who were primed with a more responsive peer reported a more responsive peer caregiving style at T2. Further, the T1 measures of caregiving were not significant predictors. In predicting T2 compulsive caregiving, participants who were primed with a more compulsive peer reported a more compulsive peer caregiving style at T2, although the overall F of the multiple regression predicting T2 compulsive caregiving was not significant ($p = .22$).[5] These results provide partial support for Collins and Read's (1994) proposition that the structural properties of a model are important in determining its subsequent effect on information processing. Specifically, the results demonstrated that a *general* model of caregiving was traded for a *relationship-specific* model of received care in shaping T2 general peer caregiving.

[5] I re-ran the simultaneous regressions including the participants' post-prime positive and negative affect as a predictor to ensure that the effect of primed care on T2 caregiving was not accounted for by affect. Positive affect (βs = .02 and .14, *n.s.*, in predicting T2 responsive and compulsive caregiving, respectively) and negative affect (βs = -.18 and -.21, *n.s.*) did not significantly predict T2 caregiving. Primed responsive care remained a significant predictor of T2 general responsive (βs = .38, $p < .001$) and primed compulsive care remained a significant predictor of T2 general compulsive caregiving (βs = .31, $p < .05$) after accounting for affect. This implies that primed care influenced T2 caregiving beyond the effect of affect.

Table 12

Simultaneous regression analyses predicting T2 general peer caregiving

Predictors	*T2 Responsive Caregiving*		*T2 Compulsive Caregiving*	
	β	t	β	t
T1 Responsive caregiving	-.01	-0.06	-.11	-0.86
T1 Compulsive caregiving	.03	0.28	.11	0.84
Primed Responsive care	.39***	3.47	.05	0.38
Primed Compulsive Care	.23	1.94	.29*	2.32
	F (4, 65) = 4.14**, Total R^2 = .20**		F (4, 65) = 1.48, Total R^2 = .08	

*** $p < .001$. ** $p < .01$. * $p < .05$.

To address *Research Question 1*, which asked whether the strength of the primed model would moderate the model's effect on T2 general peer caregiving, a series of hierarchical regressions was conducted predicting T2 responsive and compulsive peer caregiving, separately. Because T1 responsive and compulsive peer caregiving were not significant predictors in the earlier regressions and *n* was relatively small, I did not include them as predictors. At Step 1, primed responsive care, primed compulsive care, and one of the strength indicators for the primed peer caregiver (i.e., preference for use, time known, and frequency of contact) were entered. At Step 2, the two-way interactions between each primed care variable and a strength indicator (e.g., primed responsive care X primes' time known) were entered. The predictor variables and interactions were created consistent with the procedure outlined by Aiken and West (1991).

Consistent with Chapter 3, there was little conclusive evidence for the moderating effect of strength of model in predicting T2 general peer responsive or compulsive caregiving (see the top 2 panels of Table 13). Further, although only one of the 12 interaction terms was significant in Chapter 3 (the frequency of contact X received responsive care from the peer predicted participants' romantic caregiving), neither of the frequency of contact interactions was significant in this study. The preference for use X primed responsive care was significant. However, after plotting the simple slopes for this interaction, there was no significant difference in T2 general peer compulsive caregiving based on strength of model for participants primed with a more responsive peer ($\beta_{strength}$ = .20, t = 1.05, *n.s.*) or those primed with a less responsive peer ($\beta_{strength}$ = -.25, t = -1.75,

n.s.). Together these results show no support for the idea that stronger primed models influence caregiving more than weaker models.

Table 13

Summary of strength interactions predicting T2 general peer caregiving

Strength Variable	ΔR^2 Step 2	β Strength X Pr. Responsive	β Strength X Pr. Compulsive	Total R^2	F of model at Step 2
		T2 General Peer Responsive Caregiving			
Preference for Use	.05	.11	.23	.29	5.31***
Time Known	.09*	-.21	-.17	.29	5.23
Frequency of contact	.02	-.09	-.11	.23	3.81**
		T2 General Peer Compulsive Caregiving			
Preference for Use	.08*	.27*	-.17	.16	2.38*
Time Known	.03	-.06	.22	.12	1.79
Frequency of contact	.00	.06	.03	.07	0.98
		Recalled Responsive Words			
Preference for Use	.02	.09	.08	.06	0.81
Time Known	.02	-.08	.12	.06	0.83
Frequency of contact	.06	-.20	.18	.12	1.77
		Recalled Compulsive Words			
Preference for Use	.01	-.11	.04	.06	0.85
Time Known	.01	-.03	.09	.07	0.87
Frequency of contact	.12*	-.29*	.28*	.18	2.77*
		Recalled Neglectful Words			
Preference for Use	.11*	.34**	-.03	.16	2.47*
Time Known	.02	.03	-.14	.08	1.11
Frequency of contact	.01	.03	-.11	.05	0.69

Note. Pr. = Primed Degrees of freedom for F in T2 general peer caregiving regressions = 5, 64. Degrees of freedom for F in recalled words regressions = 5, 63.

***$p < .001$. **$p < .01$. *$p < .05$.

4.5 Word Recall

To test *Hypothesis 2a*, which predicted that participants primed with a model of received care would recall more caregiving-related words than non-caregiving words, paired sample t-tests on the number of recalled words of each type were conducted (see Table 14). As predicted more caregiving (responsive, compulsive, neglecting) words were

recalled than non-caregiving (positive, negative) words, t (68) = 3.64, $p < .001$. This demonstrates that the priming manipulation produced a caregiving context effect (Rowe & Carnelley, 2003). The primed context of received care facilitated the recall of caregiving-related words (e.g., Baldwin et al., 1993) because the activated model biased attention toward caregiving-relevant information. In addition, participants recalled more responsive caregiving words than compulsive and neglectful words. This finding is partially consistent with Rowe and Carnelley (2003) who found that after priming an attachment style, more positive attachment words were recalled than negative attachment words. In this study, all responsive caregiving words were of positive valence whereas the compulsive words were of mixed valence and the neglectful words were all negative words. Participants recalled equal numbers of positive and negative non-caregiving words.

Hypothesis 2b predicted that participants would recall more caregiving-related words that were congruent with the primed received care style. A series of bivariate correlations between the number of words recalled (responsive, compulsive, neglectful, positive, negative) and primed care (responsive, compulsive, neglectful) revealed little support for the hypothesis. However, there was a weak association between primed neglectful care and the recall of responsive caregiving words. Specifically, participants primed with a more neglecting peer recalled *fewer* responsive words (r (69) = -.24, $p <$ .05). Nevertheless, all other correlations were not significant (rs ranged from -.18 to .16, *n.s.*). [6] Similar to the current findings, Rowe and Carnelley (2003) found that primed-avoidant participants recalled fewer positive attachment words than primed-secure participants, but did not recall more negative attachment words. Overall, the effects of the primed received care style on memory for caregiving-relevant words are similar to the effects of a primed attachment style on memory for attachment-relevant words.

[6] The bivariate correlations were re-conducted controlling for post-prime affect. Consistent with the main findings, participants primed with a more neglectful peer recalled fewer responsive words after controlling for negative affect (r (66) = -.27, $p < .05$). These results suggest that the effect of the priming manipulation cannot be explained by affect.

Table 14

Zero-order correlations and mean number of words recalled

Word Type	*No. Words Recalled*						
	Mean	*SD*	*1*	*2*	*3*	*4*	*5*
1 Responsive	1.94_a	1.79	--	.27*	.47***	.11	.43***
2 Compulsive	0.55_b	0.98		--	.22	.17	.24*
3 Neglectful	0.81_c	0.97			--	.23	.30**
4 Positive non-caregiving	1.07_d	1.19				--	.12
5 Negative non-caregiving	1.09_d	1.19					--
6 Caregiving	3.30_e	2.86					
7 Non-caregiving	2.16_f	1.79					

*Note.*Paired sample t-tests: means that do not share the samesubscript differ at $p < .01$.

*** $p < .001$. ** $p < .01$. * $p < .05$.

A series of hierarchical regression analyses was used to address *Research Question 2,* which asked whether the strength of the primed model would moderate the effect of primed received care style on recall for caregiving-relevant words. At Step 1, primed responsive care, primed compulsive care, and one of the strength indicators for the primed peer caregiver (e.g., preference for use) were entered. At Step 2, the two-way interactions between each primed care variable and a strength indicator were entered. Results are shown in the bottom half of Table 13. The preference for use X primed responsive care interaction was significant in predicting the number of neglectful words recalled, supporting and extending the above findings. Specifically, participants primed with a strong model (i.e., a greater preference for use) of an unresponsive peer, recalled more neglectful words than participants primed with a weaker model ($\beta_{strength} = .52$, $t = 2.93$, $p < .01$). Strength of model did not moderate the effect of primed care on recall of neglectful words ($\beta_{strength} = -.15$, $t = -0.93$, *n.s.*) for participants primed with a responsive peer. Thus, these results suggest that stronger models of received care may bias memory toward congruent caregiving-related information to a greater extent than weaker models do. In addition, it is noteworthy that this effect was only found for negative caregiving words.

The frequency of contact X primed care interactions were both significant in predicting the number of compulsive words recalled; however, after plotting the simple slopes, strength of model did not moderate the effect of primed responsive care on recall of

compulsive words for participants primed with a responsive peer ($\beta_{strength}$ = .52, t = 2.93, *n.s.*) or an unresponsive peer ($\beta_{strength}$ = -.28, t = -1.51, *n.s.*). Similarly, strength of model did not significantly moderate the effect of primed compulsive care on recall of compulsive words for participants primed with a more compulsive peer ($\beta_{strength}$ = -.23, t = -1.31, *n.s.*) or a less compulsive peer ($\beta_{strength}$ = .22, t = -1.58, *n.s.*). Together these results do not provide strong support for the idea that stronger primed models will have a greater influence on the processing of caregiving-relevant information than weaker primed models. Indeed, only 3 of the 18 interactions were statistically significant. Instead, the results show mixed support for strength of model: strength was a moderator for the recall of neglectful (i.e., negative) words but not for responsive (i.e., positive) or compulsive (mixed valence) words. This suggests a negativity-bias in the processing of the caregiving-relevant information.

Discussion

4.6 Post-Prime General Peer Caregiving

This study examined the effects of a primed model of received care on self-reported general peer caregiving. The results suggest that adapting one's self-reported caregiving style is possible, at least temporarily, through manipulating the accessibility of an attachment model, specifically the model of the other (received care). Participants who spent 15-minutes thinking about a caregiving interaction with a peer went on to describe their general peer caregiving responsiveness and compulsiveness as congruent with the received responsive and compulsive care of the peer. Notably, the primed model of received care overrode participants' reports of their general peer caregiving reported in an earlier session (i.e., pre-prime). These results suggest that the writing task was sufficient to temporarily lower the threshold of activation of the model of received care from a peer. Consistent with previous research (e.g., Whitaker et al., 1999) attachment models that are more accessible are more likely to bias an individual's (self-reported) responses towards his or her significant others.[7]

[7] Whitaker et al. (1999) measured attachment model accessibility by examining the response latencies for positive and negative attachment and non-attachment words. Participants with highly accessible models (i.e., those with shorter response latencies) showed a stronger relationship between their expected satisfaction in a

4.7 Memory for Caregiving-Relevant Information

The priming manipulation appears to have created a caregiving context that led to enhanced memory for caregiving-relevant words compared to non-caregiving words. Put another way, the accessible model of received care rendered participants more sensitive to words that were congruent with the activated model (see Baldwin, 1992). These results are consistent with the view of Collins and Read (1994) that established schemas bias memory *toward* information that is relevant to and consistent with the schema. In this way, model-consistent words are likely to be preferentially attended to, encoded and retrieved. In partial support of this interpretation, there was evidence that words *in*consistent with the model of received care were processed *less* efficiently. Participants primed with a model of received neglectful care recalled *fewer* responsive caregiving words. In accord, Stangor and McMillan's (1992) report that memory is poorer for schema-*in*congruent information. These results suggest that when individuals are faced with caregiving-relevant information that is incongruent with the most accessible model of received care, at the time, this information is less likely to be attended to and encoded.

Further, because activation is likely to spread across the whole attachment model, it follows that in priming the model of received care, it is likely that the model's attachment style will have achieved heightened accessibility. Because of conjoint schematicity (i.e., the individual components of a model are mutually intertwined; Baldwin, 1992), the attachment style may be involved in the processing of caregiving-relevant information. For example, an individual primed with a model of neglectful care, (i.e., a caregiver who appears unwilling to respond to one's needs) is likely to have a model of the self as unloved, unaccepted and unworthy. This person may be more sensitive to words such as insensitive, hurtful and abusive, and less sensitive to words such as responsive, sensitive and helpful. As described below, the notion of conjoint schematicity has clear implications for clinical interventions aimed at adjusting an individual's caregiving responsiveness.

A noteworthy result to arise from these analyses was that participants appeared to preferentially attend to and process words of a positive valence than words of a negative valence. Participants recalled more responsive caregiving words, which were all of a positive valence. This result is in accord with Rowe and Carnelley's (2003) study, in which

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hypothetical marriage and their model of self than participants with less accessible models.

participants recalled more positive attachment, than negative attachment words, following a priming manipulation. Further, consistent with the notion of a caregiving context, participants recalled more positive caregiving words than positive non-caregiving words. This pattern of results may be explained by a general propensity to recall positive information over negative information. Generally, according to Walker, Skowronski and Thompson (2003), recall is enhanced for pleasant memories. This bias is not explained by environmental cues, voluntary memory selection or retrospective memory biases (Walker et al., 2003). Participants' enhanced recall for responsive caregiving words may be because they were more likely to write about a pleasant experience; one in which their attachment figure was responsive toward them.[8]

Taken together, the effect of the primed model of received care on self-reported caregiving style and the processing of caregiving-relevant information offers a fruitful direction for future research. That is, does the effect of the priming manipulation extend from self-reported or hypothetical caregiving to observed caregiving behaviours? Does a person provide care congruent with the activated model of received care or caregiving? A caregiver primed with a model of received responsive care would view his or her partner as worthy of care, promptly and accurately notice and interpret the partner's attachment signals, and respond sensitively and appropriately. Answers to these questions may have important implications for therapeutic interventions aimed at adapting individuals' caregiving ability.

4.8 Model Strength and Model Specificity

Consistent with the results from Chapter 3, model strength did not moderate the effect of received care from peer on post-prime general peer caregiving. However, model strength did moderate the effect of received care from peer on the processing of caregiving-relevant words. Participants primed with stronger models (i.e., greater preference for using as an attachment figure) of a neglectful peer caregiver appeared to preferentially attend to,

8 In response to the item, "*Were you happy with the care provided by your peer?*" participants in the present study reported that they were generally very happy with the care they received. Further, a posthoc correlation between participants' responses to this question and the perceived responsiveness of the peer suggested a tendency for participants who reported being happy with the care received to be reporting on an interaction with a responsive peer (r (69) = .22, p = .06).

encode and retrieve words congruent with the peer's caregiving style (e.g., insensitive, distant, unreliable, rejecting) compared to participants primed with weaker models. This result extends those reported above regarding participants who were primed with a model of more neglectful care recalling fewer responsive caregiving words. Taken together, these results help to understand how models of caregiving may be maintained and also how caregiving style may be adjusted. Speculatively, the most accessible model of received care will bias memory processes toward information consistent with that model's content. In this way, the model's structure and content are strengthened because individuals will notice or recall only elements of the interaction that are consistent with their activated model, elaborating the model's content.

Results suggested that, consistent with Collins and Read's (1994) feature trade-off proposition, a *relationship-specific* model of received care was applied over a general model of peer caregiving in determining post-prime general peer caregiving style and the processing of caregiving-relevant information. However, this study was not an accurate test of Collins and Read's proposition: the relationship-specific model's accessibility had been manipulated. To achieve a more accurate test of Collins and Read's proposition, future research might prime simultaneously a relationship-specific and a general model of received care and examine which has the greatest effect on information processing.

4.9 Clinical and Theoretical Implications

A notable point to emphasise about this study is that the analyses involved a primed relationship-specific *attachment* model overriding the effect of a general model of *caregiving* (see Figure 5, Chapter 3). This result has important theoretical considerations. On the one hand, that a model from the attachment behavioural system overrode the effect of a model from the caregiving system corroborates Bowlby's (1980; see also Solomon & George, 1999) view that the behavioural systems operate as a unified, interconnected network and that the different systems can exchange information. This is also consistent with the views of contemporary attachment theorists who consider the attachment and caregiving behavioural systems to be independent but linked, developmentally and behaviourally to each other (George & Solomon, 1999; Kunce & Shaver, 1994). On the

other hand, Crowell et al. (2002) suggest that the functions of the attachment and caregiving systems in young adulthood may not be distinct, but contained within one behavioural system. According to this view, the relationship-specific model of received care and the general model of peer caregiving are derived from the same behavioural system. It is beyond the scope of this study to address the organisation of the attachment and caregiving behavioural systems; however, future research should attempt to test empirically this theoretical proposition. One suggestion would be to assess the elements of an attachment and caregiving model (see Figure 8), namely, own attachment style and caregiving style and perception of partner's caregiving style and attachment style. Structural equation analysis could then be used to examine how related or independent these styles are; whether they reflect one latent variable or two. In sum, further social-cognitive research is required to elucidate the organisation of attachment and caregiving models. This issue also has clinical importance because understanding the organisation of the behavioural systems and working models will fuel research questions regarding the ability of removing people from cycles of maladaptive attachment and caregiving experiences. It follows that if views of others (models of received care) are capable of shaping models of caregiving, then in order to be an effective caregiver, one must be able to view oneself as worthy of care.

Rowe and Carnelley (2003) suggest that through the repeated priming of secure attachment models individuals who have a general insecure attachment model may render such models chronically accessible. Individuals could be trained to systematically lower the activation threshold of more optimal models through repeated self-priming (e.g., through self-assertions, talking to therapist, or self in mirror to heighten self-awareness). Such techniques would be simple enough to be continued away from the therapeutic relationship, increasing their likelihood for success.

The target and timing of intervention to adapt young adults' caregiving ability are also important considerations. Marvin, Cooper, Hoffman, and Powell (2002) suggest that in parent-infant attachment, the direct focus for intervention should be the parent caregiver, because he or she has a greater chance for change. Some parents may be ineffectual caregivers because their own experiences of receiving care were not optimal. In parent-infant relationships, it may be more effective for the infant if the parent adapts his or her

working models (Marvin et al., 2002); however, in adult-adult dyads, caregiving and careseeking will be somewhat reciprocal. In adult attachments, it might be more effective to adapt the attachment-caregiving interactions of both members of the couple, or to intervene whilst the adult is single so that when selecting a potential attachment figure he or she is able to seek care and provide care effectively. Indeed, Kilmann, Laughlin, Carranza, Downer, Major and Parnell (1999) suggest that in order to adapt established interaction patterns, intervention will be most successful prior to engagement. For example, pre-marriage, individuals may be oblivious to the problems in their relationship. Consequently, Kilmann et al. (1999) advocate targeting closeness and distance issues in relationships early.

Finally, because non-optimal adult caregiving strategies are thought to be derived from the internalisation of experiences with unavailable and insensitive caregivers (e.g., Bretherton, 1992), to adapt an individual's caregiving responsiveness, it would also seem appropriate to target the non-optimal models of received care. This point is discussed in more detail in Chapter 6.

4.10 Strengths and Limitations

This study was one of the first to prime an attachment model yet focus on the effect of the received care style on caregiving-relevant information processing and self-reports of general peer caregiving. Nevertheless, there were empirical and theoretical limitations to this study. The full extent of the priming manipulation on caregiving-relevant information processing could not be examined because of limitations with the LDT: the caregiving words were not matched for word frequency or length implying that the reaction times could not be assessed. Future research may examine the effect of conjoint priming on caregiving-relevant information processing and caregiving style. I did not assess the relationship-specific attachment style to the primed peer due to time restrictions; the experimental sessions for both studies lasted over one hour. Further, because self-report measures were used, including an attachment style measure may not have clarified the results due to problems with shared method variance.

4.11 Conclusions

This study has demonstrated that by priming a model of received care a person can adapt his or her self-reported caregiving style, temporarily. In addition, activated models also shape the way in which caregiving-relevant information is processed. On a practical level, these findings are useful in understanding how to address the revision of maladaptive caregiving styles. Future research should address the long-term possibilities of heightening optimal models of caregiving before empirical research can inform clinical interventions. However, the ability to heighten the accessibility of relationship-specific models is likely to have psychological benefits in non-clinical samples. For example, people can be motivated to improve their caregiving ability by spending several hours each day reflecting on positive views of the self and others. This study has demonstrated the importance of taking into account one's models of others (i.e., received care style) as well as attachment style in understanding the way in which maladaptive attachment-caregiving styles can be adapted. Consequently, it is likely that in developing a more secure attachment orientation or responsive caregiving style, then both views of self and others are important.

CHAPTER 5

Features and Functions III: Model Elaboration & Priming a General Model of Caregiving

"Every situation we meet with in life is construed in terms of the representational models we have of the world about us and of ourselves. Information ... is selected and interpreted in terms of those models, its significance for us and for those we care for is evaluated in terms of them, and plans of action conceived and executed with those models in mind."

(Bowlby, 1980, p. 229).

5.0 Chapter Overview

An important directive for adult attachment research is to uncover the factors that determine the continuity or discontinuity of cycles of attachment insecurity and inadequate caregiving. Chapters 3 and 4 attempted to explain the continuity of inadequate caregiving by examining the structural features of models of received care. Nevertheless, there has been little evidence to support Collins and Read's (1994) proposition that stronger models within the model network are more likely to be activated and guide caregiving-relevant information processing. Thus, the question remains: when there are several available models of received care, what factors may explain why certain models are more likely to influence a caregiver's responsiveness compared to other models? One feature of model strength that I did not operationalise in the previous studies was the knowledge contained within the model, that is, the elaboration of a model's content. The first aim of this chapter is to explore the concept of model elaboration and assess whether this feature of model strength determines which models of received care are likely to be reflected in adult caregiving.

The second aim of this study is to examine the way in which a primed general model of parental or peer caregiving directs attention to model-consistent information (i.e., the names of participants' attachment figures). Understanding the way in which attachment and caregiving models bias attention to specific features of one's environment is important because it may reveal the processes by which activated caregiving and attachment models

influence cognition, emotion and behavior in new attachment relationships. To activate a general caregiving model, participants were asked to think about caring for a child (parental caregiving) or a same-aged peer (peer caregiving) who they did not know. In addition, I examined how activation spreads from the primed general caregiving model to relationship-specific models of received care. For example, if a person is asked to care for a crying child, do his or her models of received care from mother and father achieve heightened accessibility? The answer to such questions may have important implications for our understanding of the functions of multiple models in the model network and may provide explanations for the continuity of maladaptive caregiving patterns.

5.1 The Elaboration of Parental and Peer Attachment Models

In their description of the strength of an attachment model, Collins and Read (1994) proposed that a model's strength is also determined by the complexity of the model within the hierarchy (e.g., the number of interconnections between models) and the attachment-related beliefs, attitudes and expectations contained within the model (Collins & Read, 1994). This refers to a model's elaboration or the *knowledge* contained within the model. This suggests that a model's content will represent the *episodic* attachment-related memories of interactions with the attachment figure; the autobiographical episodes of specific events (Baldwin, 1992). For example, Collins and Read described the knowledge of an insecure adult who has had a history of negative relationship experiences. Such an adult would have elaborate knowledge of painful and unrewarding social experiences and less developed knowledge about satisfying experiences (Collins & Read, 1994). Consistent with Collins and Read's definition, I operationalized model elaboration as *the range of attachment experience on which a model is based.*Described in te rms of models of received care, an elaborate model of an unresponsive, insensitive mother may contain a wealth of representations of attempts to *seek* her for emotional and physical support, and representations of rejection, being ignored or abuse and no, or few, representations of *receiving* emotional and physical support. It follows that a model that is based on a wealth of experience may be cognitively more accessible because of its detailed and varied content (Overall et al., 2003).

The accessibility and availability of a model of received care may determine that model's activation and subsequent influence on adult caregiving. Consistent with Collins and Read's (1994) proposition that a model's strength may determine the activation of that

model, those attachment models that have a more elaborate content, and hence are proposed to be structurally stronger, should be more likely to influence thoughts, emotions and behaviour in attachment-caregiving situations compared to structurally weaker attachment models (i.e., those that contain less knowledge regarding attachment-caregiving experiences). Collins and Read (1994) state that the models of major attachment figures (e.g., mother, husband) should be the most elaborate; hence, should be relatively strong in comparison to other attachment figures. This would suggest that these models would be most accessible.

In terms of the models of young adults, parental models should be the most elaborate and hence the most accessible because of the purported wealth of experience on which parental models are based in comparison to that on which newly-formed peer models are based (Collins & Read, 1994). That is, even though peers may be the primary attachment figure of young adults or are more likely to satisfy their attachment needs (La Guardia et al., 2000; Trinke & Bartholomew, 1997), parents are likely to have once occupied this position and the elaboration of parental models should reflect this history. However, although theoretically this suggestion is logical, finding support for this suggestion may be hampered by the limitations in how model elaboration is assessed.

5.1.1 Assessing Working Model Content.

Both interview and self-report methods have been used to assess the content of young adults' parental attachment models (e.g., Levy, Blatt, & Shaver, 1998) and romantic partner and peer attachment models (e.g., Fraley & Davis, 1997). The Adult Attachment Interview (AAI; George et al., 1985) examines adolescent and adult representations of the parent-child attachment relationship by analyzing participants' discourse when discussing parental caregiving in childhood (Stein et al., 1998). Participants are asked to describe specific episodes when they sought their mother and father. One of the strengths of this measure is that it may capture the minimizing or maximizing strategies employed when discussing attachment-related experiences; these are not so easily detectable in self-report measures. For example, adults classified as Dismissing of Attachment show idealization, normalization or minimization of attachment experiences. That is, they may state being unable to recall childhood events or describe their parents as overly positive. Nonetheless, the major drawback of using the AAI is its cost and length of training time (see Carnelley & Brennan, 2002). Consequently, for the current study, a self-report measure was the most convenient and cost-effective method for assessing episodic memories of attachment-

related experiences.

Self-report measures have also assessed the content of mental representations. Blatt, Auerbach and Levy (1997) asked participants to rate their significant others along 12 qualitative-thematic scales, including affectionate, ambitious, malevolent-benevolent and cold-warm.[1] Significant differences in the descriptions of parents for clinical and normal participants have been found using these scales (e.g., Bornstein & O'Neill, 1992). More specific to the current study, Levy et al. (1998) used the qualitative-thematic scales to examine the content of young adults' mental representations of their mother and father. Results revealed significant attachment style differences in the content of parental representations of college-aged students. Secure participants described their mother as more benevolent compared to preoccupied and fearful participants and described their fathers as more benevolent than dismissing, fearful and preoccupied participants and less punitive than preoccupied and fearful participants. Fearful participants described their mother as more ambivalent compared to preoccupied and secure participants.

Based on these findings it is possible that young adults' reports of the knowledge contained within their attachment models may be influenced by their current romantic attachment orientation. Scharfe and Bartholomew (1994) report how one's current attachment orientation influences his or her reports of attachment experiences. For example, Levy et al. (1998) suggest that dismissing individuals have a repressive, minimizing strategy for attachment-relevant experiences that prevents clear, extensive and empathic thoughts regarding their parents (Levy et al., 1998). Indeed, previous research has shown that avoidant individuals do recall fewer emotional memories from their childhood (e.g., Mikulincer & Orbach, 1995). Consequently, the elaboration of a model's content is likely to vary *between* young adults.

Fraley and Davis (1997) found attachment style differences in the use of attachment figures on certain attachment functions. Fraley and Davis employed a revised version of the WHOTO (Hazan & Zeifman, 1994) to assess the transfer of attachment components from parents to peers. Findings showed that the use of peers for the secure-base function was associated with young adults' attachment style in close relationships (Fraley & Davis, 1997). Secure young adults were more likely to use their best friend and their romantic partner for the secure-base function, whereas dismissing young adults were less likely to

[1] For Blatt et al. (1997) structural properties of mental representations of self and other are based on the dimensions of differentiation-relatedness and conceptual level.

do so; although the association was weaker for romantic partners. Fraley and Davis suggest that dismissing young adults may have a reluctance to use their peers as attachment figures whereas secure young adults find it easier to create an affectional bond with a close friend. This reluctance to use peers may suggest that the relationship-specific models of peers of dismissing young adults are less elaborate than those of secure, fearful, or preoccupied young adults.

Further, it is also possible that model elaboration will reflect the quality of the attachment-caregiving interactions. For example, if a young women's father continually failed to satisfy her attachment needs, she may subsequently cease to seek him. This would imply that her model of father might be *less* elaborate compared to other models within her attachment model hierarchy. La Guardia et al. (2000) found that young adults experienced different levels of need fulfillment in their adult attachments. The four major attachment figures of college-aged students satisfied their attachment needs (i.e., supporting autonomy, competence and relatedness) in the following order, greatest need satisfaction first: best friend, mother, romantic partner, father. Moreover, need satisfaction in relationships with mother, father, romantic partner, and best friend was positively associated with attachment security. Consequently, it might be that, contrary to Collins and Read's (1994) proposition, models of father may be the least elaborate models because young adults appear not to seek their fathers for need satisfaction to the same degree as they seek their close friends and mothers.

Finally, Levy et al. (1988) raise two issues to consider in the measurement of model elaboration. First, Levy et al. advocate the use of interview-based measures for studies examining parental representations. However, it is argued that interview measures are as susceptible to memory and social desirability biases as self-report measures. Second, Levy et al. state that there may be a substantial gap between what participants report to be their parents' behaviour and the actual behaviour of their parents. However, consistent with the views of several developmental psychologists who have examined self-reports of the parent-child relationships from the parent and child's perspective, agreement between parents' reports and their children's reports of parenting should not be expected (e.g., Noller & Callan, 1988; Sessa et al., 2001). Parents' reports of early experiences with their children are as susceptible to biases in recall as children's reports of early experiences with their parents (Hardt & Rutter, 2004).

In sum, in selecting a self-report measure to assess the range and amount of attachment-relevant experiences contained in young adults' attachment models with their major attachment figures (mother, father, romantic partner and peer), there were several issues that I needed to take into account. The measure needed to capture a range of attachment-relevant experiences needs, feelings and behaviours and whom young adults seek when their attachment system has been activated. Consequently, the WHOTO would be inappropriate because it contains only 6 items that assess proximity-seeking, safe-haven and secure-base use. In addition, the qualitative-thematic scales require participants to make evaluative judgments about the quality of the attachment figure's behaviour (e.g., warm, ambitious), whereas I wanted to assess the *range* of attachment needs that led to seeking the attachment figure regardless of the attachment figure's responses to requests for support. Finally, I wanted to address the question of whether the models of received care from parents are more elaborate than those of received care from peers. Subsequently, I conducted a pilot study to assess the measurement of model elaboration, as defined above, using the self-report method and a sample of young adults.

5.2. Assessing Model Elaboration: Pilot Study

The measure of model elaboration needed to capture the attachment-relevant needs, feelings and behaviours that are experienced in both parent-child and adult-adult dyads. Thus, I reviewed several empirical papers that focused on attachment and caregiving (e.g., Ainsworth, 1969; George & Solomon, 1989, 1999) for statements that reflected attachment-relevant experiences based around proximity maintenance, secure base and safe haven (e.g., When I need to rely on someone…; see Appendix H for full list). After removing redundancies, 35 statements were selected and developed into a self-report questionnaire of model elaboration.

