



'Who are *you*?' said the Caterpillar.

This was not an encouraging opening for a conversation. Alice replied, rather shyly, 'I--I hardly know, sir, just at present-- at least I know who I *was* when I got up this morning, but I think I must have been changed several times since then.'

'What do you mean by that?' said the Caterpillar sternly. 'Explain yourself!'

'I can't explain *myself*, I'm afraid, sir' said Alice, 'because I'm not myself, you see.'

'I don't see,' said the Caterpillar.

'I'm afraid I can't put it more clearly,' Alice replied very politely, 'for I can't understand it myself to begin with; and being so many different sizes in a day is very confusing.'

'It isn't,' said the Caterpillar.

'Well, perhaps you haven't found it so yet,' said Alice; 'but when you have to turn into a chrysalis--you will some day, you know--and then after that into a butterfly, I should think you'll feel it a little queer, won't you?'

'Not a bit,' said the Caterpillar.

'Well, perhaps your feelings may be different,' said Alice; 'all I know is, it would feel very queer to *me*.'

'You!' said the Caterpillar contemptuously. 'Who are *you*?'

Lewis Carroll, *Alice's Adventures in Wonderland*, 1865.
Illustration by Sir John Tenniel.

**Dissociation, coping and control: A cognitive
model of dissociation in non-clinical populations.**

**Francesca Eileen Collins
BA (Monash), BSc (Hons) (Monash)**

**Department of Psychological Medicine
Monash University**

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**This thesis is dedicated to my mum and dad,
Ann and Gerry Collins**

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ABSTRACT

In this thesis, the author proposes a novel model of dissociation as experienced by members of non-clinical adult populations. This cognitive model is derived from the conceptual, aetiological and phenomenological relationships between dissociation, External locus of control orientation and the use of emotion-focused coping strategies.

Dissociation refers to the process whereby the usually integrated functions of consciousness, memory, identity or perception of the environment are disrupted. Emotion-focused coping strategies refer to thoughts and behaviours that reduce the psychological impact of a stressful event as opposed to problem-focused strategies where the aim is to address the problem causing the stress. Locus of control refers to one's beliefs about the source of control over one's fate; the Externally oriented individual sees chance happenings or the actions of powerful others as influencing their fate whereas Internally oriented individuals see themselves as the chief source of control over their own fate.

The cognitive model presented here draws together themes emerging specifically from the dissociation research literature, Lazarus' (Lazarus & Launier, 1978) cognitive theory of stress and coping and Rotter's (1966) concept of locus of control. Historically, dissociation research has focused upon its pathological manifestations; only recently have researchers begun to investigate dissociation as a 'normal' process. In this regard, the present work represents a significant contribution to the burgeoning research literature regarding dissociation in non-clinical populations.

The proposed cognitive model and its underlying assumptions were tested over a series of three studies: 1) a questionnaire-based study; 2) a laboratory-based study examining dissociation under boring and painful conditions; and 3) a 'real world' study examining dissociative responses to riding a roller-coaster. Dissociation was measured via the Dissociative Experiences Scale (Bernstein & Putnam, 1986), coping was measured via the Ways of Coping Questionnaire (Folkman & Lazarus, 1988) and locus of control was measured via Levenson's Multidimensional Locus of Control Scale (Levenson, 1972).

In Study 1, support was found for the overall model in that dissociativity, the use of emotion-focused coping strategies and External locus of control were found to be significantly correlated and the combination of preferred coping strategies and locus of control orientation was significantly predictive of dissociativity. Study 2 showed that all individuals experience dissociation while conducting a boring, monotonous task, however, contrary to predictions, tendency to dissociate was not related to tolerance of ischaemic pain. The findings of Study 3 suggest that hyperarousal and lack of control are the essential features of peritraumatic dissociation and that peritraumatic dissociation may be experienced in response to non-traumatic, subjectively positive events.

The results of this research have important implications for both the dissociation and the coping research literature: the possibility that in non-clinical adult populations, dissociation functions to regulate stimulation is discussed, the need to revise our current conceptualisation of coping is suggested and movement away from purely traumagenic understanding is proposed.

AUTHOR'S STATEMENT

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other institution and, to the best of my knowledge, contains no material previously published or written by another person except where due reference is made in the text of the thesis.

Francesca Eileen Collins

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DISSOCIATION

“Daily life is full of many small dissociations if we look for them.”

(Hilgard, 1973, p. 406)

The past 150 years has seen two waves of clinical and research interest in dissociation and dissociative disorders. The first wave, led by the French physician Pierre Janet, was at its height between 1880 and 1930. The most recent wave began in the 1970s and continues to gain momentum to the present day.

The past two decades in particular have seen an increased interest in dissociative phenomena with the bulk of the research centring on dissociative disorders and the role of dissociation in the psychopathology of a number of mental disorders. More recently, investigators have begun to explore the nature and prevalence of dissociative experiences in members of non-clinical populations (Bauer & Power, 1995; Beere, Pica, & Maurer, 1996; Charbonneau & O'Connor, 1999; Collins & Ffrench, 1998; Fair, 1993; Giolas & Sanders, 1992; Norton, Ross, & Novotny, 1990; Ruiz, Pincus, & Ray, 1999; Sanders, McRoberts, & Tollefson, 1989). It is hoped that the research reported here will contribute to the burgeoning research literature regarding non-pathological, or normal, dissociation and encourage its further investigation as a normal psychological feature of normal individuals.

Overview of the present research

The overall aim of this research project is to present and test a cognitive model of dissociation as it is experienced by non-clinical adult individuals, that is, a cognitive model of *normal* dissociation. The cognitive model proposed here has its genesis in the research literature regarding dissociation, Lazarus and his colleagues' (Lazarus & Launier, 1978) cognitive theory of stress and coping and Rotter's (1966) concept