5.2.1 Participants.

Ninety-five undergraduate students participated during a psychology lecture, and received no reward for their participation. Participants aged over 25 (n = 4) years were not included in the analyses. Of the 91 eligible participants, 75% (n = 68) were female and 57% (n = 52) were currently in a romantic relationship. The mean age was 20.3 years (SD = 1.29, *range*: 19 – 25 years).

5.2.2 Measures.

Model elaboration questionnaire. Participants were instructed to think about who they would turn to when experiencing each of the 35 attachment-relevant needs. For each need, participants indicated the frequency with which they sought their parents (mother and father) and their peers (friends and romantic partners). Frequency was assessed on a 7-point scale (1 = *never* to 7 = *always*).

Following data collection, three of the 35 statements were dropped because of similarities to other statements (see Note in Appendix I). In addition, the statements "*when I'm hungry*" and "*when I need financial support*" were dropped because participants indicated that they rarely sought their peers for such needs. Furthermore, due to an oversight, a further 6 items were not included in the version of the questionnaire reported in the main study.[2] Thus, the results of the pilot study are based on the 24-items included in the main study.

Romantic attachment orientation. Using the 36-item Experiences in Close Relationships questionnaire (Brennan et al., 1998), participants reported their general romantic attachment orientation. As in the previous studies, the avoidance ($M = 2.52$, $SD = .96$; *alpha* = .94) and attachment anxiety ($M = 3.78$, $SD = .98$; *alpha* = .90) dimensions were approximately normally distributed. Consistent with previous research (e.g., Macdonald, 1999), the two dimensions were not correlated ($r = .18$, *n.s.*). Two participants had missing data on avoidance and attachment anxiety; hence did not have an attachment category. Of the 89 valid participants with full data sets, 38% ($n = 34$) were secure, 19% ($n = 17$) were fearful avoidant, 33% ($n = 37$) were preoccupied, and 6% ($n = 5$) were dismissive avoidant.

5.2.3 Analyses.

Two different methods for computing model elaboration values were tested. These model elaboration values would represent the elaboration of the *general* parental model and the *general* peer model. First, I computed model elaboration in terms of the attachment-relevant needs for which participants frequently sought their parents or peers. Thus, each need that was rated with a frequency of 4 or more was tallied as 1, and the sum of the needs was computed (range from 0 to 24). Mean elaboration values for each model revealed that the general peer model was more elaborate than the general parental model

[2] Importantly, these needs were mostly concerned with protection and safety; hence the measure was lacking in needs that would entail using the attachment figure as a safe haven.

($M_{parental}$ = 16.43; M_{peer} = 18.89; t (88) = -3.83, $p < .001$). However, these model elaboration values were likely to be biased by the nature of the participants' living arrangements. The majority of participants were students living away from home; hence, the reported frequencies of seeking parents and peers may have been influenced by the closer proximity and potentially greater availability of peers compared to parents.[3, 4] Consequently, I based model elaboration on the number of attachment-relevant needs that participants reported as seeking the attachment figure (i.e., 2 or greater on the frequency scale). In this way, there was a greater likelihood of the general parental model being as elaborate, if not more elaborate, as the general peer model. Thus, each attachment-relevant need that was rated with a frequency of 2 or more was scored 1 and each need rated with a frequency of 1 was scored 0; total elaboration scores ranged from 0 to 24.

Is the content of parental attachment models more elaborate than the content of peer models? To address this question, I conducted a paired-sample t-test on the general parent model elaboration and general peer model elaboration values. The general parent model (M = 23.43, SD = 1.15, *range* = 16-24) was as elaborate as the general peer model (M = 23.59, SD = 1.24, *range* = 16-24), t (90) = -1.03, *n.s.*[5] Consequently, it may be that the self-report method is not sufficiently sensitive to capture the theorized differences between parental and peer model elaboration. However, the lack of support for Collins and

[3] A series of paired sample t-tests was conducted in order to examine the frequency with which participants sought their parents and peers for each attachment need (see Appendix I for table of means and t-values). Parents were sought more frequently than peers for some safe-haven related needs (i.e., when I need guidance) and secure-base needs (i.e., when I need to rely on someone). Peers were sought more frequently than parents for proximity-seeking needs (i.e., when I need to feel close to someone) and safe-haven functions (i.e., when I'm emotionally upset). These findings are in line with research on college-aged participants and young adults (e.g., Fraley & Davis, 1997; Hazan & Zeifman, 1994) that place peers as the target of proximity need satisfaction over parents. There were also several attachment needs for which participants sought parents and peers equally as frequently (e.g., needing to trust someone). This might suggest that the transfer of attachment functions from parents to peers was ongoing for these participants.

[4] I also examined whether participants' current romantic relationship status had an effect on the frequency of seeking their parents and peers for their attachment needs. The frequency of seeking parents for each attachment need did not differ based on participants' current romantic relationship status. This finding is congruent with Trinke and Bartholomew (1997) who found that parents consistently featured in the attachment hierarchies of young adults whether or not they had a current romantic partner. However, the frequency of seeking peers for each attachment need did differ based on romantic relationship status. Participants with a current romantic partner sought their peers more frequently when they were feeling emotionally upset (t (89) = 2.59, $p < .05$), in need of physical closeness (t (89) = 4.42, $p < .001$), feeling vulnerable (t (89) = 3.58, $p < .001$), feeling sad (t (66.68) = 2.63, $p < .05$), feeling insecure (t (89) = 2.31, $p < .05$), needing to feel close to someone (t (60.46) = 3.99, $p < .001$), feeling lonely (t (62.31) = 2.35, $p < .05$), feeling down (t (89) = 2.35, $p < .05$), and needing to trust someone (t (89) = 1.96, $p < .05$). That current romantic partner was included in the definition of the general peer model may explain why these differences may exist.

[5] One participant had an outlier (defined as the mean ± 3 SD) on the peer elaboration value and 4 participants had outliers on the parental elaboration value; their values were replaced with the mean for the variable.

Read's (2004) proposition may be because model elaboration was assessed at the *general* level. The *general* peer model may contain experiences with several romantic partners and close friends and the *general* parent model may contain experiences with at least two parents. These general models may be as elaborate as each other because they contain experiences with several attachment figures. It is necessary to address this question using the elaboration values of relationship-specific models to examine whether peer models continue to appear more elaborate than parental models. Indeed, La Guardia et al. (2000) found that, out of four attachment figures, fathers satisfied the needs of college-aged participants the least.

Results also revealed that participants did not differ in general parent model elaboration (t (90) = 0.52, *n.s*,) and general peer model elaboration (t (41.49) = 1.49, *n.s.*) based on their current romantic relationship status. Theoretically, parental elaboration should not vary by current relationship status because it is presumed that parents were the targets of attachment needs prior to the onset of dating relationships.

Does romantic attachment style influence participants' reports of model elaboration? I addressed whether there were attachment style differences in the elaboration of the general parent and general peer models. Two one-way ANOVAs were conducted with the IV as participants' general romantic attachment style and the DVs as the parent model elaboration and peer model elaboration (see Table 15 for the F values and means for each attachment style).[6] General parent and peer model elaboration did not differ by participants' general romantic attachment style.[7] This suggests that model elaboration is not associated with the level of one's attachment security. Participants sought their parental and peer attachment figures even if they could not or did not satisfy their needs. This provides some confidence that the model elaboration measure was not assessing need satisfaction, as La Guardia et al. (2000). Nevertheless, this finding is in contrast to research by Fraley and Davis (1997) who found that young adults' with a dismissing romantic attachment style were less likely to use their best friend and romantic partner as a secure

[6] Gender differences were not examined in the following analyses because when attachment-style was examined by gender there were too few participants in some of the cells: women (*secure* = 29, *preoccupied* = 25, *fearful* = 11, *dismissive* = 2) and men (*secure* = 5, *preoccupied* = 8, *fearful* = 6, *dismissive* = 3).

[7] A post-hoc Games-Howell procedure was used to examine attachment style differences in parental model elaboration because the F was marginally significant; however, there were no significant differences between the four attachment-styles.

base.[8] Moreover, these findings may be the result of the level of attachment orientation that was assessed. That is, general romantic attachment style may differ from general parental attachment style and general peer attachment style (see Chapter 1). Consequently, it is necessary to examine whether attachment style differences in model elaboration are evident when the level and domain of attachment style is consistent with that of the model elaboration value.

Table 15

Attachment style differences in general parent and general peer model elaboration.

	Attachment Style				
Elaboration Value	*Secure*	*Preoccupied*	*Fearful*	*Dismissing*	*F (3, 85)*
Parental	23.54	23.18	23.19	21.00	2.21+
Peer	23.94	23.61	23.57	23.49	1.69

$+p < .10$.

5.2.4. Summary.

The pilot study addressed several concerns regarding self-report methods to assess model elaboration. First, there did not appear to be any minimizing strategies employed by participants high in avoidance; they reported seeking their peers and parents for a similar range of attachment-relevant needs as participants who are less likely to employ such strategies (i.e., individuals low in avoidance). Second, model elaboration did not appear to differ based upon the nature of the attachment relationship (parents vs. peers). This result was inconsistent with Collins and Read's (1994) proposition, but may reflect the level of the model hierarchy that was explored. Consequently, in the main study, I re-addressed the question of whether parental models have a more elaborate content than peer models by examining these models at the relationship-specific level. In addition, I chose to explore potential explanations for why parental models of young adults' may not be most elaborated. For example, parents' marital status may render it impossible to develop an elaborate model of one parent. That is, young adults whose parents are divorced, separated

[8] I conducted several further independent sample t-tests to explore other ways in which model elaboration may vary between individuals. Results revealed that women ($M = 23.61$; $SD = 0.81$; $n = 68$) had a more elaborate general parent model than did men ($M = 21.91$; $SD = 3.68$), t (22.72) = -2.20, $p < .05$. These differences may be, in part, due to normative differences in social support between men and women. Research shows that women receive (and provide) more social support than do men (Hobfoll, 1996); however, women and men did not differ in general peer model elaboration ($M = 23.80$, $SD = 0.58$; $M = 23.24$, $SD = 1.55$, respectively), t (24.11) = -1.71, *n.s.*.

or bereaved may have less elaborate parental models than young adults whose parents are married or living together. Similarly, young adults' romantic attachment experience may indicate when they began to use romantic partners as primary attachment figures. For example, young adults who became involved in romantic relationships early in adolescence may have turned to their parents for a smaller range of attachment needs, and to their partners for a wider range of attachment needs.

5.3 Elaboration of Content as an Indicator of Model Strength

Chapters 3 and 4 discussed the theory and research that explains how models of received care may shape participants' self-reported romantic caregiving style. Whether an available model of received care influences thoughts, emotions and behaviours when in a caregiving situation is thought to be determined by the accessibility of the model (Baldwin et al., 1996) and its structural properties (Collins & Read, 1991; Fiske & Taylor, 1991). Using model elaboration as an indicator of model strength I examined whether model strength moderated the influence of relationship-specific models of received care on general romantic responsiveness. To my knowledge, no previous research has addressed how the elaboration of the content of an attachment model influences the way in which that model shapes adult attachment or caregiving. To provide a comparison for discussion, the strength analyses of Chapter 3 were repeated, with the predicted variable being *general* romantic responsiveness. [9]

Hypothesis 1. Strength of model will moderate the effect of received responsive care from each attachment figure on general romantic caregiving. That is, the stronger (i.e., the more elaborate the content) the model of received care, the more that general romantic responsiveness will reflect the received care style of that model. For example, participants with strong models of received responsiveness from their father should report more general romantic responsiveness than should participants with weaker models of their father.

[9] See Appendix J for a summary table of the results. Consistent with Chapter 3, there was no evidence that the model strength indicators (length of time known, frequency of contact, preference for use as an attachment figure) moderated the models of received care in predicting general romantic responsiveness.

5.4 Priming a General Model of Parental or Peer Caregiving

As discussed in Chapter 4, research has demonstrated that temporarily heightening the accessibility of an attachment model renders that model more likely to be used in processing attachment-relevant information. Priming an attachment model leads to an attachment context effect whereby the processing of attachment-relevant information is biased by the activated attachment model (e.g., Baldwin et al., 1996; Mikulincer & Arad, 1999; Pierce & Lydon, 1998; Rowe & Carnelley, 2003). Similarly, Chapter 4 demonstrated that priming a model of received care led to a caregiving context effect (e.g., participants' memory for caregiving-relevant words was shaped by the activated model of received care). In addition, a primed attachment model affects task performance, indicated by response latencies, when the task contains attachment-relevant stimuli, such as the names of participants' attachment figures (e.g., Mikulincer, et al., 2002). When an attachment model has been activated, an individual's attention should be directed to information that is consistent with the activated model's goals, strategies, motivations and expectations. In this study, I examined whether a primed *caregiving* model enhances task performance, in terms of shorter RTs to (a) caregiving-relevant stimuli and (b) stimuli consistent with the nature of the primed model.

Mikulincer et al. (2002; Study 2) found that following the activation of the attachment system the accessibility of participants' relationship-specific attachment models was heightened. In addition, the heightened accessibility of the attachment models influenced participants' performance on a Stroop colour-word test (Stroop, 1935). A Stroop test can be used to assess how the activation of an attachment model biases attention to model-consistent information. In a Stroop test, participants are presented with a list of words. The words are either schematic with a particular context (e.g., sensitive) or aschematic (e.g., tractor). Each word is printed in several different colours. Participants are generally selected from two extremes of a personality trait (e.g., high vs. low avoidance), and are asked to read aloud the colour in which the word is printed. When the word is schematic for the participant (e.g., sensitive and low avoidance), they show interference (i.e., longer time to say the colour of the word); the activated schema biases attention toward schema-consistent stimuli (i.e., the word as opposed to the word's colour). By activating the attachment system via the threatening prime, Mikulincer et al. found that participants primed with the words *failure* and *separation* had longer RTs when naming the colour of the names of their attachment figures, but not the names of their close others,

acquaintances and strangers. Participants' attention was focused upon the model-consistent stimuli (i.e., the name of the attachment figure) as opposed to the colour of the word. Thus, the primed attachment system affected task performance. In the present study, I activated a general model of *caregiving* and examined whether it enhanced performance on a cognitive task, the dot-probe task, for model-consistent stimuli (i.e., the names of participants' caregivers).

The dot-probe task (DPT) is a direct measure of selective attention used mainly to examine emotional vulnerability (e.g., MacLeod, Rutherford, Campbell, Ebsworthy, & Holker, 2002). In a standard DPT, participants are seated in front of a computer screen upon which two words appear. The words are presented vertically, one to the right and one to the left of the screen. These words are briefly presented and subsequently disappear. Following their disappearance, a dot probe appears in either the left or right position at random, and the participant must indicate (using a keyboard or response board) in which position the dot probe appeared. The output from the DPT is a series of response latencies that indicate the participants' attentional distribution across the left and right of the screen (MacLeod et al., 2002). The word pairings are usually based around a critical trial, in which for example, one word is affectively negative, and the other is affectively neutral (MacLeod et al., 2002). When the probe appears in the location of the affectively negative word, participants who have generalized anxiety disorder have faster response times for probe detection than when the probe is in the position of the affectively neutral word (e.g., MacLeod, Mathews, & Tata, 1986). In contrast, participants who do not have generalized anxiety disorder have slower responses to the emotionally negative words; they are able to orient their attention away from the negative information (MacLeod et al., 2002).

In the present study, I examined participants' performance on an adapted DPT after the activation of a general model of caregiving. Like Mikulincer et al. (2002), I used the names of participants' attachment figures as the stimuli, but I did not use the names of close others, acquaintances and strangers. Participants were placed in one of three conditions. Two conditions involved a priming manipulation, in which participants completed a caregiving scenario (described below) designed to heighten the activation of a general model of *parental* caregiving or a general model of *peer* caregiving. The third condition was the control group who did not complete a priming manipulation. Because priming a general caregiving model should induce a caregiving context effect, I expected participants in the prime conditions to direct their attention toward schema-consistent

stimuli. That is, have shorter RTs when responding to a probe in the same location as the schema-consistent stimuli (i.e., the names of their caregivers).

Hypothesis 2a. Participants in the two prime conditions will have shorter RTs to probe detection when the probe is in the position of the names of their attachment figures compared to participants in the control condition.

5.4.1 Spreading Activation to Relationship-specific Models of Received Care.

Consistent with Mikulincer et al.'s (2002) findings, after priming a general caregiving model, the accessibility of participants' relationship-specific models of received care should be heightened. Because priming operates via the principal of spreading activation (Anderson, 1994), if one schema is activated, then a second schema, which is strongly associated with and closely connected to the first in the network, should be activated automatically (see Banse, 2003). Examining the way in which activation spreads across the network from the primed model may demonstrate why relationship-specific models continue to shape new caregiving situations. In turn, this may highlight which experiences of received care in a person's life are likely determinants of adult caregiving styles. In the present study, I examine whether any of the four major attachment figures of young adults, namely mother, father, romantic partner and a peer, achieve heightened activation during the priming of a general model of parental or peer caregiving. Based upon Collins and Read's conceptualization of the attachment model hierarchy (see Figure 1, Chap. 1), relationship-specific models are connected to and associated with general models with which they share matching features (e.g., the nature of the dyad). For example, if a participant has spent time thinking about providing care to a young child (a general *parental* caregiving model), his or her models of receiving care from his or her parents may achieve heightened activation. The models with heightened activation may enhance task performance for stimuli consistent with these models. That is, participants are expected to have shorter RTs when responding to a probe in the same location as the names of the caregivers who are consistent with the nature of the primed caregiving model.

Hypothesis 2b. Participants in the child-recipient prime condition will have shorter RTs for probe detection when the probe is in the position of the names of their mother and father. Participants in the peer-recipient prime condition will have short RTs for probe detection when the probe is in the position of the names of their romantic partner and peer(s).

Finally, if spreading activation from the general caregiving model heightens the activation of relationship-specific models of received care, such models may also guide an individual's behavioural, cognitive and emotional response patterns. For example, if a participant who received responsive care from parents while growing up has spent time thinking about providing care to a young child, then his or her post-prime general caregiving style should be more responsive. I tested this possibility by examining whether the prime condition (child- or peer-recipient) moderated the effect of received care from the four primary attachment figures on post-prime general romantic responsiveness. Because the primed general caregiving model was expected to have the greatest accessibility (or the lowest threshold of activation), unlike in Chapter 4, I did not expect the relationship-specific models to explain all of the variance in post-prime romantic responsiveness.

Hypothesis 3. Post-prime general romantic responsiveness will be predicted by models of received care that match the nature of participants' primed general caregiving model. That is, the general romantic responsiveness of participants in the peer-recipient condition is expected to reflect the received care from their romantic partner or peer. The general romantic responsiveness of participants in the child-recipient condition is expected to reflect the received care from their mother or father.

Method

5.4.3 Participants.

One hundred and seventy-one volunteers from the University of Southampton participated in a study entitled "Caregiving and memory". Participants were recruited from the School of Psychology's research pool and by advertisements across campus. Participants received either course credits (psychology students) or £8 for participation. One participant withdrew from the study prior to completion of the Time 1 measures; his or her data was excluded from all subsequent analyses. Participants aged over 25 years of age (n = 5) were dropped from analyses. The final sample consisted of 165 participants with a mean age of 20.34 years (SD = 1.84). The majority was female (n = 124, 75.2%), white European (n = 144, 87.3%), heterosexual (n = 161, 97.6%) and single (n = 152, 92.1%; 2 participants were missing data). Ninety-four participants (57.0%) were currently in a romantic relationship; of which 1 was married and 10 (10.6%) were living with their partners. The mean relationship length was 19.6 months (SD = 16.43;

range: 1 month to 5 years, 6 months). Because some participants either did not turn up to complete the Time 2 measures (n = 15; 9.1%), asked not to report on a specific attachment figure (i.e., mother or father), had a deceased parent, did not have any peer attachment figures, or did not complete measures appropriately, the number of participants with valid data varied considerably for the different analyses reported below. Where appropriate, descriptions for the different sub-samples will be reported.

5.4.4 Procedure.

Participants attended two experimental sessions. At Time 1 (T1), participants read and signed an informed consent form for both experimental sessions and completed the T1 measures. At least 24 hours after completing T1, participants returned to the laboratory to complete the Time 2 (T2) measures. To disguise the link between the dot-probe task and the caregiving scenario, participants were informed that they were participating in a batch of studies for members of the Social Psychology Research Group. At the end of T2, participants received a written and verbal debrief and were given the opportunity to ask questions of the experimenters. Participants then received their course credits or payment. Below, measures are reported in the order that participants completed them. [10]

5.4.5 Measures for Time 1.

Demographics and relationship history. Participants reported their age, gender, sexual orientation, current and previous romantic relationship experience and their parents' marital status.

Attachment Network Questionnaire (ANQ; Trinke & Bartholomew, 1997). Participants provided the names of up to 10 persons with whom they had a close relationship, regardless of whether that relationship was positive, negative or mixed. Participants listed, on average, 8.7 persons (SD = 1.75; *range:* 3 – 10). As described previously, participants ranked each of their persons along 8 items. Attachment ranks were created by averaging the individual ranks for the 4 items that define a person as an attachment figure (secure base, safe haven, separation distress and emotional connection). Participants had, on average, 6.7 attachment figures (SD = 2.85; *range:* 0 – 10).

Relationship-specific attachment styles. The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) was used to assess relationship-specific attachment style to each attachment figure. The RQ is composed of 4 descriptive paragraphs, one for each adult attachment style: secure, fearful, preoccupied and dismissing. Participants were

[10] See Appendix K for materials used in Chapter 5.

instructed to select one paragraph that they felt was most descriptive of their relationship with each person they had listed on the ANQ. Attachment style distributions are reported below for the relevant analyses.

General romantic attachment orientation (ECR; Brennan et al., 1998). Participants were instructed to respond in terms of "*how you generally experience romantic relationships, not just what is happening in a current relationship*" on a 7-point scale (1 = *disagree strongly*, 7 = *agree strongly*). The 18-item *avoidance* scale (alpha = .89; $M = 2.79$, $SD = 0.85$) and the 18-item *attachment anxiety* scale (alpha = .91; $M = 3.97$, $SD = 1.01$) were not significantly correlated (r (157) = .04, *n.s.*). Eight participants had data missing on both scales.

General romantic responsiveness (B. C. Feeney & Collins, 2001; J. A. Feeney, 1996; Kunce & Shaver, 1994). Because of the total duration of the study (approximately 1 hour 45 minutes), only responsive caregiving and not compulsive caregiving, was measured. Responsiveness was chosen because it produced the most consistent findings in this thesis, and has support from previous research and theory (e.g., Carnelley et al., 1996; Cassidy, 2000; J. A. Feeney & Hohaus, 2001). The responsive caregiving scale, which incorporated the neglect scale (reverse-scored as appropriate; 30-items), was worded to pertain to romantic partners *in general* and was responded to on a 6-point scale (1 = *disagree strongly*, 6 = *agree strongly*). This scale will be referred to as Time 1 (T1) general romantic responsiveness (alpha = .88). Participants completed computerized versions of the general romantic responsiveness and attachment orientation as in previous studies using the Authorware 5 software package.

Working model strength and elaboration. Whilst participants were completing the attachment and caregiving questionnaires, the experimenters selected the four major attachment figures (mother, father, romantic partner and peer) and prepared the elaboration and strength measures for each figure. Participants received four versions of this questionnaire, one for each attachment figure, in a randomized order. If participants had not listed their mother or father on the ANQ they were asked whether they wished to complete any measures about their mother or father. The first items on the questionnaire referred to the original strength indicators, as in the previous chapters. Participants indicated the *frequency of contact* (visit, phone, share activities, write/email) with the attachment figure on a scale from 1 (*daily/almost daily*) to 8 (*less than once a year*; participants also had the option 9 for *never*) and the *length of time known* the attachment

figure in years. The third strength indicator was the preference for using the attachment figure, which was the ANQ attachment rank.

Participants were instructed to think about their current relationship with each attachment figure, and the feelings they may have experienced which led them to turn to the attachment figure. Below the instructions was the list of the 24 attachment needs (e.g., need someone to listen to my feelings) from the pilot study that were rated from 1 (*rarely*) to 5 (*always*) to indicate the frequency of turning to the attachment figure. Participants' responses on the elaboration measure were used as indicators of the elaboration of *relationship-specific* models of mother, father, romantic partner, and peer. To compute each model elaboration value, each need that participants indicated they had sought the attachment figure for was scored 1 and each need that they did not seek the attachment figure for was scored 0, with a range from 0 to 24.

Responsiveness of received care. Participants used the 30-item responsive caregiving scale (with neglect included) of the Caregiving Questionnaire (B. C. Feeney & Collins, 2001; J. A. Feeney, 1996; Kunce & Shaver, 1994) to describe the responsiveness of care received from each attachment figure. This scale was completed immediately after the strength and elaboration measure for each of the four attachment figures (alphas = .67 - .94). This method was chosen to ensure that the participant was thinking of the specific attachment figure when completing the caregiving scale, and to remove the tedium of responding to the scale repeatedly as in Chapter 3.

5.4.6 Measures for Time 2.

Priming manipulation. Participants were randomly assigned to one of three conditions: child-recipient, peer-recipient or control.[11] Participants in the child- and peer-recipient conditions were given a hypothetical caregiving scenario to complete. In the child-recipient condition, the scenario involved the participant being telephoned by a friend who was looking after his or her nephew. The nephew had a minor injury and was emotionally upset. The participant was to imagine that the friend was asking him or her for advice on how to help the child. In the peer-recipient condition, the scenario involved the participant being telephoned by a friend whose housemate's grandfather had passed away

[11] A major flaw in the tasks completed by the control group led to their exclusion from data analysis. Participants in the control group completed two sections of the Mother-Father-Peer Questionnaire (MFP; Epstein, 1983) for an unrelated research project whilst participants in the prime conditions completed the caregiving scenarios. The Mother and Father sections of the MFP assess perceived acceptance and permitted autonomy by mother and father and take approximately 15 minutes to complete. Consequently, it is possible that the completion of the MFP will have acted as an inadvertent priming manipulation.

and was emotionally upset. The participant was to imagine that the friend was asking him or her for advice on how to help the housemate. In both of these conditions, participants were given written instructions to spend 12-minutes describing the advice they would give to the friend. After 12-minutes, a buzzer sounded, and participants moved onto the next task. To ensure that participants were thinking about providing care, they were asked to describe, in 5 words, how the friend should act towards the child or housemate and then to rate 5 questions, on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*), regarding their feelings about being asked by their friend for advice. Responses to these questions were not used in the data analysis reported below.

Post-prime affect. Participants in the child-recipient and peer-recipient conditions completed the PANAS (Watson et al., 1988; see Chap. 2 for a full description) to assess post-prime affect. Participants completed the measure in terms of how they felt "*right now*". Positive affect (alpha = .85) and negative affect (alpha = .78) were not correlated.

The dot probe task. The DPT was created using C++ programming.[12] The programme was presented on a standard PC to which was attached a 2-button response box.[13] Participants sat a comfortable distance from the computer screen, and the seat was adjusted to ensure eye-level was in line with a fixation point ('+'; 20-point font) in the centre of a white screen (526mm). Participants were instructed to concentrate on the fixation point whenever it appeared on the screen. Six practice trials were conducted in which the fixation point remained on the screen for 500 msecs. Following its disappearance, two gray circles (240mm in diameter) appeared, one to the left of the screen and one to the right of the screen (both 136mm from the center). The circles appeared for 1000 msecs before disappearing. Then a dot-probe (3 pixels, black in color) appeared at random in the centre of the position at which one of the gray circles originally appeared (256mm from the centre). This dot-probe remained on screen until the participant had made a response; pressing the right-hand button on the response box to indicate that the dot-probe appeared on the right side of the screen, and the left-hand button to indicate that it appeared on the left side of the screen. Following the practice trials, participants were instructed that they would complete some more trials like those they had just completed, but that this time, the names of some of the people who they described at Time 1 would

[12] The version of the DPT was created by Dr. Jin Zhang, University of Southampton.
[13] The computer was a Pentium III processor with 128.0MB RAM. The screen's resolution was 1024 x 768 on a 14-inch monitor.

appear in the middle of the grey circles. There were 48 critical trials. The first names (e.g., Paul) or common terms (e.g., mum, auntie) of each attachment figure (mother, father, romantic partner and peer or two peers if participants were not in a current relationship) were written in black, Arial 20-point font. The critical trials ran exactly the same as the practice trials: 500 msec fixation point followed by the two gray circles containing the names for 1000 msec, followed by the dot-probe. Each name appeared with each other name two times: twice in the location of the dot probe, and twice in the other location. In addition, each name appeared in the location of the dot probe twice on the left and right side of the computer screen. Response times were recorded as well as whether the response was correct or incorrect.

Post-prime general romantic responsiveness. (B. C. Feeney & Collins, 2001; J. A. Feeney, 1996; Kunce & Shaver, 1994). The same version as that at Time 1 was used. This scale will be referred to as T2 general romantic responsiveness (alpha = .88).

Manipulation check. To assess the effectiveness of the priming manipulation, participants in the child- and peer-recipient conditions were asked to rate, on a 7-point scale (1 = *not at all*, 7 = *extremely*), the degree with which they could focus on the scenario task without feeling distracted and how likely it would be that they would give the same advice in a real-life situation. Participants reported being able to focus on the scenario without feeling distracted (*M* child-recipient = 5.56; *M* peer-recipient = 5.44) and that it was likely that they would provide the same advice in a real-life situation (*M* child-recipient = 6.25; *M* peer-recipient = 6.05). Participants in the child-recipient condition were asked about their previous experience with babies and small children; the majority of these participants (90%) had experience of babysitting or looking after younger siblings. Finally, participants were asked to describe in writing what they believed to be the purpose of the study. The experimenters coded these written descriptions in terms of the extent to which participants knew the purpose of the study. Codes were 1 (*not at all*; participant's response did not match researchers' aims), 2 (*some*; elements of description match the experimenters' hypotheses) or 3 (*yes*). The majority of participants' descriptions were rated as 1 (59.6%) or 2 (39.1%).

Results

5.5 Preliminary Analyses

5.5.1 Missing Data Strategy.

Throughout the analyses, the following strategy for missing data replacement was used. Missing data was defined as any empty data points due to experimenter error (e.g., setting up a measure incorrectly) or participant negligence (e.g., missing out a page of the questionnaire booklet). These missing data points were replaced with the mean for the relevant variable (Tabachnick & Fidell, 2001). In all cases, mean substitution made up 5% or less of the data points in the variable. Mean substitution was not used when participants had specifically requested not to provide data about a specific attachment figure, reported that a parent was deceased, reported that they had no peer attachment figures, or reported that they had no current romantic relationship.

5.5.2 Gender Differences in Model Elaboration.

Consistent with the findings from the pilot study (see Footnote 8), there were no gender differences in the model elaboration of fathers (M_{men} = 13.41 vs. M_{women} = 13.00), mothers (M_{men} = 15.95 vs. M_{women} = 18.07), or romantic partners (M_{men} = 18.67 vs. M_{women} = 18.79); however, women's peer models were more elaborate (M = 16.07) than men's (M = 12.28), t (146) = -3.54, p <. 001. This gender difference was taken into account in subsequent analyses.

5.5.3 Relationship between Model Strength Indicators.

For exploratory reasons, I examined the association between model elaboration and the other model strength indicators (i.e., length of time known, frequency of contact and preference for use as an attachment figure; see Table 16). Participants who were in frequent contact with their mothers and fathers had more elaborate models of mother and father. This suggests that the elaboration of parental models may reflect the proximity or availability of the parent to the participant currently as opposed to across childhood and adolescence; this is a likely consequence of the retrospective nature of the questionnaire. The greater participants' preferences for using their mother, father, romantic partner, or peer as an attachment figure, the more elaborate were the corresponding models. Length of time known father, romantic partner and peer was not related to model elaboration; however, the longer participants had known their mothers, the less elaborate was the model. Because younger participants may report seeking their mother for a wider range of

attachment-related needs compared to older participants, I conducted a second correlation between the model elaboration value for mother and the length of time participants' had known their mother, controlling for participants' age. Consistent with the other attachment figures, length of time participants had known their mother was not associated with how elaborate the model of mother was (men: r (37) = .21, *n.s.*; women: r (117) = .00, *n.s.*).

5.5.4 Relationship between Model Strength and Model Content.

Conceptually, the strength and the content (e.g., attachment or caregiving style) of a working model should be independent of each other. However, zero-order correlations (see Table 16) between the elaboration value and the responsiveness of received care for each attachment model revealed that the quality of an attachment figure's caregiving may be related to the number of attachment-related needs for which an individual turns to the attachment figure.[14] For mother, father and peer, model elaboration was positively associated with the quality of care received; however, model elaboration and received care were not significantly associated for romantic partners. Participants reported seeking a greater number of attachment-related needs from attachment figures who they described as having a more responsive caregiving style. This partially corroborates LaGuardia et al.'s (2000) finding that attachment security was associated with greater need satisfaction. Nevertheless, the correlations between the model strength and structure features were sufficiently moderate to suggest that they could be viewed as distinct elements of the working model.

[14] Chapter 3 reports a similar set of analyses for the model strength indicators of length of time known, frequency of contact and preference for use as an attachment figure.

Table 16

Zero-order correlations of model strength and received responsive care.

Attachment Figure	Mean (*SD*)	Correlation with model elaboration value
	Frequency of Contact	
Mother (N = 156)	3.25 (0.89)	-.28***
Father (N = 148)	3.49 (0.95)	-.20*
Romantic Partner (N = 82)	1.97 (0.69)	-.01
Peer (N = 148)	2.79 (1.15)	-.10
	Preference for Use	
Mother	2.02 (0.87)	-.22**
Father	3.51 (1.16)	-.26***
Romantic Partner	2.19 (1.10)	-.25*
Peer	3.41 (1.19)	-.24**
	Length of Time Known (in years)	
Mother (N_{women} = 117; N_{men} = 39)	20.09 (1.73); **21.15 (1.99)**	-.21*; **-.24**
Father (N_{women} = 112; N_{men} = 36)	19.82 (2.22); **21.06 (2.25)**	-.09; **-.11**
Romantic Partner (N_{women} = 70; N_{men} = 12)	2.61 (1.69); **1.54 (0.84)**	.09; **.13**
Peer	7.56 (6.05)	.09
	Responsiveness of Received Care	
Mother	4.47 (0.85)	.32***
Father	3.89 (0.87)	.40***
Romantic Partner	4.03 (0.33)	.09
Peer (N_{women} = 109; N_{men} = 39)	4.77 (0.56); **4.10 (0.55)**	.24*; **.10**

Note. For variables with gender differences, men's values are in **bold** type. Low values on frequency of contact indicate more frequent contact (i.e., 1 = daily/almost daily). Low values on preference for use indicate a greater preference for use.
*** $p < .001$. ** $p < .01$. * $p < .05$.

Four one-way ANOVAs, with relationship-specific attachment style as the IV (between-subjects with 4 levels: secure, fearful, preoccupied, dismissing) and model elaboration as the DV were conducted to examine whether participants showed attachment style differences in model elaboration values for each attachment figure. As shown in Table 17, attachment style differences in the elaboration of mother and father models were found; post-hoc Hochberg's GT2 tests examined the nature of these differences. Specifically, participants with a dismissing attachment to their mother had a less elaborate mother model than did participants with a secure attachment to their mother. Participants with a fearful attachment to their father had a less elaborate father model than did participants with a secure attachment to their father. No attachment style differences were found in the elaboration of romantic partner and peer models. Thus, consistent with previous research (Mikulincer & Orbach, 1995) and theory (Levy et al., 1998), avoidant participants may have employed a minimizing strategy in recalling childhood memories of their parental relationships.

Table 17

Relationship-specific attachment style differences in model elaboration.

Attachment Figure	*Attachment style to figure*				*F* (df)
	Secure	*Preoccupied*	*Fearful*	*Dismissive*	
Mother	19.01_{a} (98)	16.50 (8)	16.08 (13)	14.29_{b} (21)	4.40 (3, 136)**
Father	$15.52_{a,}$ (73)	11.71 (14)	8.54_{b} (13)	11.38 (24)	5.73 (3, 120)***
Romantic Partner	19.31 (49)	19.70 (10)	17.41 (8)	19.25 (4)	0.39 (3, 67)
Peer	16.17 (92)	15.92 (23)	13.00 (8)	12.12 (17)	2.78 (3, 136)*

Note. Means with different letter subscripts differ at $p < .05$. Numbers in brackets = attachment style frequency.
* $p < .05$. ** $p < .01$. *** $p < .001$.

5.5.5 Elaboration of Parental and Peer Models.

Next, I addressed Collins and Read's (1994) proposition that parental models should be more elaborate than peer models. A series of paired-sample t-tests revealed mixed support for Collins and Read's proposition. Because of the gender differences in peers' model elaboration, the t-tests including the peer elaboration values were conducted separately for each gender. Models of mother were more elaborate than models of father (M_{mother} = 17.66; M_{father} = 13.09; t (138) = 9.56, $p < .001$). Models of mother were as elaborate in their content as models of romantic partners (M_{mother} = 17.57; $M_{partner}$ = 18.84; t (74) = -1.61, *n.s.*); however, in confirmation of the proposition, men's models of mother were more elaborate than their models of peer (M_{mother} = 16.05; M_{peer} = 12.65; t (36) = 2.89, $p < .01$) and women's models of mother were more elaborate than their models of peer (M_{mother} = 18.16; M_{peer} = 16.29; t (103) = 2.97, $p < .01$). Models of father were less elaborate than models of romantic partner (M_{father} = 12.73; $M_{partner}$ = 19.51; t (70) = -6.90, $p < .001$), for women, models of father were less elaborate than models of peer (M_{father} = 13.24; M_{peer} = 16.21; t (96) = -4.45, $p < .001$), but for men, models of father and models of peer were similar in the elaboration of their content (M_{father} = 13.53; M_{peer} = 12.41; t (33) = 0.48, *n.s.*).[15] This last result is partially consistent with that of La Guardia et al. (2000) who found that college undergraduates experienced the same amount

[15] Additional paired-sample t-tests revealed that for men, models of romantic partners were more elaborate than peer models ($M_{partner}$ = 18.67; M_{peer} = 9.17; t (11) = 5.91, $p < .001$). Similarly, for women, models of romantic partner were more elaborate than models of peer ($M_{partner}$ = 18.59; M_{peer} = 15.12; t (58) = 4.61, $p < .001$).

of need satisfaction with their fathers as they did with their college room-mates (who they may have known for a much shorter time than their father).

With the available data, I sought to examine possible explanations for why young adults may report less elaborate models of their parents than expected. Independent t-tests were conducted using mother and father model elaboration as the DVs and participants' current relationship status, parents' marital status, age and length of first romantic relationship as IVs (see Table 18). There were no significant differences in the elaboration of models of mother and father based on participants' current relationship status, parents' marital status, or the age of participants' first romantic relationship; however, model elaboration did differ by the *length* of the participants' first romantic relationship. Participants were separated into two groups based on the length of their first romantic relationship. Those whose first romantic relationship lasted at least 2 years (suggesting that their partner was likely to have been an attachment figure; Hazan & Zeifman, 1994; Trinke & Bartholomew, 1997) were more likely to have *less* elaborate models of mother and father compared to participants whose first relationship lasted less than 2 years. That is, the availability of a romantic partner may reduce the need to turn to parents for attachment need satisfaction.

Table 18

Exploratory analyses of systematic differences in model elaboration.

	Model elaboration value							
	Current relationship status[1]		Parents' marital status[2]		Age of 1st romantic relationship[3]		Length of 1st romantic relationship[4]	
Attachment figure	Have current partner	No current partner	Together	Not together	< 16 years of age	> 16 years of age	< 2 years	> 2 years
Mother	17.54	17.54	17.67	17.49	18.05	17.60	18.55	15.83
	t (154) = 0.00		t (154) = 0.16		t (143) = -0.45		t (143) = -2.48*	
Father	12.71	13.47	13.01	13.40	12.78	13.54	13.89	11.27
	t (135) = -0.66		t (146) = 0.29		t (135) = 0.63		t (135) = -1.95*	

[1] Based on cut-off of partner of 3 months or more. [2] Together = married, living together. Not together = separated, divorced, widowed. [3] Also tested at cut-offs of 18yrs, 14yrs, and 12yrs. [4] t also significant when length of first romantic relationship was dichotomized as less than 18 months and 18 months or more, less than 1 year and 1 year or more and less than 6 months and 6 months or more.

* $p < .05$.

These preliminary analyses addressed the questions arising from the pilot study on model elaboration. With this greater understanding of the nature of model elaboration

across the four primary attachment figures, I now turn to addressing the two main aims of this study, beginning with the model elaboration analyses.

5.6 Model Elaboration Analyses

Hypothesis 1 predicted that the strength of a model of received care, as indicated by the elaboration of its content, would moderate the effect of that model on general romantic caregiving. To test this hypothesis, I conducted four hierarchical regression analyses (HRA); one for each attachment figure (mother, father, romantic partner, and peer). As in Chapter 3, the four attachment figures were selected as follows: Mothers and fathers were automatically selected.[16] Current romantic partners were selected if the duration of the relationship was 3 months or more (n = 82). The mean length of these relationships was 21.9 months (SD = 16.04, *range* = 3 months to 5 years 6 months).[17] The peer attachment figure was chosen by selecting the peer with the lowest attachment rank (i.e., the most preferred peer attachment figure). This peer was a friend (n = 119), sibling (n = 19) or ex-partner (n = 10). The attachment ranks for all four attachment figures are reported in Table 16 under '*Preference for use*'. Sample size varied for each HRA (for mother, n = 160; for father, n = 148; for romantic partner, n = 82; for peer, n = 148); however, these samples did not differ on demographic variables. That is, the majority of each sample was female, white European, heterosexual and of single marital status.

[16] Four participants asked specifically not to report on their mother, five participants' mothers were deceased and 17 participants' mothers did not meet the ANQ attachment figure criteria. Ten participants asked specifically not to report on their father, seven participants' fathers were deceased and 31 participants' fathers did not meet the ANQ criteria.

[17] Only 1 current romantic partner did not meet the ANQ criteria for attachment figure status.

Table 19

Summary of model elaboration interactions predicting general romantic responsiveness

Predictors	*Mean (SD)*	ΔR^2	*βStep 1*	*βStep 2*	*F of change (df)*
		Mother			
Mom Responsive	4.47 (0.85)	.04+	.17*	.17*	2.87 (2, 157)+
Mom Elaboration	17.54 (6.22)		.04	.06	
Responsive X Elaboration		.00		.07	0.67 (1, 156)
F of model at Step 2 (3, 156) = 2.13, $p < .10$; Total $R^2 = .04$					
		Father			
Dad Responsive	3.89 (0.87)	.02	.18*	.21*	1.95 (2, 145)
Dad Elaboration	13.10 (7.06)		-.06	-.09	
Responsive X Elaboration		.07***		.26***	10.69 (1, 144)***
F of model at Step 2 (3, 144) = 4.95, $p < .01$; Total $R^2 = .09$					
		Romantic Partner			
Partner Responsive	4.03 (0.33)	.15**	.38***	.38***	7.00 (2. 79)**
Partner Elaboration	18.78 (5.05)		.06	.07	
Responsive X Elaboration		.02		.15	1.96 (1, 78)
F of model at Step 2 (3, 78) = 5.38, $p < .01$; Total $R^2 = .17$					
		Peer			
Peer Responsive	4.59 (0.63)	.16***	.42***	.44***	13.62 (2, 145)***
Peer Elaboration	15.07 (5.96)		-.10	-.13	
Responsive X Elaboration		.03*		-.17*	4.87 (1, 144)*
F of model at Step 2 (3, 144) = 10.95, $p < .001$; Total $R^2 = .19$					

*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

For the HRA, the criterion variable was (T1) general romantic responsiveness. At Step 1, received responsive care and model elaboration for each attachment figure, separately were entered. At Step 2, I entered the two-way interaction between the Step 1 variables, i.e., received responsive care X model elaboration. The predictor variables were centred by subtracting the mean from the raw score in order to reduce the effects of multicollinearity (Aiken & West, 1996). Zero-order correlations between all of the HRA variables are presented in Appendix L, Table 2. As summarized in Table 19, there was little evidence to support *Hypothesis 1*. Results revealed that the interaction of received care from mother X model elaboration was not significant ($\beta_{interaction} = .07$, $t = 0.82$, *n.s.*); however, that between received responsive care from father X model elaboration was significant ($\beta = .27$, $t = 3.32$, $p < .001$).

To examine this interaction, I plotted the simple slopes of model elaboration onto T1 general romantic responsiveness one standard deviation above and below the mean of

received responsive care from father (Aiken & West, 1996). As Figure 11 illustrates, in support of *Hypothesis 1*, participants with elaborate models of responsive fathers reported a more responsive general romantic caregiving style compared to those with elaborate models of less responsive fathers ($\beta_{responsive} = .45$, $t = 3.74$, $p < .001$). In contrast, participants with less elaborate father models reported average levels of general romantic responsiveness, regardless of fathers' responsiveness ($\beta_{responsive} = -.03$, $t = -0.31$, *n.s.*). Described another way, participants with elaborate models of unresponsive fathers reported a less responsive general romantic caregiving style compared to those with less elaborate models of unresponsive fathers ($\beta_{elaboration} = -.34$, $t = -2.79$, $p < .01$), whereas participants with responsive fathers reported average levels of general romantic responsiveness regardless of how elaborate their father models were ($\beta_{elaboration} = .15$, $t = 1.36$, *n.s.*). The latter finding is of particular interest because it suggests a difference in participants' ability, desire, or motivation to stop turning to ineffective caregivers. These participants received less optimal care from their fathers (or had the most ineffective father caregivers) and sought help, or continued to seek help, from their fathers for a range of attachment needs, despite fathers' ineffectiveness in attending responsively to attachment needs. This suggests that these participants did not or have not learnt to stop seeking care from their fathers. In contrast, the participants with the less elaborate models of their unresponsive fathers may have learnt to stop seeking care from their fathers, thus their adult caregiving is less affected by him. Speculatively, these latter participants may have had their needs met successfully by other caregivers. Overall, the greater the range of attachment-seeking experiences with fathers, the more likely that fathers' received care style, whether it be responsive or unresponsive, was reflected in participants' general romantic responsiveness. This suggests that the elaboration of the father model is a determining factor in how that model shapes general romantic caregiving.

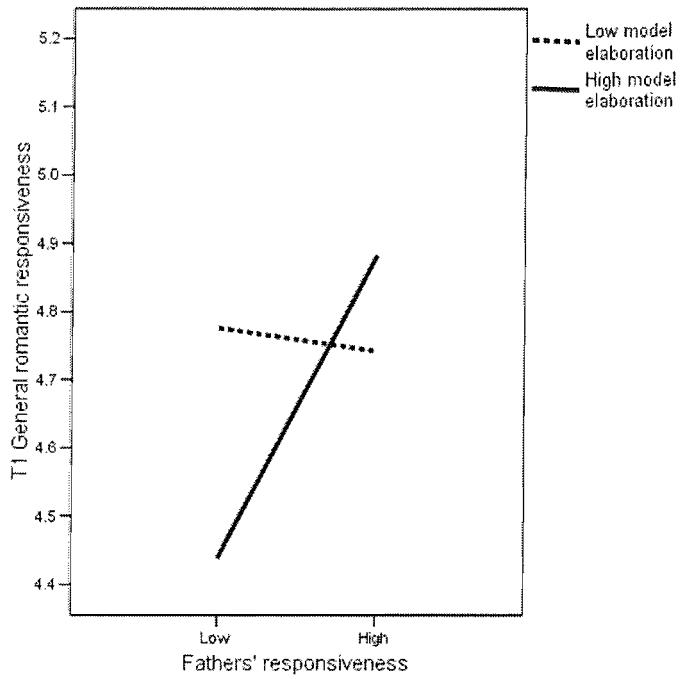

Figure 11. *Relationship between received responsive care from father and T1 general romantic responsiveness for participants with high and low elaboration of father model.*

In terms of the peer models, there was little conclusive evidence to support *Hypothesis 1.* Model strength did not moderate the effect of received care from romantic partner ($\beta_{interaction}$ = .15, t = 1.39, *n.s.*) on participants' romantic responsiveness; however, the HRA revealed a significant received care from peer X model elaboration interaction (β = -.17, t = -2.32, $p < .05$). I plotted the simple slopes of model elaboration on T1 general romantic responsiveness at high and low levels of received responsive care from peer (see Figure 8). There was no effect of model elaboration for participants who received less responsive care from their peer ($\beta_{elaboration}$ = .03, t = 0.32, *n.s.*); all participants reported average levels of general romantic responsiveness. Model elaboration did have an effect on general romantic responsiveness when participants received more responsive care from their peer ($\beta_{elaboration}$= -.28, t = -2.56, $p < .01$). Specifically, those participants with a *less* elaborate peer model reported more romantic responsive caregiving than did those participants with a more elaborate peer model. These participants received quality caregiving from their peer, yet chose, or were unable, to seek this peer for fulfillment of a larger number of attachment-relevant needs. Nevertheless, their romantic caregiving is strongly affected by that peer.

Described another way, when the peer model was less elaborate, those participants who received more responsive care from their peer reported more general romantic responsiveness than did those who received less responsive care from their peer ($\beta_{responsive} = .59$, $t = 5.56$, $p < .001$). Similarly, when the peer model was more elaborate, those participants who received more responsive care from their peer reported more general romantic responsiveness than did those who received less responsive care from their peer ($\beta_{responsive} = .28$, $t = 2.86$, $p < .01$). Supportive of *Hypothesis 1*, the romantic caregiving of participants with a more elaborate peer model was affected by the care they received from their peer. These participants reported seeking their peer for a larger number of attachment-relevant needs and in doing so the way in which those needs were fulfilled, or indeed not fulfilled, by the peers' responsiveness shaped their own adult caregiving style. This suggests, that consistent with the pattern reported above for the father model, the elaboration of the peer model is a determining factor in how that model shapes general romantic caregiving. Nevertheless, the overall pattern illustrated in Figure 12 suggests that the romantic caregiving of all participants mirrored the received care of their peer, with this effect being discernible for participants who sought their peer for fewer attachment-relevant needs.

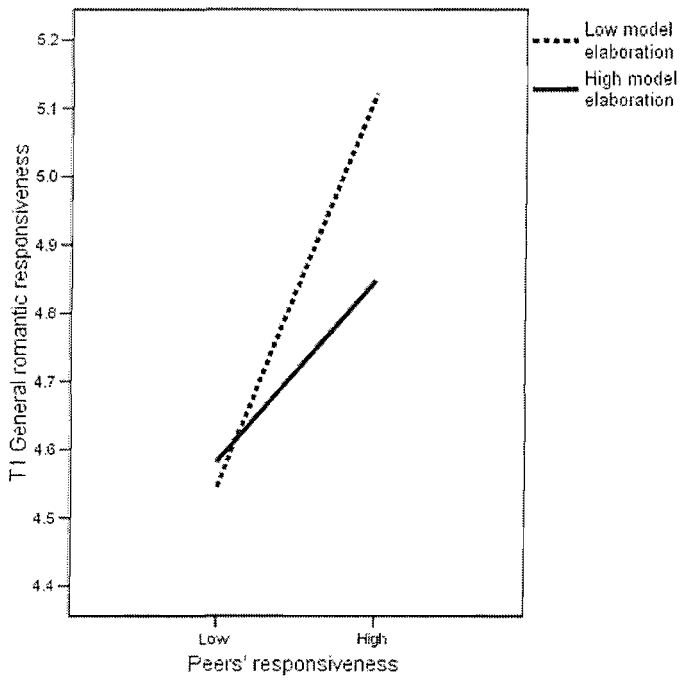

Figure 12. *Relationship between received responsive care from peer and T2 general romantic responsiveness for participants with high and low elaboration of peer model.*

In sum, the proposition of model strength has received little support, despite the use of model elaboration as an indicator. Rather, Collin and Read's (1994) structural properties of model specificity and matching of features have provided parsimonious explanations for the way in which received care from romantic partner, peer and to some extent, father shapes general romantic caregiving. In addition, the results indicate that received care from mother and father do not significantly predict general romantic caregiving as a main effect, but received responsive care from romantic partner and peer did (see Step 1 betas). This finding is partially consistent with Overall et al. (2003), who found that the models that have the greatest influence on general attachment models are those that match the relationship domain. In addition, the current result is consistent with Collins and Read's (1994) proposition of matching of features: peer and romantic partner models are affiliative, reciprocal and egalitarian (Furman & Wehner, 1994). Taken together, these results suggest that general attachment models are shaped by domain-specific relationship-specific models. I now turn to examining the priming of a general model of caregiving.

5.7 Attention to Schema-Consistent Stimuli

Participants. From the initial 165 participants, 107 participants were excluded from the DPT data analysis because they did not return to complete the Time 2 measures (n = 19), they were aged over 25 years (n = 6), they did not have or did not report four available attachment figures (i.e., mother, father, and 2 peers; n = 36). Because of several computer problems, 44 participants did not have any reaction time data.[18] Further, because of an oversight with the measures completed by participants in the control group, data from an additional 38 participants was excluded from further analysis (see Footnote 11). The final sample consisted of 58 participants of which 46 (79.3%) were women. The mean age was 19.6 years (SD = 1.53). These participants were mainly white, European (n = 53, 91.4%), heterosexual (n = 57, 98.3%), and single (n = 55; 94.8%; 3 participants were living with their current partner. Thirty-four participants (58.6%) were currently in a romantic relationship (M *length* = 19.6 months, SD = 17.88). Most of the participants' biological parents were married to each other (n = 47, 81.0%). Thirty-two participants were in the child-recipient prime condition and 26 were in the peer-recipient prime condition.

[18] Several computer problems occurred with the DPT. An earlier version of the task was found to be inappropriate because response latencies were all 250 msec or less. In addition, several computers were unable to function with the response box attached, hence the DPT crashed on several occasions causing the data to be lost.

Ten percent (n = 6) of these participants had reaction time data missing but had valid data on all other criteria. I conducted the analysis including and excluding these six participants. Both sets of analysis were highly similar; hence, I report the results for the larger sample.

Selecting attachment figures. Using the names provided on the ANQ, four names of attachment figures were selected for use in the DPT. Mother (n = 58) and father (n = 57; 1 step-father) were automatically selected, followed by a current romantic partner (n = 34) and a peer (4 ex-partners, 9 siblings, 45 friends). If participants did not have a current romantic partner (n = 24), their fourth attachment figure was another person from their list who met the criteria for being a peer and being an attachment figure (1 ex-partner, 4 siblings, 1 other family member and 17 friends). For each attachment figure, participants were asked to provide the name or common term they used to refer to each figure (e.g., mum for mother, Tom for Thomas).

Data cleaning. I cleaned the reaction time data from the DPT consistent with Bargh and Chartrand's (2000) recommendations. All RTs less than 300ms were excluded from analysis. Any RTs based on incorrect responses were also removed. Outliers were defined as the mean of RTs (for correct responses) ± 3 *SD*s and were removed. Consistent with other studies that have employed a DPT (e.g., Wilson & MacLeod, 2003), I computed participants' median reaction times for detecting the dot probe in each location (left or right) on the screen. The median reaction times are presented in Table 20.

Hypothesis 2a could not be assessed because of the lack of a control group. *Hypothesis 2b* predicted that participants should have shorter RTs for probe detection when the probe is in the position of the names of their attachment figures, who match the nature of the primed general caregiving model (i.e., parental or peer). As shown in Table 20, participants in the child-recipient condition had slightly shorter RTs for probe detection when it was in the position of the names of their parents versus peers, but this difference was not significant (t (31) = .57, *n.s.*). Participants in the peer-recipient condition showed slightly shorter RTs for probe detection when it was in the position of the names of their peers versus parents, but only when the probe appeared on the left side of the screen; again, this difference was not significant (t (25) = .15, *n.s.*). [19] Thus, no evidence was found to

[19] Ordinarily, the RTs derived from dot-probe tasks are used to compute an attentional bias index (ABI; MacLeod et al., 1986). An ABI is the difference (in msec) between probe detection when the probe is in the same location as the target words (e.g., parents' or peers' names) and when the probe is in not in the same location as the target words. Because there was no significant difference in participants' RTs to probe

suggest that participants' task performance was facilitated by the primed model of caregiving. However, the RTs analyses were severely limited by the lack of a control group.

Table 20

Median reaction times (msec) for probe detection in each probe location and each prime condition

	Probe on Left		*Probe on Right*	
Prime Condition	*Parents' names to left*	*Parents' names to right*	*Parents' names to left*	*Parents' names to right*
Child-recipient (n = 32)	383.00 (72.15)	384.00 (68.03)	368.00 (79.07)	363.00 (74.86)
	Peers' names to left	*Peers' names to right*	*Peers' names to left*	*Peers' names to right*
Peer-recipient (n = 26)	349.50 (45.19)	354.00 (44.95)	351.00 (43.76)	357.00 (51.09)

N.B. Numbers in brackets refer to SD.

5.8 Post-Prime (T2) General Romantic Responsiveness

Hypothesis 3 predicted that post-prime general romantic responsiveness would be shaped by the models of received care that match the nature of participants' primed general caregiving model. To test this, I conducted four hierarchical regressions (HRA). At Step 1, T1 general romantic responsiveness was entered in order to control for change over time. At Step 2, I entered the received care from the attachment figure (i.e., mother, father, romantic partner or peer) along with a dummy-coded contrast variable representing the prime condition. This contrast code compared participants in the child-recipient condition (coded –1.0) with those in the peer-recipient condition (coded 1.0). At Step 3, the two-way interaction created from received care and the contrast code (e.g., received care mom X prime) was entered. I examined the effects of mother, father, romantic partner and peer caregiving separately because of the low power of these analyses (i.e., small sample sizes and several predictor variables). In the mother and father regressions, all participants were included regardless of their current romantic status (n = 109 for mother; n = 99 for father). In the romantic partner regression, only participants currently in a romantic relationship were included (see Appendix L, Table 3 for zero-order correlations). Consistent with the

detection when it was in the location of parents' *or* peers' names, computing an ABI for each prime condition was redundant.

other analyses reported in this chapter, the participants in each HRA were mainly female, white European, heterosexual and single.

Table 21

Summary of hierarchical regression analyses predicting post-prime general romantic responsiveness.

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*F of change (df)*
			Mother		
T1 General Responsive	.49***	.70***	.69***	.68***	102.60 (1, 107)***
Mom Responsive	.01		.06	.08	0.90 (2, 105)
Prime Condition			-.08	-.08	
Mom Responsive X Prime	.01			-.11	2.67 (1, 104)
F of model at Step 3 (4, 104) = 27.14***; Total R^2 = .51					
			Father		
T1 General Responsive	.49***	.70***	.69***	.73***	94.09 (1.97)***
Dad Responsive	.01		-.05	-.13	0.60 (2, 95)
Prime Condition			-.06	-.05	
Dad Responsive X Prime	.05**			-.24**	10.28 (1, 94)**
F of model at Step 3 (4, 94) = 28.51***; Total R^2 = .55					
			Romantic Partner		
T1 General Responsive	.57***	.75***	.68***	.68***	72.49 (1, 55)
Partner Responsive	.03		.19*	.21*	2.28 (2, 53)
Prime Condition			.00	.00	
Partner Responsive X Prime	.00			.03	0.12 (1, 52)
F of model at Step 3 (4, 52) = 19.80***; Total R^2 = .60					
			Peer		
T1 General Responsive	.58***	.76***	.68***	.68***	87.88 (1, 63)***
Peer Responsive	.04		.20	.21*	2.98 (2, 61)
Prime Condition			-.02	-.02	
Peer Responsive X Prime	.00			.02	0.07 (1, 60)
F of model at Step 3 (4, 60) = 24.48***; Total R^2 = .62					

Note. Prime = peer recipient vs. child recipient target conditions.
*** $p < .001$. ** $p < .01$. * $p < .05$.

As shown in Table 21, T1 general romantic responsiveness accounted for approximately 50% of the variance in T2 general romantic responsiveness. The HRA predicting post-prime general romantic responsiveness revealed no significant effect of received responsive care from mother, romantic partner or peer for participants in either prime condition, providing no support for *Hypothesis 3*.[20] Although the threshold for activation of the models of received care for these three attachment figures may have been

[20] It was necessary to ensure that the effect of received care was not accounted for by positive or negative affect heightened during the priming manipulation. Simultaneous regressions were conducted with T1 general romantic responsiveness, post-prime positive or negative affect, and the received care from mother, father, romantic partner or peer as the predictor variables. Fathers' responsive care X prime condition interaction remained a significant predictor of T2 general romantic responsiveness when post-prime negative affect was a predictor (β = -.24, t =-3.19, $p < .01$) and when post-prime positive affect was a predictor (β = -.21, t =-2.74, $p < .01$).

lowered during the priming manipulation, the level of activation was not sufficient for such models to influence T2 general romantic responsiveness. These results can be compared to those reported in Section 5.6 in which received care from romantic partner and peer did predict participants' general romantic responsiveness.

Nonetheless, the HRA did reveal a significant received responsive care from father X prime interaction (β = -.24, t = -3.21, $p < .01$), predicting an additional 5% of the variance in T2 general romantic responsiveness. I plotted the nature of this interaction following recommendations by Pedhazur (1982) for interactions created from a categorical and a continuous variable. Figure 13 displays the simple slopes of T2 general romantic responsiveness for the child-recipient and peer-recipient prime conditions plotted at low and high levels of received responsive care from father. Inconsistent with *Hypothesis 3*, there was no effect of received responsive care from father on T2 general romantic responsiveness for participants in the child-recipient condition ($\beta_{responsive}$ = .11, t = 1.26, *n.s.*); however, there was an effect of fathers' received responsive care for participants in the peer-recipient condition ($\beta_{responsive}$ = -.37, t = -3.05, $p < .01$). That is, participants in the peer-recipient condition who described their fathers as responsive caregivers, reported lower T2 general romantic responsiveness than participants in this condition who described their fathers as less responsive caregivers. At first this pattern is entirely opposite to that which was predicted; however, in describing the interaction in another way, this pattern is clarified.

When participants described their fathers as responsive caregivers at T1, those participants in the child-recipient condition reported more T2 general romantic responsiveness than did those in the peer-recipient condition (β_{prime} = -.29, t = -2.85, $p < .01$). When participants described their fathers as less responsive caregivers, those participants in the child-recipient condition tended to report lower T2 general romantic responsiveness than did those in the peer-recipient condition (β_{prime} = .19, t = 1.86, $p < .10$). Thus, when compared to participants in the peer-recipient condition, the post-prime general romantic responsiveness of participants in the child-recipient condition tended to mirror the received responsiveness of their fathers. Taken together, these analyses suggest that when the model of received care from father has heightened activation, it is likely to exert some influence on adult caregiving, whereas this is not the case for the model of received care from mother, romantic partner or peer.

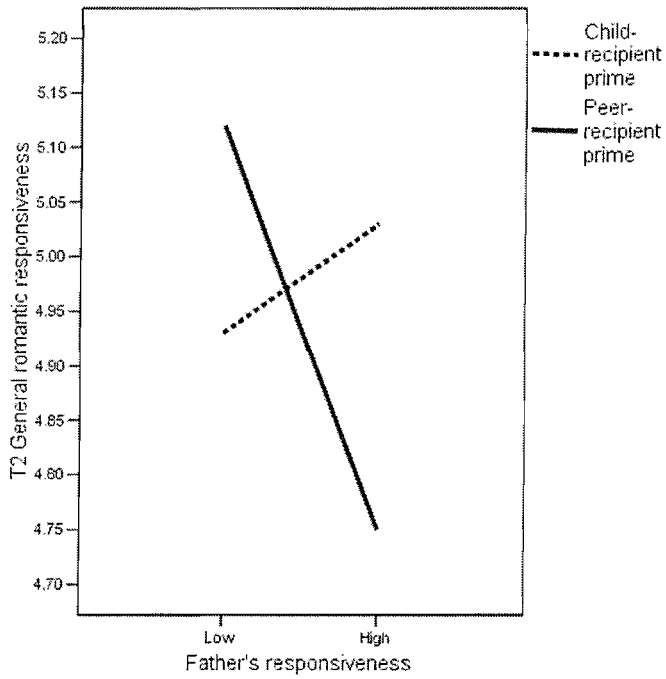

Figure 13. *Relationship between received responsive care from father and T2 general romantic responsiveness for participants in the child-recipient and peer-recipient prime conditions.*

Discussion

5.9 Model Elaboration

Based on Collins and Read's (1994) definition, I operationalised the concept of model elaboration and examined how the models of the four major attachment figures differed in the elaboration of their content. Results revealed that young adults with avoidant attachment styles are more likely to have less elaborate models of their mother and father, whereas there are no attachment style differences in young adults' elaboration of romantic partner and peer models. In terms of the parental models, the caregiving history of fearful and dismissing adults may explain why such individuals report that they seek their parental figures for fewer attachment-relevant needs. The fearful and dismissing attachment styles arise from repeated interactions in which attempts to seek support are neglected, refused or ignored by the attachment figures (Bartholomew, 1990). Thus, because of a history of rejection or poor quality caregiving interactions, fearful and dismissing individuals may choose not to seek their father or mother when an attachment-relevant need arises. Alternatively, Levy et al. (1998) suggest that dismissing individuals employ a minimizing strategy for processing attachment-relevant experiences with their

parents (Levy et al., 1998). That is, consistent with previous research (e.g., Mikulincer & Orbach, 1995), adults with avoidant attachment styles appear to recall fewer emotional memories from their childhood. Nevertheless, with the data available, one cannot be certain that participants with dismissing and fearful attachments to their mother and father, respectively have less elaborate models of these attachment figures because of their history of attachment-caregiving interactions, or because of defensive processing in the recall of their early experiences.

The results regarding peer models are particularly noteworthy because young adults' attachment style to their romantic partner and peer did not influence the number of attachment-relevant needs for which they sought the peer attachment figures. That is regardless of their attachment-seeking strategies and the likelihood of having their needs satisfied, young adults sought their peers for their attachment-related needs. Because the romantic and peer attachments were shorter in length compared to parental attachments, young adults may still be establishing the limits of their relationship. For example, all attachment needs may be directed towards peers, but based on a greater amount of experience, young adults may calibrate their attachment-seeking behaviours to their partner's caregiving style. One might expect that attachment style differences in model elaboration may be revealed in a sample of adults in longer-term romantic or marital relationships.

Overall, results suggest that the most elaborate attachment models of young adults are those of romantic partner and mother. Participants reported that they turn to their mother and romantic for more attachment-relevant needs than they do to their father or peer. It is not immediately clear why fathers are sought less for need fulfillment in comparison to mothers and romantic partners. LaGuardia et al. (2000), who found comparable results in terms of college students' need satisfaction, do not provide explanations for why fathers are sought less for need fulfillment. I speculate that the nature of the mother-child and father-child relationships may explain the current results. For example, the greater subjective closeness between mother and (adolescent) child compared to that between father and child (Youniss & Ketterlinus, 1987) might contribute to seeking mother for more attachment-relevant needs. Alternatively, a traditional family situation is one in which the mother is the primary caretaker (e.g., day-to-day responsibility of the child, perhaps not working outside of the home in order to raise the child) whilst the father may be away from the home during the child's awake time. Because of this division of

roles, seeking mother over father for need fulfillment may have arisen from childhood experiences of turning to mother due to her greater availability and, because she may have spent more time with her child, may have been present when a larger number of attachment-relevant needs arose.

The model elaboration analyses also highlight issues surrounding the transfer of attachment functions from parents to peers. The analyses that examined factors that might lead young adults' to seek their parents for fewer attachment-related needs suggested that the formation of a romantic attachment influenced the elaboration of father and mother models. Specifically, young adults whose first romantic relationship was likely to meet the criteria for an attachment bond (i.e., 2 years or greater) sought their parents for fewer attachment-relevant needs. Fraley and Davis (1997; see also Hazan & Zeifman, 1994) revealed that young adults transfer the attachment-related functions in sequence: proximity-seeking first, safe haven, and secure-base last. Consequently, when young adults have the possibility to transfer attachment functions from parents to peers, the attachment-relevant needs for which parents are sought may be diminished. Perhaps parents may continually be sought for safe haven or secure base functions whereas peers, and especially romantic partners, are sought for proximity-related needs as well as a safe haven and secure base. Indeed, the results of the pilot study (see Appendix I) did suggest that parents were sought more frequently for secure base and safe haven functions whereas peers were sought more frequently for proximity-seeking needs. Further, Chapters 1 and 3 discussed the link between a child's attachments to his or her mother and father and his or her social competence, such as level of confidence, affect within social interactions, and friendship variables, such as loyalty (Berlin & Cassidy, 1999; W. A. Collins & Sroufe, 1999; Rice et al., 1997). This suggests that both parent-child attachments may serve as prototypes for subsequent peer attachments.

5.9.1 The Moderating Effect of Model Elaboration.

As in Chapters 3 and 4, there was little evidence that model strength is a determinant in the application of relationship-specific models on adult caregiving. Specifically, when young adults have elaborate models of their fathers, the (perceived) quality of their father's caregiving is reflected in their adult caregiving. That is, for as-yet-unidentified reasons, young adults who continue to seek their father in spite of his inability to be an effective caregiver reported a less responsive, sensitive and more neglectful style of adult caregiving. Because analyses revealed that models of fathers are more elaborate

when participants' first romantic relationship was not an attachment, I addressed whether father models may be more likely to shape adult caregiving when young adults have little or no experience of a romantic attachment. To examine this, I conducted an additional hierarchical regression, controlling for participants' previous romantic relationship experience, i.e., the number of previous partners and the length of their longest romantic relationship. Results indicated that the received care X elaboration for father interaction remained significant ($\beta = .25$, $t = 3.00$, $p < .01$; *F of model* $(5, 132) = 3.69$, $p < .01$, $R^2 = .12$) when romantic attachment experience was controlled. This suggests that regardless of previous romantic experience, fathers play an important role in young adults' romantic relationships. This corroborates the specific influences on relationship-specific romantic caregiving reported in Chapter 3. It should be highlighted that participants were mainly women. Even though the father-child attachment model represents an imbalanced relationship (i.e., caregiver and dependent), it could be considered an exemplar of an opposite-sex relationship that may serve to guide heterosexual romantic caregiving.

Nevertheless, the model elaboration analyses highlighted a potential explanation for why early and current experiences with parental attachment figures continue to influence adult caregiving. The romantic caregiving of young adults who were cognizant that their fathers were providing inadequate caregiving and subsequently reduced their use of him as an attachment figure were less likely to reflect their fathers' caregiving style. Future research should address why some individuals are able to cease seeking a non-optimal caregiver whilst others continue to do so. One possibility is that those who have additional or available attachment figures have the opportunity to seek security from other sources and thus remove ineffective caregivers from their model network, whereas those with a limited number of attachment figures are forced to continue to use their ineffective caregiver as an (in)secure base rendering that model available to shape adult caregiving. In sum, the results provide preliminary evidence that model elaboration is a feature of a working model that may determine whether that model is activated and applied in future relationships. Further, these results point to the need to establish the similarities and differences between father-child attachment and romantic and peer attachment in late adolescence and young adulthood.

5.10 Model Priming and Spreading Activation

Because of the lack of a suitable control group, it was not possible to examine fully whether the priming of a general caregiving model induced a caregiving context effect such that participants in the prime conditions directed their attention to schema-consistent stimuli. In addition, whereas Mikulincer et al. (2002) used the names of attachment figures, acquaintances and strangers in their Stroop test, I used only the names of attachment figures. Thus, I could not examine whether participants directed their attention to schema-consistent versus schema-inconsistent stimuli. Nevertheless, evidence of the priming manipulation was found in the post-prime caregiving style analyses.

Analyses addressed whether any of the models that should have received heightened accessibility (i.e., those of the four major attachment figures) shaped a post-prime report of general romantic responsiveness. Results suggested that the models with heightened accessibility that are most likely to influence (if not directly activated) on (self-reported) caregiving behaviour, are those that match the nature of the caregiving situation. It is plausible that the relationship-specific models of romantic partner and peer may not have achieved heightened activation because they are not closely connected to the general model of peer caregiving. The model of received care from father, and not that of mother, romantic partner or peer, was found to shape participants' post-prime romantic responsiveness. Specifically, participants who focused on providing care to a young child reported a general romantic responsiveness that was more alike to the quality of received care from father, whereas participants who focused on providing care to a same-aged peer reported a general romantic responsiveness that was opposite to the care received from their fathers. That is, they reported being more responsive towards their romantic partners when their fathers had a less responsive style of caregiving.

That the received responsiveness of father had an effect as opposed to that of mother is surprising. Collins and Read (1994) suggest that models of parents may be most relevant when interacting with children (see also Kobak & Sceery, 1988). It might, therefore, be expected that the model of received care from mother would be the best exemplar of caregiving to a small child. A potential explanation for the lack of influence of the model of mother lies in the nature of the sample, which was mainly women, and the type of caregiving being predicted at Time 2 (general romantic responsiveness). Chapter 3 revealed that the opposite-sex parent, not the same-sex parent, shaped women's relationship-specific romantic responsiveness. Thus, although the activated general model

of parental caregiving may have spread activation to the models of received care from mother and father, the opposite-sex parent model (i.e., father) was that which shaped general romantic responsiveness. Thus, consistent with Collins and Read's (1994) matching of features characteristic, the model of received care from father matches the features of heterosexual romantic attachment for women, explaining why this model determined general romantic responsiveness over the model of received care from mother. To verify this explanation, future research could replicate the priming manipulation, heightening the accessibility of models of received care from mother and father, and examine the effect of parental models on general *parental* responsiveness. Consistent with Collins and Read's suggestion regarding parental models, the model of received care from mother may determine general parental responsiveness over the model of received care from father.

Taken as a whole, these results suggest that the application of activated models of received care is not determined only by their individual levels of activation. Rather, a process may operate in which information regarding the recipient of care and the nature of the dyad (e.g., gender of the interaction partners) leads to selecting the most appropriate model to apply to the situation. Thus, although multiple models of attachment allow for greater flexibility in one's interpersonal experiences, the present results suggest that the father model seems to fit many of the features of romantic experiences, especially for women. Consequently, in examining the continuity or discontinuity of ineffective caregiving, perhaps a focus on the father-child relationship as a strong determinant of adult caregiving is necessary.

5.11 Strengths and Limitations

The strengths of the above analyses are that they have addressed several important questions about the structure, content and function of attachment and caregiving working models. Further, I employed a novel cognitive task, which has yet to be used in attachment research, in order to examine the way in which activated models bias attention towards social stimuli (i.e., the name of attachment figures). Over the past 7 or 8 years, social/personality attachment research has employed priming techniques and cognitive methods (e.g., word recall tasks, lexical decision tasks, the Stroop test) in order to clarify the function of our attachment and caregiving models. The DPT would be an ideal task to add to this list because of its use in research on emotionally threatening material. Future

research could use a DPT, replacing the names of attachment figures, with pictures of actual attachment figures or depicting attachment/caregiving relevant scenarios. I might expect that individuals with an avoidant attachment style or an unresponsive, neglectful caregiving style would not show an attentional bias to positive pictures (e.g., a mother holding a child), compared to securely attached individuals or responsive caregivers. Further, Kirsch and Cassidy (1997) suggest that attentional biases (as well as memory biases) may be one way in which early experiences come to influence later functioning (Kirsch & Cassidy, 1997). That is, early experiences are the foundation of the attachment hierarchy and working models; early working models direct cognitive processes, and these processes, such as attentional biases, influence behaviours in social and emotional arenas. For example, if attentional biases are found towards the names of one's attachment figures, then it follows that attentional biases may also be found towards elements of the attachment-caregiving interaction, such that the activated model of received care will direct attention to model-consistent stimuli. For example, an activated model of unresponsive care may direct attention away from a picture of a person crying, whereas an activated model of responsive care may direct attention towards such a picture.

There were several methodological weaknesses in this study. First, the fluctuation in the size of the samples for each analysis means that interpretation and generalization is limited. Every opportunity was taken to maintain the sample size by using mean substitution for missing data points in line with recommendations (e.g., Tabachnick & Fidell, 2001) and the wishes of participants (e.g., some wished not to report on certain family members). Further, the number of available men was low which prevented the exploration of gender differences in the influence of received care models on romantic caregiving. Equally, this limits the extent to which I can be confident of explanations based on opposite-sex parent influences. Importantly, some of the analyses were conducted on sample sizes possibly too small to detect the effects of the moderating variables.

The measure of model elaboration could be described as relatively basic in comparison to the alternative ways in which model content has been examined in previous research, such as examining the qualitative descriptions of parents (e.g., Fraley & Davis, 1997; Hazan & Shaver, 1987; Levy et al., 1998). One reason for not using previous measures was because I wanted to capture the range of experiences within the model that a person would turn to their parents or peers as opposed to an evaluation of the quality of the attachment. Nevertheless, it is recognized that there are limitations with the model

elaboration questionnaire. The range of attachment-relevant needs should be extended to include thoughts, feelings and emotions that tap all of the functions of the attachment bond (i.e., proximity maintenance, safe haven and secure base). Further, there were two important issues surrounding model elaboration that I was not able to capture in this study. First, it was evident that individuals of different attachment styles differed in their reports of model elaboration: the fearful and dismissive participants tended to have the lowest model elaboration scores for their parents and peers. Research suggests that avoidant individuals employ a preemptive defense strategy when faced with emotional material and actually encode less emotional material than non-avoidant individuals, which in turn "*constrains the degree to which one can create a detailed, rich, or sophisticated representation of attachment-related emotional experiences*" (Fraley et al., 2000, p. 823). Consequently, a future measure of model elaboration would need to account for these attachment style differences whilst simultaneously collecting accurate data on the early caregiving experiences of fearful and dismissive adults.

The second issue is the potential change over time in the extent to which young adults turn to their attachment figures and change in the quality of care received from the attachment figure. This is especially pertinent for reports of caregiving from mothers and fathers because participants were asked to reflect upon (approximately) the past 20 years. As an example, a mother may have been sensitive and responsive towards her son throughout his childhood years, but following a complicated divorce and an episode of depression, the mother may have adopted a less optimal caregiving strategy in her son's adolescent years. These changes in received care may have influenced the son's attachment-seeking behaviour toward his mother. Future research might ask participants to report on life events that may lead to changes in the nature of received care in order to understand variations in model elaboration.

Taken together, there is a clear need to employ different methods to assess the elaboration of working models of attachment and caregiving. Self-report methods are open not only to social desirability, but also defensive responding. As Levy et al. (1998) suggest an interview measure is most appropriate for this type of analysis, especially because participants could be probed on their responses. For example, if a participant said he or she turned to his or her father when lonely, he or she could be asked to provide a specific example.

5.12 Conclusions

Overall, the results of this study may aid our understanding of the continuity of caregiving patterns. Although a general hypothesis may predict that our mental representations of received care in childhood and adolescence will be reflected in our adult caregiving, a more specific hypothesis is required which can predict the features of these representations that are likely to determine their continuity. Although research indicates that continuity is not inevitable (e.g., Phelps, Belsky & Crnic, 1998), for clinical, empirical and therapeutic purposes it is important that we can predict and explain why some people will continually be influenced by their early experiences of receiving care (Cassidy, 2000). Continued research into assessing model elaboration, or other ways in which models may have a dominating effect in the model network, will be useful for achieving this aim in the field of adult attachment research.

CHAPTER VI

General Discussion

6.0 Chapter Overview

Before commencing this thesis, adult attachment research had already begun to examine adult caregiving and its importance within romantic relationships (Carnelley et al., 1996; Collins & B. C. Feeney, 1998; B. C. Feeney & Collins, 2001; J. A. Feeney, 1996, 2001; Kunce & Shaver, 1994; Rholes et al., 1998; Simpson & Rholes, 1994; Simpson et al., 1992). This thesis has contributed to this growing research area by addressing several pertinent research questions. I have examined the way in which adult caregiving may function similar to parental caregiving by affecting the emotional and interpersonal functioning of young adults (Chapter 2). In order to understand from where young adults' caregiving abilities are derived, I examined the way in which early and current experiences of received care are reflected in young adults' caregiving responsiveness and compulsiveness (Chapters 3, 4 and 5). Finally, I examined the way in which experiences of received care and caregiving are mentally represented. This research has attempted to integrate theory and empirical research from three different psychological traditions: developmental psychology, social and personality psychology and social cognition. In doing so, I was able to consider some of the processes that foster the continuity – or discontinuity – of maladaptive caregiving strategies.

Below, I address the three main research questions, outlined in Chapter 1, using the results from the empirical studies. I outline directions for future research. Where relevant, I discuss the implications of the current results for adult attachment theory and clinical interventions. Before concluding, I have chosen to discuss two aspects of this thesis, that I have found to be most thought-provoking. The first focuses upon the importance of the father-child attachment for adult caregiving. The second is a brief discussion of the importance of romantic caregiving in the maturation of the caregiving behavioural system. Finally, I acknowledge the strengths and limitations of this thesis.

6.1 Does Romantic Caregiving Influence One's Emotional Well-being, Self-esteem and Relationship satisfaction?

The results from the study in Chapter 2 confirmed that, to some extent, romantic caregiving has parallels with parental caregiving. When romantic partners were observed to be more empathic, physically affectionate and reassuring, fearful support-seekers experienced greater positive affect than did secure and preoccupied support-seekers. However, romantic caregiving or perceived support was not found to alleviate support-seekers' negative affect (i.e., emotional distress). Several potential explanations were considered for this, e.g., that any discussion of the problem prior to the discussion task may have alleviated the negative emotions associated with the problem. Nevertheless, the results did suggest that young adults' emotional well-being is likely to be affected by the sensitivity of their romantic partner.

The effect of romantic caregiving on support-seekers' feelings about the self and their relationship differed by the support-seekers' attachment style, the quality of the caregiving, the support-seekers' perception of their partner's supportiveness, and, perhaps most importantly, whether the support-seekers' attachment system was likely to have been activated, i.e., when they were discussing a more distressing problem with their partner. The most revealing result was that fearful support-seekers' views of the self were most vulnerable to the effects of both positive and negative romantic caregiving. Fearful individuals appear to be particularly vulnerable to the effects of romantic caregiving.

The results provide information on how young adults may cope in the face of romantic caregiving. Understanding these coping or defensive strategies will be useful in explaining why and how certain individuals remain within relationships in which their attachment needs may often go unmet. Below, I briefly discuss the cognitive strategies support-seekers of each attachment style might have employed in order to process their partner's poor quality caregiving to their distressing personal problem.

Secure individuals have positive self- and other-views, which may act as a psychological buffer against minor interpersonal disappointments. Secure individuals may minimise the importance of a partner's negative behaviour and not show strong reactions to one episode (see also Collins, 1996). Preoccupied individuals may employ self-protection strategies, such as failing to encode negative partner behaviours, or selectively attending to less negative partner behaviours, to avoid feeling bad about the self. They may

also be motivated to be inaccurate (Simpson et al., 1999) when perceiving and interpreting their partner's behaviour in order to deceive the self into believing their relationship *is* good. Because dismissing support-seekers tended to not experience marked changes in their affect, self-esteem or relationship dissatisfaction, it was not wholly clear what strategies they employed. However, one notable outcome was that dismissing support-seekers fared better when their expectations of loved ones were confirmed. That is, when they felt their partner was unsupportive, they were more content with their relationship. It was suggested that this reaction might be the result of a history of non-optimal caregiving experiences. For dismissing individuals, a goal of maintaining a view of self as autonomous, self-sufficient and independent may operate when interacting with loved ones. Any partner behaviour, whether it be positive or negative, which leads to the satisfaction of their goal will lead to better reactions from dismissing individuals.

It would seem that whereas the secure and preoccupied support-seekers had strategies that were not dependent upon their partner's behaviour (i.e., their strategies did not rely upon their partner acting in a specific way; whatever behaviours their partner expressed, preoccupied and secure individuals could employ their strategies), fearful support-seekers' strategies were dependent upon their partner's behaviour. It appeared as if a crucial goal for the fearful support-seekers was to deactivate their attachment system and if the partner's behaviour could achieve this, then this was beneficial. For example, the more negative caregiving style involved the caregiver avoiding the support-seekers' problem, by being distracted, changing the topic of conversation, and minimising the problem; a great strategy for removing the focus from the fearful support-seeker and allowing him or her to deactivate their system. Removing the focus from the self may make the situation less intimate or less stressful for the fearful individual. The less positive caregiving style involved the caregiver being less physically affectionate, reassuring, empathic and fewer solutions being provided and questions asked. That is, the less positive caregiving style would have kept the focus on the support-seeker, but the care provided would have been insufficient to relieve the support-seekers' distress; hence, their attachment system may not have been deactivated. Consequently, fearful support-seekers' appear most vulnerable to the quality of their partner's caregiving.

Caveat. It is necessary to note that these mechanisms may only be relevant in situations in which support-seekers are restrained from removing themselves from the situation. In other situations, dismissing and fearful support-seekers may achieve

attachment system deactivation by physically distancing themselves from their partner, and perhaps seeking alternative activities to remove the focus from their negative affect.

6.1.1 Implications

The knock-on effects of poor quality caregiving. Although consistent with other observational studies of caregiving interactions (e.g., Collins & B. C. Feeney, 2000; Rholes et al., 1998), it should be noted that the 10-minute interaction was a snapshot of the couples' relationship. This study focused only on the short-term consequences of romantic caregiving; future research should examine the day-to-day fluctuations in affect, self-esteem and relationship-satisfaction resulting from caregiving interactions. In addition, it is important to examine the long-term effects of poor quality caregiving on self and relationship views. How do support-seekers who continually have their efforts to seek support rejected or ignored maintain their relationships? What consequences does poor romantic care have for exploration? A diminished self-view from poor received care may limit one's confidence in performing well on a subsequent task: Partners who serve as an *insecure* base may limit their partner's ability to explore. Collins and B. C. Feeney (2004) found that performance in a public speech was influenced by attachment style and the supportiveness of pre-speech notes ostensibly written by participants' romantic partners. Importantly, when these notes were unsupportive, preoccupied, fearful and dismissing participants performed worse in the public speech compared to secure participants.

Fearful avoidance, depression and dysfunctional relationships. These results point to a growing number of findings that demonstrate the psychological fragility of fearful individuals. The high lability of their self-esteem raises important questions for the long-term mental health of these individuals. The relationships of fearful individuals, or indeed individuals high in attachment anxiety, are likely to involve dysfunctional beliefs, feelings and actions and reactions. For example, Davila and Bradbury (2001) found that those individuals who were most likely to remain in an unhappy marriage, over a 4-year period, were women who were high in anxiety about abandonment and men who were high in anxiety and low in comfort with depending on others. Importantly, individuals in unhappy marriages had the highest levels of depressive symptoms during the 4-year period (Davila & Bradbury, 2001). Taken together, there is strong evidence to support the idea of early intervention, that is, pre-marriage, for fearfully avoidant individuals. Kilmann et al. (1999) propose an attachment-focused group intervention that focuses upon dysfunctional relationship beliefs, childhood experiences, relationship skills and relationship strategies.

Over 17-hours of intervention, Kilmann et al. found that women with fearful and dismissing attachment styles pre-intervention, reported greater attachment security post-intervention.

Parenting. Romantic caregiving is likely to be highly important during and after the transition to parenthood. As Bowlby noticed, a responsive caregiver for a new mother is beneficial. The importance of spousal caregiving during this period is highlighted in the finding that single mothers, who may be less likely to have available emotional support, are most likely to abdicate the caregiving role (Wilson & Daly, 1994). Inadequate spousal caregiving during this period may have subsequent effects on the mother's caregiving to her child. Similarly, the addition of a child to an adult pair-bond may also lead to changes in the quality and availability of one's romantic caregiving. Every adult has priorities and pressures outside of their romantic relationship, which may, on occasion affect the quality of their caregiving to their partner. For example, a woman who is spending every day at the hospital where her young child is being treated may be unavailable to comfort her husband who has just lost his job. How a person reacts to the delayed availability of his or her partner is likely to be influenced by one's own experiences of caregiving in childhood (Bowlby, 1979). Bowlby (1979) provided several examples of how adults' unresolved early caregiving experiences may shape their reactions to parenthood. For example, the birth of a son and the lack of his wife's availability may stimulate memories of a man's own childhood in which a younger sibling occupied his mother's time. Now faced with a similar situation in adulthood, the anger and resentment toward his own mother and sibling may be re-directed towards his wife and son. Again, this highlights the need to redress early maladaptive caregiving experiences in order that individuals attempt to be more optimal caregivers to their loved ones.

6.1.2 Future Research Directions.

Relationship or marital functioning. Relationship satisfaction is one of the most important factors involved in relationship dissolution or divorce (Davila & Bradbury, 2001). Given the association between relationship dissatisfaction and romantic caregiving (i.e., support-seekers who discussed a distressing problem and whose partners had a more negative caregiving style reported greater relationship dissatisfaction), future research should address how romantic caregiving fits into the broader concept of relationship functioning or is implicated in relationship dissolution. Romantic caregiving may be associated with greater relationship satisfaction because when a person is more invested, or

committed, to their partner, they feel greater motivation to maintain the well-being of their partner (Collins & B. C. Feeney, 2000).

Although it is beyond the scope of this chapter to discuss interdependence theory, future research may find it fruitful to examine how romantic caregiving is linked to commitment, interdependence, investment and availability of alternatives (Rusbult, 1983). B. C. Feeney and Collins (2001) found that relationship interdependence - the degree of closeness felt between the self and the partner - predicted more responsive caregiving and Rusbult and Buunk (1993) showed that feeling committed, close and trusting of one's partner motivate pro-relationship behaviours. The quality of one's romantic caregiving or the willingness to seek therapy to improve one's caregiving could be viewed as pro-relationship or relationship maintenance acts. These acts, such as a willingness to sacrifice, are associated with strong commitment to a relationship (Agnew, van Lange, Rusbult and Langston, 1998) and require a partner to be motivated to put his or her own needs or ways of responding to one side and instead think about the long-term consequences of his or her behaviour for the success of the relationship (Agnew et al., 1998).

Research that integrates caregiving and interdependence theory is important because in understanding the inter-relations between several relationship features, it may be possible to highlight under which circumstances a person is open to adapting their caregiving abilities. For example, a person may be more open, or willing, to acknowledge the negative effects of his or her inadequate caregiving when he or she is strongly committed to that person. In addition, it may be possible to identify emotion regulation strategies that individuals employ when they are committed to a relationship in which the quality of partner's caregiving does not satisfy their attachment needs.

Individual differences in effective caregiving. Simpson et al. (1992; see also Barbee & Cunningham, 1995; Bartholomew et al., 1997; J. A. Feeney & Hohaus, 2001) proposed that in order for caregiving to be effective, it should be tailored to meet the expectations and needs of the support-seeker. For example, invisible support (Bolger et al., 2000) is suggested to be optimal for dismissing individuals who need to maintain their independence in order to be more satisfied with their relationship. Indeed, although warmth and responsiveness is perhaps the most optimal caregiving strategy, George and Solomon (1993, 1999; Solomon & George, 1993) describe three different parental caregiving strategies, close, distant and flexible. As George and Solomon discuss, these strategies are not damaging to Western children and mothers who adopt one of these strategies with their

child are as protective of their child as mothers who adopt any of the other strategies (Solomon et al., 1995). Thus, it follows that romantic caregiving strategies may also take the same form. For example, protecting one's partner from a distance (i.e., the *distal* strategy) may be the most optimal strategy for adults with avoidant attachment orientations. This strategy would involve low levels of physical proximity, but greater autonomy for the partner. Future research could attempt to identify such caregiving strategies in adult-adult attachments. An additional reason for identifying adult caregiving strategies is to remove the negative connotations associated with non-optimal caregiving. For example, using the current measures of romantic caregiving (Carnelley et al., 1996; B. C. Feeney & Collins, 2001; J. A. Feeney, 1996; Kunce & Shaver, 1994), adults who score low on the scales are described as unresponsive, neglectful and disengaged when they may simply be more *distal* caregivers.

6.2 To What Extent Does Received Care from Parents and Peers Shape Adult Caregiving?

Chapter 3 revealed that young adults' relationship-specific caregiving responsiveness and compulsiveness is shaped by their perceptions of care received from mother, father and current (or most recent) romantic partner, but not peer (i.e., close friend, ex-partner, sibling). Thus, no support was found for the argument that relationships with peers may shape romantic relationship (Furman et al., 2002; Furman & Wehner, 1994).

Young adults' compulsiveness toward their romantic partner reflected their perceptions of compulsive care received from their same-sex parent. Further, young women's romantic caregiving responsiveness was shaped by the perceived responsiveness of their father, which was mediated by the perceived responsiveness of their romantic partner. The effect of received care from father appeared to be bi-directional. Not only does received care from father shape young women's romantic caregiving, but it appears to influence the perceived caregiving style of the romantic partner. Speculatively, young women may select romantic partners with a caregiving style that mirrors that of their fathers. The opposite-sex parent model may in part, guide this selection process. As could be inferred from the current results, the model of received care from father may shape young women's model of self (as a caregiver) and model of others (as caregivers). In this way, the model of self and model of others would remain stable across the two attachment

relationships, which in turn, would allow the young women to maintain consistency and predictability in their close relationships. Further, this process would ensure efficiency in the processing of attachment- and caregiving-relevant information because the attachment and caregiving systems, respectively, would be calibrated to respond to incoming information with established emotion regulation strategies (Weiss, 1991).

Chapter 5 revealed that young adults' general romantic responsiveness was shaped by the care received from their current romantic partner and peer, but not the care received from mother and father. First, consistent with Overall et al. (2003), salient models (i.e., those from the same relationship domain) are important in the composition of a general attachment model. Second, this result suggests that there is a *bottom-up* flow of information within the attachment model hierarchy in that relationship-specific models shape more general models. Nevertheless, an important caveat is that I did not assess whether the general model of romantic responsiveness had an effect on the relationship-specific models. Consequently, consistent with Collins and Read's (1994) suggestion, it is possible that there are *bottom-up* and *top-down* flows in the way in which information is transferred across the model network.

That received care from mother and father does not have an influence on the generalised representations of attachment and caregiving in romantic relationships suggests that adult attachment and caregiving experiences may not be determined by one's early caregiving experiences. Indeed, a general model of romantic relationships is likely to be activated automatically when a person perceives the attachment signals of their new romantic partner or finds his or her self facing an ambiguous romantic experience (Collins & Read, 1994; Overall et al., 2003). For example, a young woman may be on hand to support her grieving boyfriend at the funeral of his father. Her relationship-specific models of parents and peers may contain no specific representations of caregiving when a loved one dies. In these circumstances, her caregiving responsiveness should be shaped by the generalised expectations and beliefs concerning others' worthiness of receiving care in highly emotional situations, gleaned from her current and previous peer relationships. Nevertheless, more specific models are likely to be activated the less ambiguous a situation becomes (Collins & Read, 1994; Overall et al., 2003). Taken together, these results highlight the continued importance of early caregiving experiences on adult relationship functioning as well as the importance of peer attachment figures in the development of romantic caregiving (Furman & Wehner, 1994).

6.2.1 Is It Possible to Adjust an Adult's Caregiving Quality if He or She Has Learned Behaviours That Prove Ineffective?

Chapter 4 revealed that temporary adjustments in self-reported caregiving quality could be achieved by heightening the accessibility of a relationship-specific model of received care. By writing about an episode of receiving care from a close friend or romantic partner for 15-minutes (i.e., the priming manipulation), a caregiving context effect was achieved (Baldwin et al., 1993). The caregiving context led participants to describe their general peer caregiving quality as congruent with that of the primed relationship-specific model; further, participants' own general peer caregiving quality (assessed in an earlier session) had no effect following the priming manipulation. Participants' memory was biased toward words consistent with the primed context, i.e., they showed enhanced recall for caregiving words compared to non-caregiving words. In addition, participants appeared to have processed less efficiently words that were *inconsistent* with the received care style of the primed model. Participants primed with a model of neglectful care recalled *fewer* responsive caregiving words. Such words are unlikely to be descriptive of an attachment figure who routinely rejects, ignores or is insensitive to one's requests for support.

At first, these results offer a potential method for enabling individuals with less optimal caregiving styles to improve their caregiving responsiveness. By lowering the threshold for activation of an attachment model, it raises the possibility that that model will be used to direct and infer the behavioural, cognitive and affective response patterns of the self and one's peer or partner. By ensuring that the most optimal model in one's network has one of the lowest thresholds that model will be more likely to be activated. Would adjusting caregiving responsiveness really be this simple? The technique seems straightforward and could be employed without therapeutic supervision (e.g., using self-talk to activate positive models of others). Nevertheless, the results from Chapter 5 suggest that restructuring the organization of models of received care and caregiving may require a more in-depth form of intervention.

Chapter 5 revealed that the priming of a general model of peer or parental caregiving, led to the heightened activation of relationship-specific models of received care.[1] The noteworthy result from this study was that *pre-prime* general romantic

[1] As reviewed in detail in Chapter 5, there were several methodological problems in this study: the control group was unusable, the responsiveness of the primed general model of caregiving was not assessed and the

responsiveness was shaped by the received care from romantic partner and peer. However, *post-prime* general romantic responsiveness was shaped by the received care from *father* and not romantic partner or peer. Although this study only temporarily lowered the threshold of the caregiving model, it suggests that if a model exists within the network, given apt circumstances, it may receive heightened activation and exert an influence on adult caregiving.

In order to attenuate the effect of early (non-optimal) caregiving experiences to not shape current relationships, one would need to reappraise and restructure those experiences. Consequently, any intervention that examines manipulating the accessibility of general models must also consider that spreading activation will heighten the accessibility of closely related models. The effect of the model of received care from father suggests that this model may be densely connected within the model hierarchy, to both parental and peer-based models; thus, future research should clarify which models are closely associated within the network in order to understand how our caregiving past shapes our caregiving present.

6.2.2 Implications for therapy.

Short-term changes in caregiving responsiveness may be achieved through priming; however, for long-term changes, it is felt that intervention may need to return to the psychoanalytic roots of attachment theory. Bowlby (1988) proposed that the therapeutic approach should involve helping the client to access cognitions, emotions and behaviours that, because of the distress associated with them, have been pushed into the unconscious and made inaccessible. The anger, hostility and anxieties associated with these models will continue to shape current relationship cognitions, emotions and behaviours; implying that these emotions will be directed at and expected from inappropriate sources (e.g., one's partner) (Bowlby, 1988). The therapist's task is to help the client to understand how their current responses are linked to early experiences. It is not until the client has acknowledged the link between the past and the present that he or she can work on reappraising the early experiences (Bowlby, 1988). Not until reappraisal has occurred can restructuring of one's attachment and caregiving models take place. Indeed, as Kilmann et al. (1999) state, dysfunctional relationship patterns are likely to be repeated unless the

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choice of stimuli in the dot-probe task meant that it was not possible to determine which relationship-specific models had received heightened activation following the priming manipulation (e.g., because the names of non-attachment figures were not included).

disappointing caregiver and the romantic relationship are restructured. Consequently, adopting new caregiving strategies may be less likely if one has not understood why old caregiving strategies exist in the first place.

6.2.3 Future Research Directions.

The stability of parental caregiving. One factor that the current thesis did not examine is instability in the quality of care received from mother and father. That is, because of the use of retrospective reports, it is likely that the perceptions of parental caregiving were based on the most recent experiences of receiving care. Fraley (2002) proposed two possible ways in which attachment models are revised. 1) Early models of received care are overwritten by subsequent experiences of receiving care, such that the model's content is revised and up-dated (Fraley, 2002). This would suggest that if early caregiving experiences were negative and later experiences were more optimal (or vice versa), the more optimal (or negative) experiences would shape adult caregiving. 2) Early models of received care remain in their original form, and new models develop for subsequent experiences of receiving care (Fraley, 2002); that is, early experiences are not overwritten. This would suggest that early caregiving experiences may shape adult caregiving, given the opportunity for their activation. If the current situation is sufficient to activate early representations of received care, then it is plausible that these early representations may shape caregiving toward one's partner or child.

The continued influence of parental caregiving on adult caregiving. Future research should examine more fully the extent to which early caregiving experiences influence adult caregiving. In this case, early refers to from infancy through to young adulthood. J. A. Feeney (1996) reported how the spousal caregiving of middle-aged married couples was predicted by the quality of each partner's maternal and paternal caregiving in childhood. But, does the effect of parents' quality of caregiving wane the longer an individual is with their partner? Does its effect increase during certain life transitions, such as that of parenthood? Research conducted on adults with earned security suggests that the inadequate caregiving experiences of one's childhood can be overcome through gaining a coherent perspective on one's past; i.e., the restructuring of these early experiences (Phelps et al., 1996). That is, the cross-generational cycle of insecure attachment and inadequate parenting is not inevitable (Paley et al., 1999; Pearson et al., 1994).

The inclusion of sibling-sibling attachments. Although I focused upon four major attachment figures, namely mother, father, romantic partner and a peer (La Guardia et al., 2000), future research may wish to broaden the focus to other types of relationships, such as siblings, whose caregiving quality may determine adult caregiving. A sibling-sibling attachment provides a relationship in which the main features of peer relationships are present: a more egalitarian structure and, possibly, the reciprocal exchange of caregiving and care-seeking (Furman & Wehner, 1994; Noller, 2004). Another reason why siblings may influence adult caregiving is based on the maturation of the caregiving system. As George and Solomon (1999) described, the caregiving system begins to develop in middle childhood. It follows that a likely target of these caregiving attempts are (younger) siblings. Indeed, from an evolutionary perspective, providing care to a sibling would ensure the survival of the family's genes. In addition, because the models of sibling caregiving or received care are likely to be well-established in the model networks of young adults (when compared to romantic partners, for example), according to Collins and Read's propositions of model strength and matching of features, sibling models may be relatively strong and may have more shared features with other peer models. Because of sample size issues and that less than 30% of participants had a sibling attachment figure, I did not differentiate between ex-romantic partners, close friends, siblings and cousins. Nevertheless, a more in-depth understanding of the influences upon adult caregiving may benefit from the inclusion of sibling attachment.

Priming manipulations and observed behaviour. Future research should examine whether the effects of priming outlined above extend from self-reported behaviour to actual behaviour. That is, after heightening the accessibility of a model of received care, does a person *behave* congruent with the style of the primed model? A priming manipulation could be followed by a problem discussion task with one's romantic partner. It would be anticipated that the primed model of received care would bias not only a person's evaluations of his or her partner's actions, but also the person's own caregiving behaviour. From a clinical standpoint, being able to shape a person's behaviour might be effective when coupled with revising their cognitive and affective elements of the caregiving model.

6.3 Do the Structural Features of Working Models Determine Which Models Shape Adult Caregiving?

To address this question, I operationalised Collins and Read's (1994) proposition of model strength, manipulated the level of specificity of the models under investigation and assessed the matching features (e.g., gender of attachment figure, reciprocity of caregiving, nature of dyad) between the models. Whereas previous research has addressed the specificity of models of attachment (Cozzarelli et al., 2002; Pierce & Lydon, 2001; Overall et al., 2003), the studies reported in Chapters 3 to 5 are the first to test empirically, to my knowledge, Collins and Read's (1994) proposition of model strength. Taken together, these results provide preliminary evidence that attachment and caregiving models act like other cognitive structures in that their structural properties may determine the activation and application of that model (Collins & Read, 1994; Fiske & Taylor, 1991).

Matching of features. Results revealed that relationship-specific models that shaped general or other relationship-specific models were those that shared matching features in terms of the nature of the relationship, consistent with previous research and theory (Collins & Read, 1994; Overall et al., 2003). That is, romantic partners and peers shaped the general *peer* model, demonstrating a match of the *type* of relationship and the *reciprocity* of the caregiving. Fathers shaped women's relationship-specific romantic partner model, demonstrating a match between *genders* of the relationship partners. Consequently, in identifying the models of received care that are important in the composition of a general model of caregiving, examining whether two models share matching features is useful.

Additional support for the matching of feature proposition was found in Chapter 5. After priming a general model of *parental* caregiving, general romantic responsiveness tended to be congruent with received care from father. After priming a general model of *peer* caregiving, received care from father predicted general romantic responsiveness, but the caregiving styles were not congruent. Thus, it would appear that once a model has received heightened activation, it is more likely to shape subsequent caregiving if the activated model matches the features of the caregiving interaction.

Model specificity. Results revealed that a *relationship-specific* model of received care from a peer predicted general peer caregiving responsiveness over a *general* model of peer caregiving; that is, both models shared matching features. Although, this result

provides partial support for Collins and Read's proposition that the structural properties of a model trade-off one another, it was noted in Chapter 4, that the accessibility of the relationship-specific model had been manipulated. Future research should assess Collins and Read's proposition ensuring that the accessibility of the relationship-specific model and the general model is similar.

Model strength. Little evidence was found to support the proposition of model strength. The results from Chapters 3, 4 and 5 were inconsistent across the four attachment figures: strength only moderated the models of father and peer. In addition, of the four strength indicators, only model elaboration, frequency of contact and preference for use were significant moderators. Nevertheless, as predicted, stronger models of received care had a greater effect on self-reported adult caregiving. Compared to weak models, a strong model of a responsive peer predicted greater relationship-specific romantic compulsiveness (Chapter 3), a strong model of a responsive father predicted greater general romantic responsiveness, and a strong model of an unresponsive father predicted less general romantic responsiveness (Chapter 5). A particularly interesting result to arise from the strength analyses was the role strong (i.e., more elaborate) models of father played in determining the continuity of non-optimal caregiving strategies. This result is discussed in more detail in Section 6.5. In addition, stronger models of received care had a greater effect on the processing of caregiving-relevant information. Participants primed with a stronger model of an unresponsive peer recalled more neglectful caregiving words than participants primed with a weaker model (Chapter 4). Thus, stronger models of received care were found to determine self-reported caregiving and to have a greater effect on information processing than did weaker models.

Nevertheless, support for the strength feature was not wholly substantial. Indeed, opposite to predictions, a weak model of a responsive peer predicted greater general romantic responsiveness compared to a strong model of a responsive peer (Chapter 5). Consequently, it raises the question of whether the strength indicators were measuring a structural feature or a feature of the relationship (e.g., quality of the attachment). Future research will be necessary to explore the concept of strength further. However, given that the stronger father models shaped adult caregiving even when the received care was non-optimal suggests that, at least, model elaboration was assessing an aspect of the attachment bond other than relationship quality.

6.3.1 Future Research Directions.

Measuring model strength. Future research may benefit from testing different methods for assessing model strength of an attachment or caregiving model. The strength of cognitive structures, such as attitudes, beliefs and stereotypes, has been assessed using response latencies. For example, the time taken to decide whether a word is descriptive of an attitude object has been used to reflect the strength of the association between the descriptor and the object (Bassili, 2001). Participants could be presented with caregiving-related words and asked to indicate, using a response box, whether the word is or is not descriptive of their romantic partner. Shorter reaction times would indicate stronger associations between the relationship-specific attachment model and the romantic partner. The stronger the association between the attitude object and the mental representation of the evaluation, the more likely that the model will be activated and used to process information (Bassili, 2001).

The operationalisation of model strength did not include Collins and Read's (1994) concept of a model's centrality and density of connection within the hierarchy. By assessing the interconnectedness of attachment models, it may be possible to identify which models are likely to receive heightened activation via spreading activation after a priming manipulation. Rowe and Carnelley (2005) have found the bull's-eye mapping technique (Antonucci, 1986) to be suitable to assess the cognitive representation of young adults' hierarchy of attachment figures. Participants are asked to position labels, representing each of their attachment figures, onto a set of concentric circles at the centre of which is a circle representing the core self. Attachment orientation is linked to the distance with which participants placed their attachment figures from the core self (Rowe & Carnelley, 2005). Importantly in terms of assessing model strength, the way in which participants complete this measure may reflect the cognitive representation of these relationships in the attachment network (Rowe & Carnelley, 2005; see also Widmer, 1999).

6.4 The Effect of Received Care from Mother and Father on Romantic Caregiving.

Previous research has revealed that care received from mother *and* father (e.g., Collins & Read, 1990; J. A. Feeney, 1996) or mother alone (e.g., Carnelley et al., 1996;

Carnelley et al., 2005a; Simpson et al., 2002) predicts romantic and spousal attachment and caregiving. The results from this thesis are inconsistent with previous research; little evidence was found to suggest that the model of received care from mother shaped adult caregiving. In addition, considering the importance of the mother-child attachment bond in infancy and childhood, and its continued importance in adulthood (e.g., Carnelley et al., 2005a; La Guardia et al., 2002; Trinke & Bartholomew, 1997), the present results warrant further discussion.

Potential explanations for the incongruence with previous research may be based on aspects of the statistical analysis or measurement of parental caregiving. The way in which parental caregiving was assessed in the current thesis differs from the way in which it was assessed by Carnelley et al. (1996), J. A. Feeney (1996) and Simpson et al. (2002). In their research, measures were used that were specifically developed to assess maternal and paternal caregiving, such as the Parental Bonding Inventory (Parker et al., 1979) or Mother-Father-Peer Inventory (Epstein, 1985). In contrast, this thesis assessed parental responsiveness with a measure originally devised to assess romantic caregiving. Thus, the adapted caregiving measure in this thesis may not be sufficiently sensitive to capture the differences between parental and romantic caregiving (e.g., asymmetrical dependency; W. A. Collins & Sroufe, 1999). It is necessary; therefore, to address the influence of received care from parents and peers using measures that directly map onto the type of caregiving under question. I examined whether restriction of range explains the current results. However, the variability in the received responsiveness and compulsive of mother and father were comparable. In addition, post-hoc analyses revealed that received care from father was not suppressing the effect of received care from mother (or vice versa). Thus, it is unlikely that the current results are due to a statistical artefact.

It is also pertinent to mention other research that has found, often unexpectedly (e.g., Brody et al., 1994), a greater effect of the father on the child's psychological development than of mother. For example, the life dissatisfaction of late adolescents in romantic relationships is predicted by fathers' caregiving that is less affectionate and warm and more overprotecting, but is not predicted by mothers' caregiving (Overbeek, Vollebergh, Engels & Meeus, 2003). The acceptance of one's sexual orientation for lesbian, gay and bisexual individuals is predicted by perceptions of fathers' support concerning their sexual orientation (Mohr & Fassinger, 2003). More positive, less conflictual sibling relationships in adolescence were predicted, prospectively, by fathers'

display of greater positive affect and less negative treatment during interactions (as well as other family-based variables, such as perceived close family relationships, less difficult child temperaments) (Brody et al., 1994).[2] More closely related to the current thesis, Jaeger, Hahn and Weinraub (2000) found that the adult caregiving of daughters with alcoholic fathers was shaped by their paternal caregiving experiences. In alcoholic parent-child attachments, there tends to be a reversal of the parent-child role, a lack of interest in the child's feelings, a lack of nurturance and the presence of abuse (Jaeger et al., 2000). Not only were daughters with alcoholic fathers more likely to have an insecure adult attachment style, but also dismissing daughters, in particular, showed high levels of compulsive caregiving.

With this research in mind, the current results do not appear unusual. The father-child attachment bond appears to be dominant in shaping the psychological functioning of their offspring, at least in the interpersonal domain. This interpretation is consistent with child-based attachment research that suggests the father-child attachment is most influential in a child's social relationships (Steele & Steele, 1994). Nevertheless, *why* fathers may dominate in the social domain is still unclear. Research suggests that fathers' influence might be because the father-child attachment generalises to peer relationships because of its more distal, play-oriented nature (Brody et al., 1994; Ducharme et al., 2002; Rice et al., 1997; Youniss & Ketterlinus, 1987). However, although received care from father was linked to romantic caregiving and received care from the romantic partner, this link was not found between father and the *peer* (i.e., close friend, sibling, ex-partner). For example, received care from peer did not shape relationship-specific romantic caregiving nor did it mediate the influence of received care from father on relationship-specific romantic caregiving (Chap. 3). Further, participants reported seeking their peers for attachment-need satisfaction over their fathers (Chap. 5). One might have expected a greater association between fathers and peers if the explanation for the greater influence of fathers is because of the shared characteristics between the two types of relationship. Moreover, the results from Chapter 5 suggest that the influence of fathers is greatest when fathers are non-optimal caregivers and their daughters have not relinquished the attachment. Consequently, it is suggested, that a focus on features of the father-child

2 In addition, the quality of the mother-younger sibling relationship also predicted sibling relationship in adolescence (Brody et al., 1994).

attachment will provide a clearer explanation for why father's caregiving influences romantic caregiving.

My suggestion, consistent with ideas put forth by other psychologists, is that for some individuals the father-daughter (or indeed, son) attachment has a particular emotional salience that renders the relationship particularly dominant when shaping subsequent peer (including sibling) relationships. The factors that lead to the emotional salience are, at this point, still unclear (Brody et al., 1994). One explanation is that "*Fathers' relative unavailability compared with mothers may bestow on them...a particular psychological salience..., making them more likely to spill over into the sibling relationship*" (Brody et al., 1994, p.283). Future research should explore the factors that determine emotional salience because it seems likely that in order to foster caregiving responsiveness in those individuals who have had negative caregiving experiences with their father, the emotional salience will need to be relinquished. A potential direction may be to examine the social context within which the child was raised. A focus upon the social contextual features of the adult's family background may aid in understanding *why* certain working models are more accessible (Sedikides & Skowronski, 1991) or emotionally salient. For example, a father's poor caregiving abilities may be one aspect within a wider context of family dysfunction in which a child has no opportunity to seek care from other, more responsive, figures.

Moreover, psychologists who take a developmental approach to attachment express uncertainty in understanding fathers' caregiving to their children (e.g., George & Solomon, 1999) and in understanding why fathers' are important influences in one social domain but not in another (e.g., Steele & Steele, 1994). Indeed, as Steele and Steele (1994) state "*Does the model of one parent become dominant? Or does one parent's influence dominate in some interpersonal contexts while the other parent prevails in other situations?*" (Steele & Steele, 1994, p.114).

In sum, future research needs to explore in which interpersonal contexts attachment models for mother and father are likely to dominate the processing of attachment- and caregiving-relevant information and why.

6.5 The Adaptive Function of Adult Caregiving

In Chapter 1, I outlined three ways in which caregiving differs from social support provision, one of which was that caregiving has an adaptive function: to ensure the

survival and transmission of one's genes (Cassidy, 2000; George & Solomon, 1999). In addition, I have argued for the importance of caregiving within adult romantic and peer relationships (cf. Kirkpatrick, 1998; McAdams, 2000). Before concluding, I would like to express several views that should highlight the importance of romantic caregiving in the maturation of the caregiving behavioural system.

Because romantic caregiving is most likely to occur during late adolescence and early adulthood, that is (in general) the period before reproduction, the function of romantic caregiving may be to secure a suitable mate to parent one's offspring. From an evolutionary perspective, a sensitive and responsive man demonstrates his ability to protect his partner, which may serve as an indication of his potential ability to protect the couple's offspring should danger or threat arise. A sensitive and responsive woman demonstrates her potential suitability as a parent, an indication of her ability to ensure the survival of the couples' offspring. Further, Cassidy (2000) suggested that those children who have sensitive and responsive parents and who model their parents' caregiving quality should attract more desirable partners in adulthood. Thus, a pair-bond in which both members have optimal caregiving strategies provides a secure environment both for reproduction, protection of the mother and the survival of one's genes. A child born to parents who have a secure pair-bond characterised by caregiving responsiveness will ensure that that child is protected, increasing the likelihood that the he or she will reach reproductive age (Fraley & Shaver, 2000).

In addition, if an adult chooses not to reproduce or to delay reproduction, activation and use of the caregiving system is expected to continue. That is, romantic caregiving will aid in the maturation of the caregiving system, even if the eventual target of one's caregiving behaviour is not one's own child. Erikson (1959) believed that adulthood is marked by a period of generativity (versus stagnation) during which a person focuses upon establishing or guiding future generations. However, generativity includes more than becoming a parent: generativity can be expressed in behaviours that enhance the survival of children in one's vicinity. For example, a person who does not become a parent may act as an attachment figure to his or her sibling's children. The adaptive function of caregiving would be the same, as the survival of (some of) one's genes would be ensured.

Another important role for caregiving behaviour is in the parent-adult child attachment bond. One of the motives for adult caregiving is a self-oriented need, whereby we are motivated to maintain close relationships to combat feelings of loneliness. A parent

is often a source of emotional support and may continue to provide a secure base. Consequently, an adult child may be motivated to care for his or her elderly mother or father in order to maintain this source of security. Circirelli (1993) has described this motivation to care for one's parents as a protective behaviour. That is, adult caregiving toward an elderly parent may delay loss and prevent separation (e.g., if the parent was to be taken into residential care).

In sum, caregiving features within several of our closest relationships across the lifespan. Because of this, it *is* important to examine the way in which caregiving behaviours develop, are expressed, and are open to adaptation.

6.6 Strengths and Limitations

Here, I will focus on the strengths and weaknesses of the thesis, in general (rather than for each study). There are several strengths. This research is grounded within an established theoretical framework; adult attachment theory. Relevant research and theory from the fields of social cognition, developmental psychology and social and personality psychology has helped to develop the research questions and hypotheses. In addition, a varied selection of research methodologies has been employed: self-report questionnaires, behavioural observation, priming manipulations and computer-based reaction time measures. To my knowledge, adult attachment research has not used the dot-probe task. By rectifying the problems with the version used in Chapter 5 (i.e., the stimuli and control group), the dot-probe task will be useful in future research to assess how the activation of a model of attachment or caregiving biases attention to schema-consistent information.

Theoretical framework. General criticisms of attachment theory focus on its inability to experimentally manipulate separation and deprivation in child-caregiver attachment (see Miller, 2002). Bowlby's (1988) early emphasis on the mother-infant attachment bond reflected typical parental caregiving in his era and has subsequently been addressed by father-infant research (see Steele & Steele, 1994). Criticisms specific to adult attachment theory focus on the incongruence between research and measurement tools from the developmental and clinical traditions and those from the social and personality tradition (see Crowell & Treboux, 1995; Stein et al., 1998). The interview-based measures employed by developmental psychologists, are considered superior forms of assessment because they are not limited by subjectivity biases (de Haas et al., 1994). However, Shaver, Belsky and Brennan (2000) discuss the degree of convergence between the two types of

measures: both are associated with defensive responding, memory for emotional experiences and personality disorders. A recent critique noted by Ryan (2004), is that the previous research emphasis on the attachment behavioural system has rendered the research uni-dimensional. However, research has integrated the attachment, caregiving and affiliation systems to examine romantic relationship development in adolescence (Furman & Wehner, 1994), the attachment, caregiving and sexual/reproductive systems to examine adult romantic love (e.g., Brennan et al., 1997; Shaver et al., 1988), and the attachment, caregiving, exploratory, self-defence and sexual/reproductive systems to examine a wider range of interpersonal, intimate relationships (Heard & Lake, 1997).

Participants. The nature of the participants used in this thesis has both strengths and weaknesses. Limiting the analysis of romantic caregiving to a sample of young, single adults has theoretical and practical importance. Theoretically, little research has addressed the development of caregiving in this age group, and as has been highlighted above, romantic caregiving has implications for caregiving across the lifespan and across generations. Practically, because of the large sample sizes needed, university students were the obvious, available resource; however, this limits the generalisability of the results and interpretations; the university population could be viewed as largely homogenous. The maturity of the caregiving system, the specific influences on adult caregiving, and the nature of the caregiving role (i.e., peer-based or parental) may differ considerably in other environments. For example, young adults who live in dangerous, insecure environments (e.g., refuges, asylum seekers, child prostitutes) may, for survival reasons, have to deactivate their caregiving systems or abdicate caregiving roles they hold. Similarly, some young people may be forced to assume caregiver roles before their systems have reached maturity (e.g., children whose parents are killed in war-torn countries or whose parents have terminal illnesses and have to assume the parental role for younger siblings). Under such life-and-death situations, it would seem appropriate to consider that the caregiving of these individuals may differ somewhat from the romantic caregiving of young adults in more secure environments. Consequently, the results of this thesis are most relevant for understanding caregiving in young adulthood in Western countries with relatively secure living environments. Nevertheless, the results could prove fruitful in developing research questions and hypotheses about adult caregiving in dangerous environments.

Methodologies. Consistent with previous research, the use of self-report questionnaires to assess adult caregiving was the most convenient method given the sample

sizes and the amount of data collected. Perhaps the main limitation was the correlational nature of the analyses assessing patterns of influence on adult caregiving. Consequently, interpretations that parents shape adult caregiving should be viewed with caution. The reliance on retrospective reports of received care from mother and father is also a limitation. First, retrospective reports were likely to be biased by participants' current attachment orientation (B. C. Feeney & Cassidy, 2003; Scharfe & Bartholomew, 1998). Second, it is likely that the descriptions of parental caregiving did not capture any changes in caregiving that occurred across childhood and adolescence. This also applies to the measure of model elaboration in Chapter 5. Future research may overcome these limitations by collecting multiple perspectives on adult caregiving (e.g., self- and partner-reports) and by using measures that can capture the defensive processing (e.g., minimization) evidenced by individuals of an avoidant attachment orientation (e.g., the Adult Attachment Interview) in reports of care received from parents. These issues point to the use of cognitive methods, such as the lexical decision task, Stroop test or dot-probe task, to examine the differences in how individuals process caregiving-relevant information.

The cognitive tasks and priming manipulations were able to overcome some of the limitations of the correlational analyses. Another strength of these measures was that the priming manipulations were conducted over two sessions, at least 24 hours apart. Nevertheless, several methodological problems and oversights limited the use of much of the data collected from these measures. For example, in Chapter 4, because word frequency and length were not controlled, the LDT data was unusable. Similarly, in Chapter 5, being unable to use the control group implied that the extent of the priming manipulation could not be adequately established.

A final concern was the way in which model strength was assessed. If self-reports are appropriate to assess model strength, then the measure needs to be sufficiently sensitive to capture the richness of experiences with parental figures in comparison to current romantic partners and peers. Future research may also employ other methods to assess the strength of association between the different attachment and caregiving models. As discussed earlier, response latencies or a hierarchical mapping technique may prove useful here.

6.6 Concluding Comments

Attachment theory has helped me to understand why some of us flow through life open to love and support, whilst some of us flow through life trying to protect ourselves from hurt and pain. It has helped to explain why some of us go through life willing and wanting to provide others with love and support, whilst some of us may go through life intent on causing hurt and pain. However,

"Although the capacity for developmental change diminishes with age, change continues throughout the life cycle so that changes for better or for worse are always possible."

(Bowlby, 1988, p. 136).

Appendix A
Materials for Chapter 2

Pre-Interaction Measure

Experiences in Close Relationships Questionnaire (Brennan, Clark & Shaver, 1998).
The following statements concern how you *generally* feel in romantic relationships. Please read each statement and rate the extent to which it describes how you *generally* think and feel about your romantic relationships. Think about *all* of your romantic relationships, past and present, and respond in terms of how you *generally* feel in these relationships.
Respond to each statement by indicating how much you agree or disagree with it.

1	2	3	4	5	6	7
Disagree strongly			Neutral			Agree strongly

___ 1. I prefer not to show a partner how I feel deep down.
___ 2. I worry about being abandoned.
___ 3. I am very comfortable being close to romantic partners.
___ 4. I worry a lot about my relationships.
___ 5. Just when my partner starts to get close to me I find myself pulling away.
___ 6. I worry that romantic partners won't care about me as much as I care about them.
___ 7. I get uncomfortable when a romantic partner wants to be very close.
___ 8. I worry a fair amount about losing my partner.
___ 9. I don't feel comfortable opening up to romantic partners.
___ 10. I often wish that my partner's feelings for me were as strong as my feelings for him/her.
___ 11. I want to get close to my partner, but I keep pulling back.
___ 12. I often want to merge completely with romantic partners, and this sometimes scares them away.
___ 13. I am nervous when partners get too close to me.
___ 14. I worry about being alone.
___ 15. I feel comfortable sharing my private thoughts and feelings with my partner.
___ 16. My desire to be very close sometimes scares people away.
___ 17. I try to avoid getting too close to my partner.
___ 18. I need a lot of reassurance that I am loved by my partner.
___ 19. I find it relatively easy to get close to my partner.
___ 20. Sometimes I feel that I force my partners to show more feeling, more commitment.
___ 21. I find it difficult to allow myself to depend on romantic partners.
___ 22. I do not often worry about being abandoned.
___ 23. I prefer not to be too close to romantic partners.
___ 24. If I can't get my partner to show interest in me, I get upset or angry.
___ 25. I tell my partner just about everything.
___ 26. I find that my partner(s) don't want to get as close as I would like.
___ 27. I usually discuss my problems and concerns with my partner.
___ 28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.
___ 29. I feel comfortable depending on romantic partners.
___ 30. I get frustrated when my partner is not around as much as I would like.
___ 31. I don't mind asking romantic partners for comfort, advice, or help.
___ 32. I get frustrated if romantic partners are not available when I need them.
___ 33. It helps to turn to my romantic partner in times of need.
___ 34. When romantic partners disapprove of me, I feel really bad about myself.
___ 35. I turn to my partner for many things, including comfort and reassurance.
___ 36. I resent it when my partner spends time away from me.

Pre- and Post-Interaction Measures

Positive and Negative Affect Scale (Watson, Clark & Tellegen, 1998).

Feelings and Emotions

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. Indicate to what extent you feel this way **right now**, that is, at the present moment. Use the following scale to record your answer.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

____	Interested	____	Irritable
____	Distressed	____	Alert
____	Excited	____	Ashamed
____	Upset	____	Inspired
____	Strong	____	Nervous
____	Guilty	____	Determined
____	Scared	____	Attentive
____	Hostile	____	Jittery
____	Enthusiastic	____	Active
____	Proud	____	Afraid

Global Self-esteem (Rosenberg, 1965).

Below are ten statements that describe ways to think or feel about yourself. Next to each statement, please write the scale number which reflects the extent to which you agree that each statement pertains to you from 1 ("strongly agree") to 4 ("strongly disagree").

1	2	3	4
Strongly agree	Agree	Disagree	Strongly disagree

____1. I feel that I'm a person of worth, at least on an equal plane with others.
____2. All in all, I am inclined to feel that I am a failure. (R)
____3. I feel that I have a number of good qualities.
____4. I feel that I do not have much to be proud of. (R)
____5. I am able to do things as well as most other people.
____6. I wish I could have more respect for myself. (R)
____7. I take a positive attitude to myself.
____8. At times I think I am no good at all. (R)
____9. On the whole, I am satisfied with myself.
____10. I certainly feel useless at times. (R)

Relationship Satisfaction sub-scale from the Perceived Relationship Quality Component Inventory (Fletcher, Simpson & Thomas, 2000).

Feelings about your relationship

Please think about your current relationship and tell us how much you agree with each of the statements below. Use the following scale:

1	2	3	4	5	6	7
Not at all						Extremely

____1. How satisfied are you with your relationship?
____2. How content are you with your relationship?
____3. How happy are you with your relationship?

Post-Interaction Measure

Nature of Problem Discussed (Carnelley, Brennan & Israel, 2003)

Couple Therapy Problem Evaluation

The questions below refer to the problem you discussed with your partner in the Couple Therapy task. Please answer them carefully.

1. Had you discussed this problem with your partner previously (previous to this experiment)? (Please circle appropriately) YES NO

a. *If you answered YES to the previous question*, please indicate (in the space below), the number of times you have discussed this problem with your partner.
Number of times_____

2. How important do you consider the discussed problem to be?

1	2	3	4	5	6	7
Not at all important			Neutral/Mixed			Extremely important

3. How distressing do you consider the problem you discussed to be?

1	2	3	4	5	6	7
Not at all important			Neutral/Mixed			Extremely important

4. How positive do you consider the problem you discussed to be?

1	2	3	4	5	6	7
Not at all important			Neutral/Mixed			Extremely important

5. How negative do you consider the problem you discussed to be?

1	2	3	4	5	6	7
Not at all important			Neutral/Mixed			Extremely important

Support-seekers' Perceptions of Received Care (Carnelley et al., 2003).

Therapy Rating Scale

Please evaluate your partner's performance during the therapy task on the following 7-point scale:

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

____1. How supportive was your partner during the discussion?
____2. To what extent did your partner understand the nature of your problem?
____3. How empathic was your partner during the discussion?
____4. To what extent did your partner demonstrate good listening skills?
____5. How responsive was your partner during the discussion?
____6. To what extent did your partner understand your feelings about your problem?
____7. To what extent did talking about your problem with your partner help you?
____8. How likely is it that you would discuss another problem with your partner in the future?

Behavioural Coding of the Couple Interaction

Interactive Coping Behavior Coding System, Revised (Barbee & Cunningham, 1995 with physical behavior codes from Simpson et al., 1992).

Solve Behaviors: Problem-Focused/Approach

QUES:	Asks questions about the details of the problem; asks questions about how the seeker will continue to handle; asks what's on the seeker's mind, "What's bothering you?" in positive tone; asks "Are you okay?"; **gathers extra information about the problem**.
CAUSE:	Figures out the *cause* of the problem.
PERSP:	Gives the seeker perspective; reframes the situation for the seeker; takes the perspective of the third party; provides insight into the event; clarifies the event; **something not already known**
SOLUTION:	Gives information to help solve the seeker's problem; suggests or tells about resources that could help; recommends professional or non-professional help; suggests that the person stand up for him- or herself; suggests that the person compromise; suggests that the person do what makes him or her happy; suggests how to handle the problem; tells seeker how the situation can be changed; comes to a conclusion about what seeker could do to solve the problem; looks for solutions with the seeker; lists options of how to solve the problem; describes how he or she would handle the problem if it were his or hers.
TANGIBLE:	Does something active or physical to help the seeker; gives money or a loan; offers to help now; offers to follow up the future.

Solace Behaviors: Emotion-Focused/Approach

AFFECTION:	Gives seeker a hug; touches seeker on the shoulder; puts arm around seeker's shoulder; gives a kiss; verbal affection; conveys attachment to seeker; **hand-holding; **touch partner on body or face; **also code helpee for STOUCH or MOVEAP**
EMPATHY:	Shows understanding; makes empathic remarks such as uh-huh, ooh; cries with seeker; gets angry along with seekers about the problem's cause; **all listening noises such as yeah, mmm, ok; include nodding of head**
COMPLIMENT:	Compliments the looks of the seeker; compliments ability of seeker.
AVAILABLE:	Assures seeker of future availability to help with the problem; leans forward and displays quiet attentiveness; stifles impulse to interrupt seekers; **include lean towards
REASSURE:	Tells the seeker that he or she is a good person; tries to boost the seeker's self-esteem; shows shock/sorrow at hearing the problem; give reassurance that everything will be okay; agrees with seeker; assures the seeker that it was not his or her fault; criticizes the behaviour of the third party.
LIFT MOOD:	Offers to buy the seeker a gift or take him or her out to lunch in order to cheer the seeker up; exercises with the seeker to lift spirits; encourages seeker to engage in a creative task to lift spirits; **uses humor to cheer up partner - but not in malicious way**.
CONFIDENTIALITY:	Assures seeker of confidentiality; promises to mislead others about problem.
FEELINGS:	Asks how the seeker feels about the problem; asks why the seeker feels that way; encourages disclosure of feelings and emotional displays.
FACEPH	**Looks toward the face of the helpee to show attentiveness/listening; sits close to partner; tries to maintain eye contact.**

Dismiss Behaviors: Problem-Focused/Avoidance

AVOIDPROB:	Tells the seeker about his or her own problem rather than dealing with the seeker's problem; avoids dealing with the problem; changes the topic of conversation; talks, but doesn't address the real problem; talks about own interest.
SHOWDIS:	Shows disinterest in problem; says, "I don't care about problem"; says, "There's nothing you can do."
CRITICIZE:	Criticism about how the seeker handled the problem; blames the seeker for the problem; says, "Don't get upset until it is really a problem"; suggests problem could have been handled with easily available information.
MINIMISE:	Says that the seeker's problem is not serious; says, "That's life"; says, "It's not a problem"; says, "Forget about it"; suggests that others have similar problems and that the seeker is not unique.
SARCASM:	Uses sarcastic tone of voice; ridicules the seeker; says, "Good luck"; patronizing.
POLLYANNA:	Feigns sympathy; SAYS, "Don't worry"; says, "Look on the bright side"; suggests the problem is a "blessing in disguise"; tells seeker that problem could be worse; tells seeker to think of other people's suffering.

Escape Behaviors: Emotion-Focused/Avoidance

AVOID VERBALLY:	Tells the seeker to leave; uses excuses not to talk to seeker; remind seeker of things helper has to do; passes of the seeker to another.
DISTRACT:	Turns on TV or radio **or plays with toys**; begins to read a book or magazine while the seeker is talking or instead of answering the seeker; acts distracted; ignores the seeker's emotional displays or mood state.
NONVERBAL ESCAPE:	Withdraws physically in room-moves chair away from seeker, turns away from seeker, pulls back; leaves room; avoids eye contact; **resists contact; **use also as LOOKAP for helpee**
ENCOURAGE ESCAPE:	Encourages seeker to get drunk or take drugs; encourages seeker to have sex or to engage in fantasy; changes activity.
AGGRESSIVE JOKE:	Makes fun of the seeker or the seeker's feelings, not with the intention to cheer up the seeker; laughs at the seeker and his or her situation, tells a joke that is out of context for the seeker's problem.
SHOW IRRITATION:	Shows irritation at the seeker or the seeker's problem; reports annoyance that the seeker is depressing.
MEAN:	Says, "I don't care about you"; says, "Shut up", "Be quiet" or "Quit talking about it"; says, "Grow up."
SUPPRESSEM:	Encourages the seeker to suppress emotions; encourages seeker not to cry; helper takes seeker to a public place to discourage open display of emotions.
FIDGETH	nervous habits to try to calm self; bites fingernails; cracks knuckles; smokes a lot; rocks in chair; nervously taps pencil, taps feet or scratches face and neck (any self-grooming behaviors); paces; moves in chair out of embarrassment and tries to get comfortable; wrings hands.

Additional Points

Code each speaker turn.
At each turn code helpee's and helper's looking position (e.g., **FACEP - FACEPH, FACEP - NONVERBAL ESCAPE, FACEPH - LOOKAP, FACEPH - POUT, FACEPH - STAREO** etc).
Initial position is neutral.

FACEPH and **FACEP** are used if helper or helpee is looking in the general direction of their partner, whether eye contact is or is not made.

If speaker turn makes no direct sense then don't code. Also don't code if it doesn't fit into category.-----

Code **NONVERBAL ESCAPE** when the helpee is **FACEP**. Use as **LOOKAP** is used for helpee. For **FIDGETH** also code where helper looks (e.g., **NONVERBAL ESCAPE, FACEPH**). **FACEPH** for when helper is looking towards helpee (think eye-contact) and **AVAILABLE** for when helper leans towards helpee.
Code **EMPATHY** for helper's head nods, mmm noises etc.

Appendix B
Intra-Class Correlations for Behavioural Coding

Solve Behaviors: Problem-Focused/Approach	
Ques	.97
Cause	Never used
Persp	.92
Solution	.91
Tangible	Low usage
Solace Behaviors: Emotion-Focused/Approach	
Affection	.95
Empathy	.94
Compliment	.76
Available	.44
Reassure	.60
Liftmood	.47
Confidentiality	Never used
Feelings	.09
Faceph	.94
Dismiss Behaviors: Problem-Focused/Avoidance	
Avoidprobon	.67
Avoidproboff	.89
Showdis	.12
Criticize	.91
Minimize	.79
Sarcasm	.64
Polly-Anna	Never used
Escape Behaviors: Emotion-Focused/Avoidance	
Avoid verbally	Never used
Distract	.88
Nonverbal escape	.90
Encourage escape	Low usage
Aggressive joke	Never used
Show irritation	.80
Mean	Low usage
Suppressem	Never used
Fidgeth	Never used

Note. Low usage: used 3 or fewer times by only one coder.

Appendix C
Hierarchical Regression Analyses (Excluding Perceived Distress)

Table 1

Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions and perceived care

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*F of change*
			Post-interaction Positive Affect			
T1 Positive Affect	.43***	.66***	.63***	.63***	.63***	46.18***
Avoidance	.06		.04	.04	.04	2.16
Anxiety			.02	.01	.01	
Perceived Support			.24*	.24*	.24*	
Avoidance*Anxiety	.00			.03	.04	0.05
Avoidance*P. Support				.00	.00	
Anxiety*P. Support				.04	.02	
Avoid*Anxiety*P. Support	.00				-.04	0.08
F of model at Step 4 (8, 54) = 6.49***; Total R^2 = .49						
			Post-interaction Negative Affect			
T1 Neg. Affect	.30***	.54***	.49***	.50***	.51***	26.34***
Avoidance	.02		-.10	-.11	-.10	0.67
Anxiety			-.02	-.04	-.04	
Perceived Support			.11	.11	.12	
Avoidance*Anxiety	.01			.03	.05	0.16
Avoidance*P. Support				.04	.03	
Anxiety*P. Support				.07	.04	
Avoid*Anxiety*P. Support	.01				-.09	0.38
F of model at Step 4 (8, 54) = 3.41**; Total R^2 = .34						
			Post-interaction Self-esteem			
T1 Self-esteem	.78***	.89***	.91***	.92***	.91***	221.61***
Avoidance	.02		-.08	-.07	-.08	1.82
Anxiety			.11	.13*	.14*	
Perceived Support			-.01	.02	.01	
Avoidance*Anxiety	.01			-.07	-.09	1.32
Avoidance*P. Support				.03	.04	
Anxiety*P. Support				-.12+	-.07	
Avoid*Anxiety*P. Support	.01				.11	2.23
F of model at Step 4 (8, 54) = 31.44***; Total R^2 = .82						
			Post-interaction Relationship Satisfaction			
T1 Relationship Satisfaction	.78***	.88***	.79***	.81***	.81***	217.14***
Avoidance	.02		.11	.12+	.12+	1.82
Anxiety			-.09	-.07	-.07	
Perceived Support			-.07	-.09	-.09	
Avoidance*Anxiety	.01			.09	.09	1.06
Avoidance*P. Support				-.07	-.08	
Anxiety*P. Support				.00	-.01	
Avoid*Anxiety*P. Support	.00				-.03	0.17
F of model at Step 4 (8, 54) = 28.99***; Total R^2 = .81						

Note. P. Support = Perceived Support. Degrees of Freedom for Step 1 F of change = 1, 61. Degrees of Freedom for Step 2 F of change = 3, 58. Degrees of Freedom for Step 3 F of change = 3, 55. Degrees of Freedom for Step 4 F of change = 1, 54.

*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Table 2

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions and approach-based caregiving

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*F of change*
			Post-interaction Positive Affect			
T1 Positive Affect	.43***	.66***	.64***	.65***	.63***	46.18***
Avoidance	.02		.06	.13	.13	0.54
Anxiety			.02	.05	.09	
Approach-based caregiving			.13	.18	.17	
Avoidance*Anxiety	.04			.10	.15	1.29
Avoidance*Approach				.06	.12	
Anxiety* Approach				.18+	.19+	
Avoid*Anxiety* Approach	.03+				.19+	3.07+
F of model at Step 4 (8, 54) = 7.05***; Total R^2 = .51						
			Post-interaction Negative Affect			
T1 Neg. Affect	.30***	.55***	.53***	.55***	.52***	26.34***
Avoidance	.01		-.09	-.05	-.06	0.36
Anxiety			-.01	.01	-.03	
Approach-based caregiving			.05	.08	.08	
Avoidance*Anxiety	.01			.05	.01	0.19
Avoidance*Approach				.03	-.03	
Anxiety* Approach				.08	.06	
Avoid*Anxiety* Approach	.02				-.15	1.48
F of model at Step 4 (8, 54) = 3.48**; Total R^2 = .34						
			Post-interaction Self-esteem			
T1 Self-esteem	.78***	.89***	.91***	.92***	.92***	221.61***
Avoidance	.03+		-.04	-.04	-.04	2.65+
Anxiety			.11+	.12+	.14*	
Approach-based caregiving			.09	.08	.08	
Avoidance*Anxiety	.01			-.04	-.02	0.69
Avoidance*Approach				.07	.09	
Anxiety* Approach				-.05	-.05	
Avoid*Anxiety* Approach	.00				.07	1.21
F of model at Step 4 (8, 54) = 30.97***; Total R^2 = .82						
			Post-interaction Relationship Satisfaction			
T1 Relationship Satisfaction	.78***	.88***	.84***	.86***	.86***	217.14***
Avoidance	.02+		.06	.03	.03	2.33+
Anxiety			-.09	-.09	-.09	
Approach-based caregiving			-.10	-.10	-.10	
Avoidance*Anxiety	.01			.06	.05	1.31
Avoidance*Approach				-.08	-.09	
Anxiety* Approach				-.06	-.07	
Avoid*Anxiety* Approach	.00				-.04	0.41
F of model at Step 4 (8, 54) = 30.48***; Total R^2 = .81						

Note. Degrees of Freedom for Step 1 F of change = 1, 61. Degrees of Freedom for Step 2 F of change = 3, 58. Degrees of Freedom for Step 3 F of change = 3, 55. Degrees of Freedom for Step 4 F of change = 1, 54. *** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Table 3

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions and escape-based caregiving

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*F of change*
			Post-interaction Positive Affect			
T1 Positive Affect	.43***	.66***	.64***	.64***	.65***	46.18***
Avoidance	.02		.04	.00	-.02	0.61
Anxiety			-.01	.05	.04	
Escape-based caregiving			-.14	-.11	-.11	
Avoidance*Anxiety	.03			.04	.05	0.99
Avoidance* Escape				-.08	-.07	
Anxiety* Escape				.16	.19	
Avoid*Anxiety* Escape	.00				.07	0.26
F of model at Step 4 (8, 54) = 6.21***; Total R^2 = .48						
			Post-interaction Negative Affect			
T1 Neg. Affect	.30***	.55***	.52***	.52***	.52***	26.34***
Avoidance	.02		-.12	-.16	-.15	0.52
Anxiety			.00	.03	.04	
Escape-based caregiving			.09	.12	.12	
Avoidance*Anxiety	.01			-.03	-.03	0.38
Avoidance* Escape				-.04	-.05	
Anxiety* Escape				.13	.09	
Avoid*Anxiety* Escape	.00				-.07	0.24
F of model at Step 4 (8, 54) = 3.42**; Total R^2 = .33						
			Post-interaction Self-esteem			
T1 Self-esteem	.78***	.89***	.91***	.89***	.89***	221.61***
Avoidance	.02		-.07	-.09	-.11	1.92
Anxiety			.11+	.10	.09	
Escape-based caregiving			-.03	.01	.02	
Avoidance*Anxiety	.01			-.07	-.06	1.15
Avoidance* Escape				.04	.05	
Anxiety* Escape				.11	.13	
Avoid*Anxiety* Escape	.00				.05	0.34
F of model at Step 4 (8, 54) = 30.00***; Total R^2 = .81						
			Post-interaction Relationship Satisfaction			
T1 Relationship Satisfaction	.78***	.88***	.83***	.85***	.85***	217.14***
Avoidance	.02		.09	.09	.09	1.39
Anxiety			-.09	-.05	-.05	
Escape-based caregiving			.01	-.02	-.02	
Avoidance*Anxiety	.01			.10	.09	1.03
Avoidance* Escape				-.07	-.07	
Anxiety* Escape				-.01	-.02	
Avoid*Anxiety* Escape	.00				-.02	0.04
F of model at Step 4 (8, 54) = 28.12***; Total R^2 = .81						

Note. Degrees of Freedom for Step 1 F of change = 1, 61. Degrees of Freedom for Step 2 F of change = 3, 58. Degrees of Freedom for Step 3 F of change = 3, 55. Degrees of Freedom for Step 4 F of change = 1, 54. *** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Appendix D
Hierarchical Regression Analyses (Including Perceived Distress; *n* = 63)

Table 1

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions, perceived distress and perceived support

Predictors	*ΔR^2*	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Positive Affect				
T1 Positive Affect	.43***	.66***	.58***	.67***	.68***	.66***	46.18***
Avoidance	.09*		.05	.02	.02	.05	2.57*
Anxiety			.06	.10	.17	.13	
P. Support			.24**	.32**	.31**	.32**	
P. Distress			-.18+	-.19*	-.19	-.22*	
Avoidance*Anxiety	.07			-.06	-.13	-.11	1.38
Avoidance*P. Support				-.01	.03	.02	
Anxiety*P. Support				-.09	-.06	-.02	
Avoidance*P. Distress				.07	.05	.07	
Anxiety*P. Distress				-.24*	-.33*	-.38*	
P. Support*P. Distress				.18+	.17	.13	
Avoidance*Anxiety*P. Support	.02				.12	.14	0.59
Avoidance*Anxiety*P. Distress					-.01	-.09	
Avoidance*P. Support*P. Distress					.06	-.04	
Anxiety*P. Support*P. Distress					.16	.30	
Avoidance*Anxiety*P. Support*P. Distress	.01					.22	1.10
F of model at Step 5 (16, 46) = 4.58***; Total R^2 = .62							
			Post-interaction Negative Affect				
T1 Negative Affect	.30***	.55***	.49***	.56***	.60***	.59***	26.34***
Avoidance	.09+		-.09	-.12	-.11	-.14	2.06+
Anxiety			.03	.09	.12	.16	
P. Support			.11	.11	.11	.11	
P. Distress			-.26*	-.25*	-.29*	-.26*	
Avoidance*Anxiety	.05			-.07	-.11	-.12	0.81
Avoidance*P. Support				.02	.04	.06	
Anxiety*P. Support				.01	-.03	-.07	
Avoidance*P. Distress				.21	.17	.15	
Anxiety*P. Distress				-.16	-.05	.00	
P. Support*P. Distress				-.02	-.07	-.03	
Avoidance*Anxiety*P. Support	.01				.00	-.02	0.25
Avoidance*Anxiety*P. Distress					.20	.29	
Avoidance*P. Support*P. Distress					-.03	.08	
Anxiety*P. Support*P. Distress					.04	-.11	
Avoidance*Anxiety*P. Support*P. Distress	.01					-.23	0.85
F of model at Step 5 (16, 46) = 2.49**; Total R^2 = .46							

Table 1, continued.

Predictors	*ΔR²*	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Self-esteem				
T1 Self-esteem	.78***	.89***	.88***	.88***	.87***	.87***	221.61***
Avoidance	.03		-.08	-.06	-.06	-.06	1.86
Anxiety			.12	.13*	.16*	.17*	
P. Support			-.01	.05	.03	.03	
P. Distress			-.09	-.12+	-.09	-.09	
Avoidance*Anxiety	.02			-.06	-.07	-.07	1.25
Avoidance*P. Support				.03	.05	.05	
Anxiety*P. Support				-.12+	-.03	-.03	
Avoidance*P. Distress				-.07	-.05	-.06	
Anxiety*P. Distress				.03	-.16	-.15	
P. Support*P. Distress				.08	.16*	.16*	
Avoidance*Anxiety*P. Support	.03+				.13	.12	2.35+
Avoidance*Anxiety*P. Distress					-.18+	-.17	
Avoidance*P. Support*P. Distress					.15*	.16+	
Anxiety*P. Support*P. Distress					.05	.03	
Avoidance*Anxiety*P. Support*P. Distress	.00					-.03	0.07
F of model at Step 5 (16, 46) = 17.88***; Total R^2 = .86							
			Post-interaction Relationship Satisfaction				
T1 Relationship satisfaction	.78***	.88***	.76***	.84***	.81***	.82***	217.14***
Avoidance	.04**		.12+	.08	.09	.06	3.51**
Anxiety			-.13*	-.07	-.13*	-.09	
P. Support			-.09	-.13*	-.13*	-.13*	
P. Distress			.16**	.20***	.19***	.22***	
Avoidance*Anxiety	.05*			.09	.14*	.13+	2.89*
Avoidance*P. Support				-.06	-.08	-.07	
Anxiety*P. Support				.01	.00	-.03	
Avoidance*P. Distress				.11*	.13*	.11+	
Anxiety*P. Distress				-.06	.05	.09	
P. Support*P. Distress				-.16**	-.13*	-.09	
Avoidance*Anxiety*P. Support	.02				-.04	-.05	1.82
Avoidance*Anxiety*P. Distress					.06	.14	
Avoidance*P. Support*P. Distress					-.04	.06	
Anxiety*P. Support*P. Distress					-.16*	-.30**	
Avoidance*Anxiety*P. Support*P. Distress	.01*					-.22*	3.94*
F of model at Step 5 (16, 46) = 24.59***; Total R^2 = .89							

Note. P. Distress = Perceived distress. P. Support = Perceived support. Degrees of Freedom for Step 1 F of change = 1, 61. Degrees of Freedom for Step 2 F of change = 4, 57. Degrees of Freedom for Step 3 F of change = 6, 51. Degrees of Freedom for Step 4 F of change = 4, 47. Degrees of Freedom for Step 4 F of change = 1, 46.

*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Table 2

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions, perceived distress and approach-based caregiving

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Positive Affect				
T1 Positive Affect	.43***	.66***	.59***	.68***	.67***	.67***	46.18***
Avoidance	.04		.07	.09	.11	.11	1.19
Anxiety			.06	.10	.12	.12	
Approach-based caregiving			.13	.14	.12	.11	
P. Distress			-.18+	-.05	.09	.09	
Avoidance*Anxiety	.08			.04	.08	.09	1.46
Avoidance*Approach				.05	.05	.04	
Anxiety*Approach				.15	.15	.14	
Avoidance*P. Distress				.18	.18	.16	
Anxiety*P. Distress				-.26*	-.14	-.10	
Approach*P. Distress				.16	.22	.18	
Avoidance*Anxiety*Approach	.04				.13	.12	1.11
Avoidance*Anxiety*P. Distress					.06	.09	
Avoidance*Approach*P. Distress					.20	.18	
Anxiety*Approach*P. Distress					-.16	-.09	
Avoidance*Anxiety*Approach*P. Distress	.00					.08	0.07
F of model at Step 5 (16, 46) = 4.16***; Total R^2 = .59							
			Post-interaction Negative Affect				
T1 Negative Affect	.30***	.55***	.52***	.64***	.63***	.63***	26.34***
Avoidance	.08		-.09	-.06	-.06	-.05	1.77
Anxiety			.04	.12	.09	.09	
Approach-based caregiving			.04	.11	.12	.12	
P. Distress			-.26*	-.31*	-.27	-.28	
Avoidance*Anxiety	.07			-.02	-.07	-.07	1.14
Avoidance*Approach				.06	.02	.02	
Anxiety*Approach				.11	.09	.09	
Avoidance*P. Distress				.14	.04	.05	
Anxiety*P. Distress				-.14	-.13	-.17	
Approach*P. Distress				-.17	-.09	-.06	
Avoidance*Anxiety*Approach	.03				-.11	-.11	0.73
Avoidance*Anxiety*P. Distress					.08	.05	
Avoidance*Approach*P. Distress					-.03	-.01	
Anxiety*Approach*P. Distress					-.17	-.22	
Avoidance*Anxiety*Approach*P. Distress	.00					-.07	0.04
F of model at Step 5 (16, 46) = 2.71*; Total R^2 = .49							

Table 2, continued

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Self-esteem				
T1 Self-esteem	.78***	.89***	.87***	.86***	.85***	.84***	221.61***
Avoidance	.03*		-.04	-.04	-.03	-.04	2.48*
Anxiety			.12*	.12+	.10	.12+	
Approach-based caregiving			.09	.06	.04	.02	
P. Distress			-.09	-.02	.10	.12	
Avoidance*Anxiety	.02			-.03	.00	.02	1.27
Avoidance*Approach				.03	-.02	-.03	
Anxiety*Approach				-.09	-.10+	-.12*	
Avoidance*P. Distress				.04	.12	.07	
Anxiety*P. Distress				.02	.02	.19	
Approach*P. Distress				.17+	.17+	.04	
Avoidance*Anxiety*Approach	.02				.01	-.01	1.62
Avoidance*Anxiety*P. Distress					-.11	.04	
Avoidance*Approach*P. Distress					.21*	.13	
Anxiety*Approach*P. Distress					-.05	.22	
Avoidance*Anxiety*Approach*P. Distress	.01+					.34+	3.61+
F of model at Step 5 (16, 46) = 19.19***; Total R^2 = .87							
			Post-interaction Relationship Satisfaction				
T1 Relationship satisfaction	.78***	.88***	.82***	.85***	.87***	.88***	217.14***
Avoidance	.05**		.07	.04	.02	.01	3.73**
Anxiety			-.12*	-.09	-.08	-.07	
Approach-based caregiving			-.09	-.07	-.03	-.04	
P. Distress			.15**	.09	.01	.02	
Avoidance*Anxiety	.03			.08	.06	.07	1.87
Avoidance*Approach				-.03	.04	.04	
Anxiety*Approach				-.03	-.02	-.03	
Avoidance*P. Distress				.03	-.07	-.09	
Anxiety*P. Distress				-.01	-.12	-.07	
Approach*P. Distress				-.14+	-.19*	-.25*	
Avoidance*Anxiety*Approach	.02				.03	.02	1.39
Avoidance*Anxiety*P. Distress					-.07	-.02	
Avoidance*Approach*P. Distress					-.19*	-.23*	
Anxiety*Approach*P. Distress					-.02	.07	
Avoidance*Anxiety*Approach*P. Distress	.00					.12	0.41
F of model at Step 5 (16, 46) = 19.88***; Total R^2 = .87							

Note. P. Distress = Perceived distress. Degrees of Freedom for Step 1 F of change = 1, 61. Degrees of Freedom for Step 2 F of change = 4, 57. Degrees of Freedom for Step 3 F of change = 6, 51. Degrees of Freedom for Step 4 F of change = 4, 47. Degrees of Freedom for Step 4 F of change = 1, 46.
*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Table 3

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions, perceived distress and escape-based caregiving

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Positive Affect				
T1 Positive Affect	.43***	.66***	.59***	.67***	.66***	.66***	46.18***
Avoidance	.05		.05	-.02	-.04	-.04	1.38
Anxiety			.03	.04	.02	.01	
Escape-based caregiving			-.15	-.21+	-.19+	-.20+	
P. Distress			-.19+	-.13	-.14	-.12	
Avoidance*Anxiety	.07			.02	.04	.03	1.34
Avoidance* Escape				-.05	-.01	-.01	
Anxiety* Escape				.09	.11	.11	
Avoidance*P. Distress				.07	.01	.02	
Anxiety*P. Distress				-.27*	-.20	-.19	
Escape*P. Distress				-.10	-.01	.01	
Avoidance*Anxiety* Escape	.01				.12	.13	0.33
Avoidance*Anxiety*P. Distress					-.02	-.05	
Avoidance* Escape *P. Distress					.00	.00	
Anxiety* Escape *P. Distress					.16	.08	
Avoidance*Anxiety* Escape *P. Distress	.00					-.11	0.09
F of model at Step 5 (16, 46) = 3.73***; Total R^2 = .57							
			Post-interaction Negative Affect				
T1 Negative Affect	.30***	.55***	.51***	.59***	.57***	.57***	26.34***
Avoidance	.08		-.12	-.12	-.17	-.17	1.86
Anxiety			.05	.09	.06	.07	
Escape-based caregiving			.07	.05	.05	.05	
P. Distress			-.26*	-.27*	-.15	-.15	
Avoidance*Anxiety	.05			-.06	-.03	-.03	0.79
Avoidance* Escape				.01	.09	.09	
Anxiety* Escape				-.05	-.13	-.13	
Avoidance*P. Distress				.24+	.00	-.01	
Anxiety*P. Distress				-.16	.11	.09	
Escape*P. Distress				-.02	.21	.19	
Avoidance*Anxiety* Escape	.06				.13	.12	1.33
Avoidance*Anxiety*P. Distress					-.07	-.05	
Avoidance* Escape *P. Distress					-.23	-.23	
Anxiety* Escape *P. Distress					.51*	.55	
Avoidance*Anxiety* Escape *P. Distress	.00					.07	0.03
F of model at Step 5 (16, 46) = 2.79**; Total R^2 = .49							

Table 3, continued.

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Self-esteem				
T1 Self-esteem	.78***	.89***	.87***	.86***	.81***	.85***	221.61***
Avoidance	.03		-.07	-.09	-.11+	-.09+	1.95
Anxiety			.12*	.12+	.07	.09	
Escape-based caregiving			-.04	.02	.06	.07	
P. Distress			-.09	-.06	-.09	-.13	
Avoidance*Anxiety	.02			-.07	-.03	-.01	1.02
Avoidance* Escape				.02	.07	.07	
Anxiety* Escape				.12	.11	.11	
Avoidance*P. Distress				-.14+	-.15	-.18*	
Anxiety*P. Distress				.07	.00	-.06	
Escape*P. Distress				.08	.21*	.13	
Avoidance*Anxiety* Escape	.05**				.09	.04	4.65**
Avoidance*Anxiety*P. Distress					-.25**	-.15	
Avoidance* Escape *P. Distress					.11	.10	
Anxiety* Escape *P. Distress					.24*	.49**	
Avoidance*Anxiety* Escape *P. Distress	.01*					.40*	4.22*
F of model at Step 5 (16, 46) = 22.95***; Total R^2 = .89							
			Post-interaction Relationship Satisfaction				
T1 Relationship satisfaction	.78***	.88***	.81***	.86***	.83***	.83***	217.14***
Avoidance	.04*		.10	.08	.11	.11	2.97*
Anxiety			-.12*	-.02	-.02	-.01	
Escape-based caregiving			.02	.03	.03	.04	
P. Distress			.16**	.19**	.10	.07	
Avoidance*Anxiety	.04*			.06	.06	.07	2.62*
Avoidance* Escape				-.02	-.05	-.05	
Anxiety* Escape				.07	.11	.11	
Avoidance*P. Distress				.01	.09	.07	
Anxiety*P. Distress				-.02	-.07	-.10	
Escape*P. Distress				.18*	.09	.06	
Avoidance*Anxiety* Escape	.01				-.02	-.05	0.68
Avoidance*Anxiety*P. Distress					.09	.15	
Avoidance* Escape *P. Distress					.13	.13	
Anxiety* Escape *P. Distress					-.19	-.04	
Avoidance*Anxiety* Escape *P. Distress	.00					.23	1.32
F of model at Step 5 (16, 46) = 19.68***; Total R^2 = .87							

Note. P. Distress = Perceived distress. Degrees of Freedom for Step 1 F of change = 1, 61. Degrees of Freedom for Step 2 F of change = 4, 57. Degrees of Freedom for Step 3 F of change = 6, 51. Degrees of Freedom for Step 4 F of change = 4, 47. Degrees of Freedom for Step 4 F of change = 1, 46.
*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Appendix E
Hierarchical Regression Analyses (Including Perceived Distress; *n* = 46)

Table 1

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions, perceived distress and perceived support

Predictors	*ΔR^2*	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Positive Affect				
T1 Positive Affect	.44***	.66***	.55***	.66***	.66***	.66***	34.31***
Avoidance	.16**		.12	.09	.09	.15	4.03**
Anxiety			.11	.16	.21+	.16	
P. Support			.30**	.41**	.42**	.39**	
P. Distress			-.27*	-.26*	-.28*	-.29*	
Avoidance*Anxiety	.09			-.08	-.07	-.09	1.71
Avoidance*P. Support				-.04	.00	-.05	
Anxiety*P. Support				-.12	-.17	-.08	
Avoidance*P. Distress				.07	.02	.04	
Anxiety*P. Distress				-.26*	-.30+	-.36+	
P. Support*P. Distress				.24*	.20	.15	
Avoidance*Anxiety*P. Support	.03				-.10	-.03	0.78
Avoidance*Anxiety*P. Distress					-.04	-.13	
Avoidance*P. Support*P. Distress					.07	-.06	
Anxiety*P. Support*P. Distress					.16	.33	
Avoidance*Anxiety*P. Support*P. Distress	.01					.25	0.89
F of model at Step 5 (16, 29) = 4.89***; Total R^2 = .73							
			Post-interaction Negative Affect				
T1 Negative Affect	.28***	.53***	.49***	.61***	.68***	.68***	16.78***
Avoidance	.11		-.07	-.11	-.11	-.16	1.72
Anxiety			.06	.13	.22	.28	
P. Support			.12	.11	.09	.13	
P. Distress			-.30*	-.29*	-.35*	-.32*	
Avoidance*Anxiety	.08			-.08	-.24	-.22	0.85
Avoidance*P. Support				.00	.04	.10	
Anxiety*P. Support				.08	.09	-.01	
Avoidance*P. Distress				.26+	.23	.20	
Anxiety*P. Distress				-.19	-.11	-.05	
P. Support*P. Distress				-.02	-.09	-.03	
Avoidance*Anxiety*P. Support	.03				.18	.09	0.44
Avoidance*Anxiety*P. Distress					.27	.37	
Avoidance*P. Support*P. Distress					-.03	.12	
Anxiety*P. Support*P. Distress					.15	-.05	
Avoidance*Anxiety*P. Support*P. Distress	.01					-.29	0.64
F of model at Step 5 (16, 29) = 1.84+; Total R^2 = .50							

Table 1, continued.

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Self-esteem				
T1 Self-esteem	.79***	.89***	.86***	.87***	.87***	.87***	162.54
Avoidance	.02		-.08	-.08	-.07	-.07	1.14
Anxiety			.11	.11	.12	.13	
P. Support			.02	.12	.08	.08	
P. Distress			-.09	-.11	-.06	-.05	
Avoidance*Anxiety	.04			-.04	-.02	-.02	1.25
Avoidance*P. Support				.08	.06	.07	
Anxiety*P. Support				-.14	-.02	-.03	
Avoidance*P. Distress				-.08	-.04	-.04	
Anxiety*P. Distress				.03	-.15	-.14	
P. Support*P. Distress				.12	.20*	.21*	
Avoidance*Anxiety*P. Support	.03				.09	.08	1.73
Avoidance*Anxiety*P. Distress					-.22+	-.20	
Avoidance*P. Support*P. Distress					.17*	.19	
Anxiety*P. Support*P. Distress					.02	-.01	
Avoidance*Anxiety*P. Support*P. Distress	.00					-.04	0.06
F of model at Step 5 (16, 29) = 12.46***; Total R^2 = .87							
			Post-interaction Relationship Satisfaction				
T1 Relationship satisfaction	.78***	.88***	.78***	.86***	.84***	.86***	155.76***
Avoidance	.05*		.11	.08	.08	.03	2.99*
Anxiety			-.16*	-.09	-.15*	-.10	
P. Support			-.07	-.14+	-.14*	-.11	
P. Distress			.18*	.21**	.22**	.23***	
Avoidance*Anxiety	.05*			.09	.10	.12	2.56*
Avoidance*P. Support				-.06	-.08	-.03	
Anxiety*P. Support				.03	.07	-.02	
Avoidance*P. Distress				.12+	.15*	.13+	
Anxiety*P. Distress				-.06	.00	.04	
P. Support*P. Distress				-.19**	-.15+	-.11	
Avoidance*Anxiety*P. Support	.02				.05	-.01	1.73
Avoidance*Anxiety*P. Distress					.05	.13	
Avoidance*P. Support*P. Distress					-.04	.07	
Anxiety*P. Support*P. Distress					-.16+	-.31*	
Avoidance*Anxiety*P. Support*P. Distress	.01					-.22	2.02
F of model at Step 5 (16, 29) = 18.59***; Total R^2 = .91							

Note. P. Distress = Perceived distress. P. Support = Perceived support. Degrees of Freedom for Step 1 F of change = 1, 44. Degrees of Freedom for Step 2 F of change = 4, 40. Degrees of Freedom for Step 3 F of change = 6, 34. Degrees of Freedom for Step 4 F of change = 4, 30. Degrees of Freedom for Step 4 F of change = 1, 29.

*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Table 2

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions, perceived distress and approach-based caregiving

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Positive Affect				
T1 Positive Affect	.44***	.66***	.57***	.68***	.70***	.69***	34.31***
Avoidance	.08		.17	.22	.22	.19	1.73
Anxiety			.06	.11	.13	.16	
Approach-based caregiving			.12	.15	.06	.02	
P. Distress			-.26*	-.09	.09	.12	
Avoidance*Anxiety	.09			.04	.11	.13	1.41
Avoidance*Approach				.10	-.01	-.04	
Anxiety*Approach				.15	.19	.17	
Avoidance*P. Distress				.21	.21	.18	
Anxiety*P. Distress				-.27+	-.09	.02	
Approach*P. Distress				.19	.29	.21	
Avoidance*Anxiety*Approach	.05				.07	.06	1.03
Avoidance*Anxiety*P. Distress					.09	.19	
Avoidance*Approach*P. Distress					.30	.24	
Anxiety*Approach*P. Distress					-.19	.02	
Avoidance*Anxiety*Approach*P. Distress	.01					.26	0.43
F of model at Step 5 (16, 29) = 3.64 ***; Total R^2 = .67							
			Post-interaction Negative Affect				
T1 Negative Affect	.28***	.53***	.50***	.66***	.62**	.63**	16.78***
Avoidance	.09		-.07	-.03	.02	.04	1.45
Anxiety			.06	.14	-.01	-.03	
Approach-based caregiving			-.01	.08	.14	.17	
P. Distress			-.30*	-.35*	-.26	-.28	
Avoidance*Anxiety	.09			-.02	-.18	-.19	0.98
Avoidance*Approach				.04	.03	.05	
Anxiety*Approach				.14	-.02	.00	
Avoidance*P. Distress				.16	.07	.09	
Anxiety*P. Distress				-.16	-.15	-.23	
Approach*P. Distress				-.19	-.03	.03	
Avoidance*Anxiety*Approach	.05				-.24	-.23	0.69
Avoidance*Anxiety*P. Distress					.07	.01	
Avoidance*Approach*P. Distress					.00	.04	
Anxiety*Approach*P. Distress					-.22	-.35	
Avoidance*Anxiety*Approach*P. Distress	.00					-.17	0.12
F of model at Step 5 (16, 29) = 1.87+; Total R^2 = .51							

Table 2, continued

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Self-esteem				
T1 Self-esteem	.79***	.89***	.85***	.86***	.86***	.86***	162.54***
Avoidance	.04		**-.02**	-.01	.01	**-.03**	1.99
Anxiety			.08	.09	.04	.08	
Approach-based caregiving			.14+	.11	.08	.01	
P. Distress			-.08	-.02	.14	.18	
Avoidance*Anxiety	.03			-.07	-.07	-.04	1.15
Avoidance*Approach				.09	.01	-.04	
Anxiety*Approach				-.12	-.16	-.19	
Avoidance*P. Distress				.05	.12	.09	
Anxiety*P. Distress				.03	.00	.19	
Approach*P. Distress				.17	.20	.06	
Avoidance*Anxiety*Approach	.02				-.07	-.09	1.28
Avoidance*Anxiety*P. Distress					-.15	.01	
Avoidance*Approach*P. Distress					.23+	.15	
Anxiety*Approach*P. Distress					-.08	.25	
Avoidance*Anxiety*Approach*P. Distress	.01+					.41+	2.99+
F of model at Step 5 (16, 29) = 14.03***; Total R^2 = .87							
			Post-interaction Relationship Satisfaction				
T1 Relationship satisfaction	.78***	.88***	.82***	.86***	.91***	.91***	155.76***
Avoidance	.05*		.07	.05	.05	.04	2.86*
Anxiety			-.14*	-.11	-.15+	-.15	
Approach-based caregiving			-.05	.00	.10	.09	
P. Distress			.18*	.11	.04	.05	
Avoidance*Anxiety	.04			.11	.02	.03	1.75
Avoidance*Approach				-.05	.06	.05	
Anxiety*Approach				.02	-.04	-.04	
Avoidance*P. Distress				.01	-.07	-.07	
Anxiety*P. Distress				.00	-.18	-.16	
Approach*P. Distress				-.18+	-.24*	-.25+	
Avoidance*Anxiety*Approach	.03				-.08	-.08	1.94
Avoidance*Anxiety*P. Distress					-.13	-.12	
Avoidance*Approach*P. Distress					-.22+	-.23+	
Anxiety*Approach*P. Distress					-.06	-.02	
Avoidance*Anxiety*Approach*P. Distress	.00					.04	0.03
F of model at Step 5 (16, 29) = 15.64***; Total R^2 = .89							

Note. P. Distress = Perceived distress. Degrees of Freedom for Step 1 F of change = 1, 44. Degrees of Freedom for Step 2 F of change = 4, 40. Degrees of Freedom for Step 3 F of change = 6, 34. Degrees of Freedom for Step 4 F of change = 4, 30. Degrees of Freedom for Step 4 F of change = 1, 29.
*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Table 3

HRA Predicting Post-Interaction Affect, Self-esteem and Relationship Satisfaction with Support-seekers' attachment dimensions, perceived distress and escape-based caregiving

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Positive Affect				
T1 Positive Affect	.44***	.66***	.57***	.64***	.59***	.59***	34.31***
Avoidance	.09		.15	.08	.10	.10	1.95
Anxiety			.07	.09	.05	.05	
Escape-based caregiving			-.15	-.21	-.22	-.22	
P. Distress			-.27*	-.20	-.28	-.27	
Avoidance*Anxiety	.06			.02	.06	.05	0.89
Avoidance* Escape				-.02	.03	.03	
Anxiety* Escape				.08	.05	.05	
Avoidance*P. Distress				.06	.06	.06	
Anxiety*P. Distress				-.28*	-.29	-.29	
Escape*P. Distress				-.08	-.02	-.02	
Avoidance*Anxiety* Escape	.02				.06	.06	0.31
Avoidance*Anxiety*P. Distress					-.07	-.07	
Avoidance* Escape *P. Distress					.12	.12	
Anxiety* Escape *P. Distress					.10	.09	
Avoidance*Anxiety* Escape *P. Distress	.00					-.02	0.00
F of model at Step 5 (16, 29) = 2.83; Total R^2 = .61							
			Post-interaction Negative Affect				
T1 Negative Affect	.28***	.53***	.51***	.63***	.61**	.64**	16.78***
Avoidance	.11		-.09	-.13	-.13	-.13	1.76
Anxiety			.08	.17	.11	.14	
Escape-based caregiving			.13	.17	.14	.15	
P. Distress			-.29*	-.29*	-.18	-.21	
Avoidance*Anxiety	.08			-.14	-.12	.11	0.80
Avoidance* Escape				-.01	.09	.08	
Anxiety* Escape				.01	-.17	-.16	
Avoidance*P. Distress				.25	.03	.01	
Anxiety*P. Distress				-.17	.08	.05	
Escape*P. Distress				.03	.22	.19	
Avoidance*Anxiety* Escape	.06				.02	-.01	0.94
Avoidance*Anxiety*P. Distress					-.07	-.01	
Avoidance* Escape *P. Distress					-.22	-.22	
Anxiety* Escape *P. Distress					.50	.62	
Avoidance*Anxiety* Escape *P. Distress	.00					.20	0.15
F of model at Step 5 (16, 29) = 1.99*; Total R^2 = .52							

Table 3, continued.

Predictors	ΔR^2	*β Step 1*	*β Step 2*	*β Step 3*	*β Step 4*	*β Step 5*	*F of change*
			Post-interaction Self-esteem				
T1 Self-esteem	.79***	.89***	.88***	.86***	.81***	.86***	162.54***
Avoidance	.03		-.07	-.11	-.11	-.11	1.31
Anxiety			.10	.11	.04	.07	
Escape-based caregiving			-.06	.01	.03	.04	
P. Distress			-.09	-.05	-.09	-.12	
Avoidance*Anxiety	.02			-.07	.01	.02	0.78
Avoidance* Escape				.00	.09	.08	
Anxiety* Escape				.15	.11	.11	
Avoidance*P. Distress				-.16+	-.16	-.19+	
Anxiety*P. Distress				.08	.01	-.06	
Escape*P. Distress				.08	.21*	.11	
Avoidance*Anxiety* Escape	.06**				.15	.07	4.09**
Avoidance*Anxiety*P. Distress					-.27*	-.16	
Avoidance* Escape *P. Distress					.11	.09	
Anxiety* Escape *P. Distress					.28+	.56**	
Avoidance*Anxiety* Escape *P. Distress	.01+					.46+	4.02+
F of model at Step 5 (16, 29) = 17.46***; Total R^2 = .85							
			Post-interaction Relationship Satisfaction				
T1 Relationship satisfaction	.78***	.88***	.81***	.87***	.84***	.84***	155.76***
Avoidance	.05*		.10	.09	.10	.09	2.75*
Anxiety			-.16*	-.04	-.03	-.01	
Escape-based caregiving			-.02	-.03	-.03	-.02	
P. Distress			.18**	.19**	.12	.09	
Avoidance*Anxiety	.05+			.07	.07	.08	2.09+
Avoidance* Escape				.01	-.02	-.03	
Anxiety* Escape				.02	.07	.08	
Avoidance*P. Distress				.03	.08	.06	
Anxiety*P. Distress				-.05	-.08	-.11	
Escape*P. Distress				.19*	.13	.08	
Avoidance*Anxiety* Escape	.01				.00	-.04	0.29
Avoidance*Anxiety*P. Distress					.09	.14	
Avoidance* Escape *P. Distress					.09	.09	
Anxiety* Escape *P. Distress					-.16	-.02	
Avoidance*Anxiety* Escape *P. Distress	.00					.22	0.83
F of model at Step 5 (16, 29) = 13.53***; Total R^2 = .88							

Note. P. Distress = Perceived distress. Degrees of Freedom for Step 1 F of change = 1, 44. Degrees of Freedom for Step 2 F of change = 4, 40. Degrees of Freedom for Step 3 F of change = 6, 34. Degrees of Freedom for Step 4 F of change = 4, 30. Degrees of Freedom for Step 4 F of change = 1, 29.
*** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Appendix F
Materials for Chapter 3

Demographics.

About You

Please circle the appropriate responses.

1.Gender:	Male	Female	**2. Age:**	_____years		**Participant Number:** _____	
3. Your marital status:			Single	Married	Separated	Divorced	Widowed
4. Are you currently in a romantic relationship?		Yes	No	**4a. How long have you been in this relationship?**		_____years _____months	
5. If you are not currently in a relationship, have you been in a romantic relationship before?		Yes	No	**5a. If yes, how long were you in this relationship?**		_____years _____months	
		Not applicable				Not applicable	
5. Are you primarily:		Hetero-sexual	Bisexual	Gay / Lesbian	**6. Ethnic origin:**	_____	

About Your Parents

Please circle the appropriate responses.

7. What is the marital status of your biological parents?	Married	Living together (unwed)	Separated	Divorced	Widowed
7a. If your parents are divorced, how old were you when they divorced?				_____years	
7b. Which parents had custody of you?			Mother	Father	Joint
7c. Do you have any step-parents?		Step-mother	Step-father	Both	None
7d. At what age did you get your step-parents?		Step-mother: _____years		Step-father: _____years	
8. Did you suffer the loss of a parental figure before you were 18 years old?		Yes	No	Mother	Father
8a. What age were you at the time?		_____years			

Defining Attachment Figures.

Your close relationships

Please list the names of up to 10 people with whom you consider yourself to have a close relationships, regardless of whether this relationship is positive, negative, or mixed. Please list as many or as few people as you feel necessary, and provide the information requested. These people can be parents, friends, siblings, romantic partners, or any other form of relationship. These people can be listed in any order.

Name / Initials	Nature of relation-ship	Gender	Age	**Distance from you** (whilst you are at university) **1** = same house **2** = up to 2hr drive **3** = up to 5hr drive **4** = 6+ hrs drive **5** = up to 5hrs flight **6** = 6+hrs flight	**Frequency of contact** **1** = daily/almost daily **2** = at least once a week **3** = at least once a month **4** = 6-10 times per year **5** = 3-4 times per year **6** = twice a year **7** = once a year **8** = less than once a year				**Amount of time known**
					Visit	**Phone**	**Share activities**	**Write/E mail**	
1									
...									
10									

Attachment Network Questionnaire (Trinke & Bartholomew, 1997).

Instructions for ranking

First, you will need to copy each name from your list onto the table below. Now rank each person in the order that you would use them (or would like to use them) for each question. Starting at 1, please rank in order of importance (with 1 being the most important) only the individuals relevant to each question. For example, if you only get upset with 3 people from your list, then only rank those 3 individuals for question 7. However, for question 8, you must rank all of your people. **Ties in rankings are not permitted.**

1. Whom would you want to go to to help you feel better when something bad happens to you or you feel upset, whether or not you actually go to them?
2. Whom would you actually go to to help you feel better when something bad happens to you or you feel upset?
3. Whom would you like to be able to count on to always be there for you and care about you no matter what?
4. Who do you feel you can actually count on to always be there for you and care about you no matter what?
5. Who is it important for you to seek or talk with regularly?
6. Whose death would have the greatest impact or effect on you, regardless of what that effect might be?
7. Who can make you feel upset?
8. Rank order all the people on your list in terms of whom you feel most emotionally connected to, regardless of whether this connection is positive, negative, or mixed (please rank all of the people on your list).

Name / Initial	1.Want to go to	2.Actually go to	3.Like to count on	4.Actually count on	5.Seek & Talk to	6.Death impact	7.Feel upset	8.Emotion
1								
...								
10								

Caregiving Questionnaire (Kunce & Shaver, 1994; scales by J. A. Feeney, 1996).
Items 1 - 24: Responsive Caregiving
Items 25 - 32: Compulsive Caregiving

Relationship-specific romantic caregiving to current or previous romantic partner.
For each of the following items, please rate how descriptive the statement is about your relationship with your current / previous romantic partner.

1	2	3	4	5	6
Not at all descriptive					Extremely descriptive

1. When my partner seems to want or need a hug, I'm glad to provide it.
2. When my partner is troubled or upset, I move closer to provide support or comfort.
3. I sometimes draw away from my partner's attempts to get a reassuring hug from me. (R)
4. I feel comfortable holding my partner when s/he needs physical signs of support and reassurance.
5. I sometimes push my partner away when s/he reaches out for a needed hug or kiss. (R)
6. When my partner cries or is distressed, my first impulse is to hold or touch him/her.
7. When my partner is crying or emotionally upset, I sometimes feel like withdrawing. (R)
8. I don't like it when my partner is needy and clings to me. (R)
9. I am very good at recognizing my partner's needs and feelings even when they are different from my own.
10. I am very attentive to non-verbal signals for help and support.
11. I can always tell when my partner needs comforting, even when s/he doesn't ask for it.
12. Too often, I don't realize when my partner is upset or worried about something. (R)
13. I sometimes missed the subtle signs that show how my partner is feeling. (R)
14. I am good at knowing when my partner needs help or support and when s/he would rather handle things alone.
15. I'm not very good at "tuning in" to my partner's needs and feelings. (R)
16. I sometimes "miss" or "misread" my partner's signals for help and understanding. (R)
17. I tend to be too domineering when trying to help my partner. (R)
18. When helping my partner solve a problem, I am much more "co-operative" than "controlling".

19. When I help my partner with something, I tend to want to do things "my way". (R)
20. I can help my partner work out her/his problems without "taking control".
21. I am always supportive of my partner's *own efforts* to solve her/his problems.
22. When my partner tells me about a problem, I sometimes go too far in criticising her/his own attempts to deal with it. (R)
23. I always respect my partner's ability to make her/his own decisions and solve her/his own problems.
24. I often end up telling my partner what to do when s/he is trying to make a decision. (R)
25. I tend to get overinvolved in my partner's problems or difficulties.
26. I frequently get too "wrapped up" in my partner's problems and needs.
27. I tend to take on my partner's problems – and then feel burdened by them.
28. I create problems by taking on my partner's troubles as if they were my own.
29. I help my partner without being overinvolved in her/his problems. (R)
30. When necessary, I can say "no" to my partner's requests for help without feeling guilty. (R)
31. I can easily keep myself from becoming overly concerned about or overly protective of my partner. (R)
32. When it's important, I take care of my own needs before I try to take care of my partner's. (R)

Received care from mother.

For each of the following items, please rate how descriptive the statement is about your childhood relationship with your mother / mother figure.

1	2	3	4	5	6
Not at all descriptive					Extremely descriptive

1. When I wanted or needed a hug, my mother was glad to provide it.
2. When I was troubled or upset my mother would move closer to provide support or comfort.
3. My mother drew away from my attempts to get a reassuring hug from him.
4. My mother seemed comfortable holding me when I needed physical signs of support and reassurance.
5. My mother sometimes pushed me away when I reached out to needed hug or kiss.
6. When I cried, or was distressed, my mother's first impulse was to hold or touch me.
7. When I cried or was emotionally distressed, it seemed that my mother felt like withdrawing.
8. My mother did not like it when I was needy and clung to him.
9. My mother was very good at recognizing my needs and feelings even when they were different from her own.
10. My mother was attentive to non-verbal signals for help and support.
11. My mother could tell when I needed comforting, even when I didn't ask for it.
12. Too often, my mother did not realize when I was upset or worried about something.
13. My mother sometimes missed the subtle signs that showed how I was feeling.
14. My mother was good at knowing when I needed help or support and when I would rather handle things alone.
15. My mother was not very good at "tuning in" to my needs and feelings.
16. My mother sometimes "missed" or "misread" my signals for help and understanding.
17. My mother tended to be too domineering when trying to help me.
18. When helping me solve a problem, my mother was much more "co-operative" than "controlling".
19. When my mother helped me with something, she tended to want to do things "her way".
20. My mother could help me work out my problems without "taking control".
21. My mother was always supportive of my own efforts to solve my problems.
22. When I told my mother about a problem, she sometimes went too far in criticizing my own attempts to deal with it.
23. My mother always respected my ability to make my own decisions and solve my own problems.
24. My mother often ended up telling me what to do when I was trying to make a decision.
25. My mother tended to get overinvolved in my problems or difficulties.
26. My mother frequently got too "wrapped up" in my problems and needs.
27. My mother tended to take on my problems – and then seemed to feel burdened by them.
28. It seemed that my mother created problems by taking on my troubles as if they were her own.
29. My mother helped me without being overinvolved in my problems.
30. When necessary, my mother could say "no" to my requests for help without feeling guilty.
31. My mother could easily keep her self from becoming overly concemed about or overly protective of me.
32. When it was important, my mother took care of her own needs before she tried to take care of my needs.

Received care from father.

For each of the following items, please rate how descriptive the statement is about your childhood relationship with your father / father figure.

1	2	3	4	5	6
Not at all descriptive					Extremely descriptive

1. When my I wanted or needed a hug, my father was glad to provide it.
2. When I was troubled or upset my father would move closer to provide support or comfort.
3. My father drew away from my attempts to get a reassuring hug from him.
4. My father seemed comfortable holding me when I needed physical signs of support and reassurance.
5. My father sometimes pushed me away when I reached out to needed hug or kiss.
6. When I cried, or was distressed, my father's first impulse was to hold or touch me.
7. When I cried or was emotionally distressed, it seemed that my father felt like withdrawing.
8. My father did not like it when I was needy and clung to him.
9. My father was very good at recognising my needs and feelings even when they were different from his own.
10. My father was attentive to non-verbal signals for help and support.
11. My father could tell when I needed comforting, even when I didn't ask for it.
12. Too often, my father did not realise when I was upset or worried about something.
13. My father sometimes missed the subtle signs that showed how I was feeling.
14. My father was good at knowing when I needed help or support and when I would rather handle things alone.
15. My father was not very good at "tuning in" to my needs and feelings.
16. My father sometimes "missed" or "misread" my signals for help and understanding.
17. My father tended to be too domineering when trying to help me.
18. When helping me solve a problem, my father was much more "co-operative" than "controlling".
19. When my father helped me with something, he tended to want to do things "his way".
20. My father could help me work out my problems without "taking control".
21. My father was always supportive of my own efforts to solve my problems.
22. When I told my father about a problem, he sometimes went too far in criticising my own attempts to deal with it.
23. My father always respected my ability to make my own decisions and solve my own problems.
24. My father often ended up telling me what to do when I was trying to make a decision.
25. My father tended to get overinvolved in my problems or difficulties.
26. My father frequently got too "wrapped up" in my problems and needs.
27. My father tended to take on my problems – and then seemed to feel burdened by them.
28. It seemed that my father created problems by taking on my troubles as if they were his own.
29. My father helped me without being overinvolved in my problems.
30. When necessary, my father could say "no" to my requests for help without feeling guilty.
31. My father could easily keep his self from becoming overly concerned about or overly protective of me.
32. When it was important, my father took care of his own needs before he tried to take care of my needs.

Received care from current or previous romantic partner.

For each of the following items, please rate how descriptive the statement is about your relationship with your current or previous romantic partner.

1	2	3	4	5	6
Not at all descriptive					Extremely descriptive

1. When I want or need a hug, my partner is glad to provide it.
2. When I am troubled or upset, my partner moves closer to provide support or comfort.
3. My partner sometimes draws away from my attempts to get a reassuring hug from him / her.
4. My partner feels comfortable holding me when I need physical signs of support and reassurance.
5. My partner sometimes pushes me away when I reach out for a needed hug or kiss.
6. When I cry or am distressed, my partner's first impulse is to hold or touch me.
7. When I am crying or emotionally upset, my partner sometimes feel like withdrawing.
8. My partner doesn't like it when I am needy and cling to him / her.
9. My partner is very good at recognising my needs and feelings even when they are different from his / hers.
10. My partner is very attentive to my non-verbal signals for help and support.
11. My partner can always tell when I need comforting, even when I don't ask for it.
12. Too often, my partner doesn't realise when I am upset or worried about something.
13. My partner sometimes misses the subtle signs that show how I am feeling.
14. My partner is good at knowing when I need help or support and when I would rather handle things alone.
15. My partner is not very good at "tuning in" to my needs and feelings.
16. My partner sometimes "misses" or "misreads" my signals for help and understanding.
17. My partner tends to be too domineering when trying to help me.
18. When helping me solve a problem, my partner is much more "co-operative" than "controlling".

19. When my partner helps me with something, he / she tends to want to do things "their way".
20. My partner can help me work out my problems without "taking control".
21. My partner is always supportive of my own efforts to solve my problems.
22. When I tell my partner about a problem, he / she sometimes goes too far in criticising my own attempts to deal with it.
23. My partner always respects my ability to make my own decisions and solve my own problems.

24. My partner often ends up telling me what to do when I am trying to make a decision.
25. My partner tends to get overinvolved in my problems or difficulties.
26. My partner frequently gets too "wrapped up" in my problems and needs.
27. My partner tends to take on my problems – and then feel burdened by them.
28. My partner creates problems by taking on my troubles as if they were his / her own.
29. My partner helps me without being overinvolved in my problems.
30. When necessary, my partner can say "no" to my requests for help without feeling guilty.
31. My partner can easily keep his- / herself from becoming overly concerned about or overly protective of me.
32. When it's important, my partner takes care of his / her own needs before he / she tries to take care of mine.

Received care from peer.
For each of the following items, please rate how descriptive the statement is about your relationship with the person named above.

1	2	3	4	5	6
Not at all descriptive					Extremely descriptive

1. When I want or need a hug ,this person is glad to provide it.
2. When I am troubled or upset, this person moves closer to provide support or comfort.
3. This person sometimes draws away from my attempts to get a reassuring hug from him / her.
4. This person feels comfortable holding me when I need physical signs of support and reassurance.
5. This person sometimes pushes me away when I reach out for a needed hug or kiss.
6. When I cry or am distressed, this person's first impulse is to hold or touch me.
7. When I am crying or emotionally upset, this person sometimes feel like withdrawing.
8. This person doesn't like it when I am needy and cling to him / her.
9. This person is very good at recognising my needs and feelings even when they are different from his / hers.
10. This person is very attentive to my non-verbal signals for help and support.
11. This person can always tell when I need comforting, even when I don't ask for it.
12. Too often, this person doesn't realise when I am upset or worried about something.
13. This person sometimes misses the subtle signs that show how I am feeling.
14. This person is good at knowing when I need help or support and when I would rather handle things alone.
15. This person is not very good at "tuning in" to my needs and feelings.
16. This person sometimes "misses" or "misreads" my signals for help and understanding.
17. This person tends to be too domineering when trying to help me.
18. When helping me solve a problem, this person is much more "co-operative" than "controlling".

19. When this person helps me with something, he / she tends to want to do things "their way".
20. This person can help me work out my problems without "taking control".
21. This person is always supportive of my own efforts to solve my problems.
22. When I tell this person about a problem, he / she sometimes goes too far in criticising my own attempts to deal with it.
23. This person always respects my ability to make my own decisions and solve my own problems.

24. This person often ends up telling me what to do when I am trying to make a decision.
25. This person tends to get overinvolved in my problems or difficulties.
26. This person frequently gets too "wrapped up" in my problems and needs.
27. This person tends to take on my problems – and then feel burdened by them.
28. This person creates problems by taking on my troubles as if they were his / her own.
29. This person helps me without being overinvolved in my problems.
30. When necessary, this person can say "no" to my requests for help without feeling guilty.
31. This person can easily keep his- / herself from becoming overly concerned about or overly protective of me.
32. When it's important, this person takes care of his / her own needs before he / she tries to take care of mine.

Appendix G
Materials for Chapter 4

Time 1 (Pre-Prime) Measures

Demographics.
See above for Chapter 3.

Caregiving Questionnaire (Collins & B. C. Feeney, 2001; J. A. Feeney, 1996; Kunce & Shaver, 1994).

Items 1 - 24: Responsive Caregiving
Items 25 - 32: Compulsive Caregiving
Items 33 - 38: Neglecting Caregiving

General Peer Caregiving
For each of the following items, please rate how descriptive the statement is about your relationships with romantic partners and close friends.

1	2	3	4	5	6
Not at all descriptive					Extremely descriptive

1. When romantic partners and close friends seem to want or need a hug, I'm glad to provide it.
2. When romantic partners and close friends are troubled or upset, I move closer to provide support or comfort.
3. I sometimes draw away from romantic partners' and close friends' attempts to get a reassuring hug from me.
4. I feel comfortable holding romantic partners and close friends when they need physical signs of support and reassurance.
5. I sometimes push romantic partners and close friends away when they reach out for a needed hug or kiss.
6. When romantic partners and close friends cry or are distressed, my first impulse is to hold or touch them.
7. When romantic partners and close friends are crying or emotionally upset, I sometimes feel like withdrawing.
8. I don't like it when romantic partners and close friends are needy and cling to me.
9. I am very good at recognising romantic partners' and close friends' needs and feelings even when they are different from my own.
10. I am very attentive to non-verbal signals for help and support.
11. I can always tell when romantic partners and close friends need comforting, even when they doesn't ask for it.
12. Too often, I don't realise when romantic partners and close friends are upset or worried about something.
13. I sometimes missed the subtle signs that show how romantic partners and close friends are feeling.
14. I am good at knowing when romantic partners and close friends need help or support and when they would rather handle things alone.
15. I'm not very good at "tuning in" to romantic partners' and close friends' needs and feelings.
16. I sometimes "miss" or "misread" romantic partners and close friends signals for help and understanding.
17. I tend to be too domineering when trying to help romantic partners and close friends.
18. When helping romantic partners and close friends solve a problem, I am much more "co-

operative" than "controlling".

19. When I help romantic partners and close friends with something, I tend to want to do things "my way".
20. I can help romantic partners and close friends work out their problems without "taking control".
21. I am always supportive of romantic partners' and close friends' own efforts to solve their problems.
22. When romantic partners and close friends tell me about a problem, I sometimes go too far in criticising their own attempts to deal with it.
23. I always respect romantic partners and close friends ability to make their own decisions and solve their own problems.
24. I often end up telling romantic partners and close friends what to do when they are trying to make a decision.
25. I tend to get overinvolved in romantic partners and close friends problems or difficulties.
26. I frequently get too "wrapped up" in romantic partners and close friends problems and needs.
27. I tend to take on romantic partners and close friends problems – and then feel burdened by them.
28. I create problems by taking on romantic partners and close friends troubles as if they were my own.
29. I help romantic partners and close friends without being overinvolved in her/his problems.
30. When necessary, I can say "no" to romantic partners and close friends requests for help without feeling guilty.
31. I can easily keep myself from becoming overly concemed about or overly protective of romantic partners and close friends.
32. When it's important, I take care of my own needs before I try to take care of romantic partners and close friends.
33. I try not to get involved in romantic partners' and close friends' problems.
34. When romantic partners and close friends want to tell me about a problem they are having, I sometimes make excuses not to talk about it.
35. I tend to emotionally withdraw from romantic partners and close friends when they are feeling stressed about something.
36. When romantic partners and close friends tell me about a problem, I sometimes change the topic or dismiss it as unimportant.
37. I sometimes ignore romantic partners' and close friends' problems.
38. I tend to avoid romantic partners' and close friends' when I know that they are stressed about something.

Defining Peer Attachment Figures (see Appendix F).

Priming Manipulation

1.Gender	Male	Female	**2. Age:**	_____years	**Participant No:**_____

I would like you to think about your current relationship with _____ . Please describe an occasion when _____ provided care to you. For example, has this person every looked after you when you have needed support, or have you ever approached this person when you have needed help? Please describe the situation in as much detail as you can. You can write about any kind of caregiving experience, and what you write can be positive, negative, or mixed. You will be given **15 minutes** to complete this section. Please write as much as you can in the time provided.

...

Please answer these questions about the description you have just written.

	Not at all						Very
Were you happy with the care provided?	1	2	3	4	5	6	7
Was the care provided typical of the care he/she always provides?	1	2	3	4	5	6	7

Six items from the Quality of Relationships Inventory (Pierce, Sarason & Sarason, 1991).
Please take a moment to think about whether you can count on _____ for different types of help and support, and answer the following questions using the scale below:

Not at all / never				Very much / Very often
1	2	3	4	5

_____1. To what extent can you count him or her to listen to you when you are very angry at someone else?
_____2. To what extent can you really count him or her to distract you from your worries when you feel under stress?
_____3. To what extent can you count on him or her to give you honest feedback, even if you might not want to hear it?
_____4. To what extent can you turn to him or her for advice about problems?
_____5. To what extent could you count on him or her to help you if you had a family crisis or tragedy?
_____6. To what extent could you count on him or her for help with a problem?

See also *Received care from peer* **in Appendix F.**

Time 2 (Post-prime) Measures

Post-prime affect (see Appendix A for PANAS).

Word recall memory task.
Instructions
In the spaces below, please list any words that you can remember from the computer task you have just completed. You do not need to write these words in the order that they were presented on the computer, simply write as many words that you can remember, and in any order.

Lists of words used in lexical decision task.

Responsive words		Compulsive words		Neglectful words	
sensitive	tender	dominate	obligated	withdraw	rejecting
responsive	affectionate	possessive	interferes	unsympathetic	inattentive
sympathetic	loving	restrictive	compelled	insensitive	distracted
empathic	caring	influences	intrusive	unresponsive	uninterested
compassionate	warm	commands	involved	callous	negligent
protective	reliable	controlling	obsessive	ignore	impatient
supportive	faithful	overprotective	obtrusive	disregard	intolerant
encourages	trustworthy	dominant	hostile	dismissing	uninvolved
comforts	accessible	overinvolved	protects	neglectful	unconcerned
consoles	approachable	overconcerned		distant	disinterested
helpful	alert			leaves	abandon
interested	dependable			unreliable	
assists				irresponsible	

Positive non-caregiving words		Negative non-caregiving words	
clear	serene	terrified	unemployed
studious	upright	filthy	lousy
informal	certain	abnormal	tragic
festive	luxurious	fatal	loathsome
fine	miraculous	abysmal	malicious
scientific	radiant	obscene	squalid
ambitious	gorgeous	dirty	liar
modern	refined	poisonous	stink
magical	meditative	polluted	hideous
fabulous		destitute	derogatory
		stupid	

Nonwords
casing doothetic tenale alaytful alleyoble conworthy donfing enludable nanching trustative sensiting laydable dependerate swipative nousecting protless nortful unvifative tisetant unvomful uncading unphantable ingristive trajuxtive abnorant harricted squalucted abyscene wocotless cerdiant shamulant sobonous disveying ellon starvuted pelling ignotute demtucted vassured exceptiant forjupished mashdible reffectionate cassless tenulant conurous ignovuted tiserant laydible nortucted harridaiant soboveying nanchful pallorant excepale sensful squalative ellise foricted cerosate doosted unvifotute abyoble carlished disjecting insendible hurtive callages reficious influentic studore modracted loatinant fatical irresposate hidiable udimployed ruhlale tocoupted terricted palliosate gosted foloyale fegotive ignoraculous lexational supptile negliene impadious sympalid asselled obine abanages leasoles withtects magitive comgeous abnorty tensted disitious rejinate wartile sinurous quise comful grapetent skisured enerful

Post-prime general caregiving: see Caregiving Questionnaire above.

Manipulation Check.
Please answer the following questions by circling the appropriate number on the scale provided.

For these first two questions, please think back to the beginning of this study session, and the task where you answered questions on the computer about the person named on the screen.

1. Rate how easy it was to answer the questions about how this person provides care to you.

1	2	3	4	5	6	7
Not at all						Extremely so

2. Rate how easy it was to think of this person's responses.

1	2	3	4	5	6	7
Not at all						Extremely so

Now, please think back to the writing task where you wrote about this person.

3. Rate how easy it was to imagine this person when you were writing about her / him.

1	2	3	4	5	6	7
Not at all						Extremely so

4. Rate the degree to which you were able to focus on the writing task without feeling distracted.

1	2	3	4	5	6	7
Not at all						Extremely so

5. Rate the degree to which you felt, while you were writing, as you typically do when you are with this person.

1	2	3	4	5	6	7
Not at all						Extremely so

Appendix H
Caregiving Statements Selected for Elaboration Measure

Taken from Ainsworth (1969).

Ignored me
Neglected me
Is available to me
Rejected me
Is sensitive towards me
Empathises with me
Soothes me when I'm distressed
Feeds me when I'm hungry
Cooperates with me
Makes demands of me
Restricted my exploration
Controls me
Directed me
Trained me
Instructed me

Taken from Carnelley et al. (1996).

Put my needs first
Listened to my problems
I seek proximity to her when distressed
I seek proximity to her when I am hurt
I was distressed when separated from her

Taken from J. A. Feeney and Hohaus (2001).

Experienced distress if they were unavailable
Derive a sense of security from their relationships
Helped me to cope with stress
Provided financial support
Provided emotional support (e.g., hugs me)
Listened to me when I am down I can talk things over with them

Taken from Fraley and Davis (1997).

I seek this person when I am distressed or separated from them
I enjoy being in the presence of them
I protest when separated from them
I need to re-establish contact with them regularly (e.g., via phone calls, emails, letters, visits, etc)
I seek contact with this person
I seek reassurance from this person
I seek safety and protection from this person
If I'm really upset, it takes being with this person or contacting this person to make me begin to feel better again (safe haven)
I will explore my environment (e.g., go travelling, try a new activity) when I know that this person is available if I need them
I become distressed when separated from this person
We both care for each other
We both support each other
We both trust each other

Taken from George and Solomon (1989).

Comfort me
Protected me
Taught me skills
Encouraged independence
Accepted me
Taught me social skills
Disciplined me
Was intrusive
Enjoyed spending time with me
Was interested in me
Was hostile
Was available
Was physically affectionate
Reassured me when distressed/ill
Joked and played with me
Engaged in affective sharing
Was empathic
Expected too much from me
Praised me
Respected me
Provided leadership during joint tasks
Compromised
Encouraged sharing
Gave clear reasons for requests/rules
Tried to manipulate
Nagged
Showed disappointment
Encouraged dependence

Encouraged cooperation Treated me like a playmate/companion
Comforted me when I was frightened

Taken from George and Solomon (1996).
Was involved with me Guided me
Comforted me when I was hurt
Protected me from danger/risk/when I was vulnerable

Taken from George and Solomon (1999).
Was sensitive to my needs Provided closeness
Helped me solve problems Nursed me

Taken from Parker and Tupling (1979).
Accepted me Rejected me Warmth
Were sensitive Were controlling
Encouraged my independence Prevented my independent behavior
Were reliable Provided physical proximity
Were overprotective Were dependable Were available
Appreciated me Supported me Were trustworthy

Taken from Simpson et al (1992).
Paid attention to me Calmed me when stressed
Reassure me Nurture me Sympathetic
Resisted contact with me

Taken from Steele and Steele (1994).
Interfering Discouraged negative affect
emotionally upset physically hurt illness
separation rejection neglect
emotionally supportive I could depend upon her/him
Warmth

Taken from Weiss and Perry (1983). Spouse Observation Checklist
Held me Hugged/kissed me
Greeted me affectionately Shared activities together

Pilot Model Elaboration Measure.

Please circle the appropriate response where necessary.
Your gender: MALE FEMALE
Your age: _____years

Are you currently in a romantic relationship? YES NO

Below is a list of feelings that you may have experienced. We would like you to think about who you would turn to when feeling this way – your parents, your peers (peers includes both your romantic partners **and** friends), or both. Using the scale, write the appropriate number in each column. Leave the space blank if you do not turn to these people when you experience each feeling.

1	2	3	4	5	6	7
Never	Rarely	Sometimes	A fair amount	A great deal	Almost always	Always

Example:

FEELING	PARENTS	PEERS
When I'm feeling embarrassed	3	5

FEELING	PARENTS	PEERS
When I'm emotionally upset		
When I'm frightened		
When I'm distressed		
When I'm ill		
When I need physical closeness		
When I need help solving a problem		
When I'm sick		
When I need protection from danger or risk		
When I'm vulnerable		
When I'm physically hurt		
When I need to depend on someone		
When I'm hungry		
When I need encouragement		
When I'm feeling sad		
When I'm feeling insecure		
When I'm facing failure		
When I'm embarassed		
When I'm feeling anxious		
When I need to feel close to someone		
When I'm frustrated		
When I need someone to listen to my feelings		
When I need to feel safe		
When I'm sad		
When I'm feeling lost		
When I need support		
When someone upsets me		
When I feel rejected		
When I need guidance		
When I'm feeling lonely		
When I'm feeling down		
When I need reassurance		

When I need financial support		
When I need to trust someone		
When I'm feeling nervous		
When I need to rely on someone		

See also *Experiences in Close Relationships Questionnaire* **in Appendix A.**

Appendix I
Results from Model Elaboration Pilot Study

Feeling/Behavior	Mean Elaboration score		t (90)
	Parents	Peers	
Parents sought more frequently			
Ill	5.27 (1.41)	3.62 (1.47)	7.99***
Physically hurt	4.93 (1.58)	4.04 (1.61)	4.57***
Need to rely on someone	5.39 (1.48)	5.01 (1.42)	2.22*
Need guidance	5.49 (1.29)	4.36 (1.44)	6.75***
Peers sought more frequently			
Emotionally upset	3.91 (1.43)	4.98 (1.27)	-6.18***
Distressed	4.11 (1.43)	4.55 (1.34)	-2.19*
Need physical closeness	3.18 (1.61)	5.04 (1.51)	-7.57***
Embarrassed	2.93 (1.54)	3.52 (1.46)	-3.51***
Need to feel close to someone	3.79 (1.64)	5.23 (1.36)	-6.65***
Need someone to listen to my feelings	4.12 (1.78)	5.35 (1.33)	-5.79***
Someone upsets me	3.96 (1.78)	5.01 (1.31)	-5.09***
Feeling sad	4.12 (1.67)	5.00 (1.44)	-4.48***
Feeling lonely	4.21 (1.63)	5.48 (1.30)	-6.77***
Feeling down	4.27 (1.54)	5.32 (1.33)	-6.55***
Parents and peers sought equally			
Frightened	3.79 (1.72)	3.86 (1.51)	-0.32
Need reassurance	4.97 (1.58)	4.78 (1.47)	0.99
Vulnerable	4.21 (1.62)	4.43 (1.56)	-1.18
Need someone to depend on	4.79 (1.64)	4.92 (1.53)	-0.64
Need to trust someone	5.01 (1.68)	5.01 (1.36)	0.00
Insecure	3.94 (1.74)	4.29 (1.63)	-1.52
Anxious	4.15 (1.06)	4.29 (1.37)	-0.79
Feeling lost	4.44 (1.49)	4.24 (1.49)	1.16
Need support	5.14 (1.47)	4.88 (1.39)	1.67
Feel rejected	4.18 (1.72)	4.44 (1.36)	-1.31

*** $p < .001$. ** $p < .01$. * $p < .05$.

Deleted items. Due to an oversight the following items were not included in the final model elaboration measure "when I need help solving a problem", "when I need protection from danger or risk", "when I need encouragement", "when I'm facing failure", "When I need to feel safe", "when I'm frustrated"

The following items were dropped due to their similarities to other items: "when I'm sick"/"when I'm ill", "when I'm feeling nervous"/"when I'm feeling anxious", "when I'm sad"/"when someone upsets me"/"when I'm feeling down"

Appendix J
Summary of Strength Analyses (Chapter 5)

Attachment Figure	Mean (*SD*)	ΔR^2 Step 2	β Strength X Responsive Care	Total R^2	F of model at Step 2 (df)
		Preference for Use			
Mother	2.02 (0.87)	.00	.01	.04	2.21 (3, 152)
Father	3.51 (1.16)	.01	-.10	.04	1.94 (3, 144)
Romantic Partner	2.19 (1.10)	.01	-.10	.24	8.19 (3, 78)***
Peer	3.41 (1.19)	.00	-.04	.18	10.37 (3, 144)***
		Length of Time Known			
Mother	20.35 (1.86)	.00	.05	.04	2.22 (3, 152)
Father	20.12 (2.29)	.00	-.06	.04	1.99 (3, 144)
Romantic Partner	2.45 (1.64)	.03	.18	.19	6.23 (3, 78)***
Peer	7.56 (6.05)	.00	.02	.16	8.97 (3, 144)***
		Frequency of Contact			
Mother	3.25 (0.89)	.00	-.06	.07	3.94 (3, 152)**
Father	3.49 (0.95)	.02	-.14	.04	2.13 (3, 144)
Romantic Partner	1.97 (0.69)	.00	.01	.16	4.96 (3, 78)**
Peer	2.79 (1.15)	.02	-.14	.18	10.16 (3, 144)***

*** $p < .001$. ** $p < .01$. * $p < .05$.

Appendix K
Materials for Chapter 5

Time 1 (Pre-prime) Measures

Demographics and relationship history.
About You

Please circle the appropriate response where necessary.
Your gender: MALE FEMALE
Your age: _____years
Your ethnic origin: _____

Relationship history:

1. What is your current relationship status?

SINGLE	MARRIED	LIVING TOGETHER (UNWED)	SEPARATED	DIVORCED	WIDOWED

2. Are you currently in a romantic relationship?

YES	How long have you been in this relationship? ____years ____months **GO TO QUESTION 4**
NO	**GO TO QUESTION 3**

3. Have you been in a romantic relationship before?

YES	How long were you in this relationship? _____years _____months
NO	**GO TO QUESTION 9**

4. At what age did you have your first romantic partner?
   _____ years
5. How long were you in this relationship? _____years _____months
6. How many romantic partners have you had altogether?
   _____ partners
7. What was the length of your shortest romantic relationship?
   _____years _____months
8. What was the length of your longest romantic relationship?
   _____years _____months
9. Are you primarily: HETEROSEXUAL GAY/LESBIAN BISEXUAL
10. What is the marital status of your biological parents?

MARRIED	LIVING TOGETHER (UNWED)	SEPARATED	DIVORCED	WIDOWED

See *Attachment Network Questionnaire* **in Appendix F.**
Additional Instructions:
In the first column of the table on the opposite page, I would like you to write the names of up to 10 people with whom you consider yourself to have a close relationship, regardless of whether this relationship is positive, negative, or mixed. When writing the names, please use the terms that you regularly use when interacting with each person. For example, if you call your mother 'mum', put mum, and if you call your friend Daniel 'Dan', put Dan. Please list as many or as few people as you feel necessary. These people can be parents, friends, siblings, romantic partners, or any other form of relationship and can be listed in any order.

Relationship Questionnaire (Bartholomew & Horowitz, 1991).
Relationship-specific attachment style.
Below are four general relationship styles that people often report. For each of the relationships that you described on the previous page, please choose and circle **one** relationship description (A, B, C, or D) that best describes how you feel when with each person.

A I am uncomfortable getting close to him/her. I want an emotionally close relationship, but I find it difficult to trust him/her completely, or to depend on him/her. I worry that I will be hurt if I allow myself to become too close to him/her.

B I am comfortable without this close emotional relationship. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on him/her.

C I want to be completely emotionally close with him/her, but often find that he/she is reluctant to get as close as I would like. I am uncomfortable being without this close relationship, but I sometimes worry that he/she does not value me as much as I value him/her.

D It is easy for me to become emotionally close to him/her and, I am comfortable depending on him/her. I do not worry about being alone (or without him/her) or having him/her not accept me.

Person	A	B	C	D
1	A	B	C	D
...	A	B	C	D
10	A	B	C	D

See *Experiences in Close Relationships Questionnaire* **in Appendix A.**

Caregiving Questionnaire (Kunce & Shaver, 1994; scales by J. A. Feeney, 1996).
Items 1 - 24: Responsive Caregiving

General romantic responsiveness
Please take a moment to think about the way **you** generally act when your romantic partner(s) is upset or is experiencing a problem. Think about **all** your relationships, past and present, and respond in terms of how you **generally** act in those relationships. Rate how well each statement describes your thoughts, feelings, and behaviors.

1	2	3	4	5	6
Not at all descriptive					Extremely descriptive

1. When romantic partners cry or are upset, my first impulse is to hold or touch them.
2. When romantic partners are crying or emotionally upset, I sometimes feel like withdrawing.
3. When necessary, I can say "no" to romantic partners' requests without feeling guilty.
4. I don't like it when romantic partners are needy and cling to me.
5. I tend to get over-involved in romantic partners' problems and difficulties.
6. When I help romantic partners solve a problem, I am much more "cooperative" than "controlling".
7. I help romantic partners without becoming over-involved in their problems.
8. I am very attentive to romantic partners' nonverbal signals for help and support.
9. I tend to be too domineering when trying to help romantic partners.
10. I sometimes "miss" or "misread" romantic partners' signals for help and understanding.

11. I sometimes push romantic partners' away when they reach out for a needed hug or kiss.
12. Too often, I don't realize when romantic partners are upset or worried about something.
13. I feel comfortable holding romantic partners when they need physical signs of support and reassurance.
14. I'm very good at recognizing romantic partners' needs and feelings.
15. When romantic partners seem to want or need a hug, I'm glad to provide it.
16. I can always tell when romantic partners need comforting, even when they
17. I always respect romantic partners' ability to make their own decisions and solve their problems.
18. I can help romantic partners work out their problems without "taking control".
19. I often end up telling romantic partners what to do when they are trying to make a decision.
20. I'm not very good at "tuning in" to romantic partners' needs and feelings.
21. When I help romantic partners with something, I tend to want to do things "my way".
22. I tend to take on romantic partners' problems -- and then feel burdened by them.
23. I sometimes create problems by taking on romantic partners' troubles as if they were my own.
24. I can easily keep myself from becoming overly concerned about or overly protective of romantic partners.

Example of working model strength and elaboration questionnaire.

Your Romantic Partner

Distance from you (whilst you are at university) **1** = same house **2** = up to 2hr drive **3** = up to 5hr drive **4** = 6+ hrs drive **5** = up to 5hrs flight **6** = 6+hrs flight	**Frequency of contact** **1** = daily/almost daily **2** = at least once a week **3** = at least once a month **4** = 6-10 times per year **5** = 3-4 times per year **6** = twice a year **7** = once a year **8** = less than once a year **9** = never				**Amount of time known** (in years)
	Visit	**Phone**	**Share activities**	**Write/Email**	

Now please think about the relationship you have with your current partner, from when you first met through to the present day. Below are some feelings that you may have experienced You may have turned to your current partner when experiencing these feelings. Put a cross (X) in the box next to all of the feelings that, when you have felt this way, you have turned to your current partner. Then for each feeling that you have crossed, please indicate how often you have turned to your current partner using the scale. Leave the box and scale blank if you have not turned to your current partner when you have experienced this feeling.

Feelings	**Experienced? (X)**	**1 Rarely**	**2**	**3**	**4**	**5 Always**
1. Emotionally upset		1	2	3	4	5
2. Frightened		1	2	3	4	5
3. Distressed		1	2	3	4	5
4. Need reassurance		1	2	3	4	5
5. Ill		1	2	3	4	5
6. Need physical closeness		1	2	3	4	5
7. Vulnerable		1	2	3	4	5
8. Physically hurt		1	2	3	4	5
9. Need someone to depend on		1	2	3	4	5
10. Need to trust someone		1	2	3	4	5
11. Insecure		1	2	3	4	5
12. Embarrassed		1	2	3	4	5
13. Anxious		1	2	3	4	5
14. Need to feel close to someone		1	2	3	4	5
15. Need someone to listen to my feelings		1	2	3	4	5
16. Need to rely on someone		1	2	3	4	5
17. Feeling lost		1	2	3	4	5
18. Need support		1	2	3	4	5
19. Someone upsets me		1	2	3	4	5
20. Feel rejected		1	2	3	4	5
21. Need guidance		1	2	3	4	5
22. Feeling sad		1	2	3	4	5
23. Feeling lonely		1	2	3	4	5
24. Feeling down		1	2	3	4	5

Responsiveness of received care. See Appendix F.

Priming Manipulation

Instructions:
For this part, I would like you to try to imagine that you are involved in the scenario described below. I would like you to write in as much detail as you can, your response to situation. You will have 12 minutes to complete this section.

Read through the scenario, and then start the stopwatch that is on the computer screen. Click on the ► button, and begin the task. A buzzer will sound when the 12 minutes is over. If you finish writing your response before 12 minutes is over, **do not** start the next task. Instead, use the remaining time to think about what you have written, and jot down anything else that comes to mind.

Parent-child caregiving scenario:
Your friend is babysitting for his 4-year old nephew. The nephew has been playing outside, and suddenly runs inside crying. He has fallen over and cut his knee (which looks a lot worse than it is). He's very upset and crying for his parents. Your friend has phoned you for advice. What would you advise your friend to do?
Peer-peer caregiving scenario:
Your friend's housemate has just received some bad news about her grandfather. Unfortunately, the housemate can not return home until the following afternoon, and her boyfriend is away on holiday. She is very upset, and crying uncontrollably in the lounge. Your friend has phoned you for advice. What would you advise your friend to do?

If you had to describe in 5 words how your friend should act towards the child/housemate, which words would you use?

_____
_____
_____
_____

Using the scale beneath each of the following statements, circle the box that best describes how you would feel as you gave advice to your friend:

My advice would be aimed at making the situation better for my friend.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My advice would be aimed at making the situation better for the child/housemate.

Strongly Disagree				Strongly Agree
1	2	3	4	5

My advice would be aimed at making the situation better for both my friend and the child/housemate.

Strongly Disagree				Strongly Agree
1	2	3	4	5

I am capable of giving useful advice to improve the situation for my friend.

Strongly Disagree				Strongly Agree
1	2	3	4	5

I am capable of giving useful advice to improve the situation for the child/housemate.

Strongly Disagree				Strongly Agree
1	2	3	4	5

I am surprised that my friend contacted me for advice.

Strongly Disagree				Strongly Agree
1	2	3	4	5

Time 2 (Post-prime) Measures

Post-prime affect. See PANAS, Appendix A.
Post-prime general romantic responsiveness; see scale above.

Manipulation check.
Please answer the following questions.

1. Please rate the degree to which you were able to focus on the scenario task without feeling distracted.

1	2	3	4	5	6	7
Not at all focused						Extremely focused

2. Please rate how likely it is that the advice you gave in the scenario task is what you would give if the situation was real.

1	2	3	4	5	6	7
Not at all likely						Extremely likely

3. Were there any parts of the study (both Part 1 and Part 2) that you found difficult to complete? If so, please describe below.

_____

_____

4. What do you think the purpose of this study was?

_____

_____

5. How much experience do you have of looking after babies and small children? Please circle the appropriate number. (parent-child caregiving scenario only)

1 None at all
2 I've babysat or looked after younger siblings, etc a few times
3 I've regularly looked after younger siblings / babysat
4 My current partner has a child I help to look after
Other, please specify _____

Appendix L
Zero-order correlations for relationship-specific influences analyses (Chapter 5)

Table 1

Correlations for relationship-specific influences on T1 general romantic responsiveness

	1	2	3	4	5
1 T1 Gen. Resp	--				
2 Mum's Resp	.34*	--			
3 Dad's Resp	.29*	.49***	--		
4 Part's Resp	.39**	.18	.19	--	
5 Peer's Resp	.35**	.28	.28*	.16	--

Note. Gen. Resp = General romantic responsiveness. Resp = received responsive care. Part's = Romantic partner.
*** $p < .001$. ** $p < .01$. * $p < .05$.

Table 2

Correlations for moderation of relationship-specific influences by model elaboration

	Mum		Dad		Partner		Peer	
	Resp.	Elab.	Resp.	Elab.	Resp.	Elab.	Resp.	Elab.
1 T1 Gen. Resp	.18*	.10	.15	.01	.38***	.17	.39***	.02
2 Received Resp		.32***		.40***		.02		.30***

Note. Gen. Resp = General romantic responsiveness. Resp = received responsive care. Elab. = model elaboration value
*** $p < .001$. * $p < .05$.

Table 3

Correlations for relationship-specific influences on T2 general romantic responsiveness

	1	2	3	4	5	6
1 T2 Gen. Resp	--	.65***	--	--	.55***	.33*
2 T1 Gen. Resp	.68***	--	--	--	.35*	.38**
3 Mum's Resp	.13	.12	--	--	--	--
4 Dad's Resp	.15	.15	.31***	--	--	--
5 Part's Resp	--	--	--	--	--	.29*
6 Peer's Resp	--	--	--	--		--

Note. Values in the bottom diagonal are for the parent-only regression; values in the top diagonal are for the peer-only regression. T2 = Time 2 (post-prime). T1 = Time 1. Gen. Resp = General romantic responsiveness. Resp = received responsive care. Part's = Romantic partner.
*** $p < .001$. ** $p < .01$. * $p < .05$.

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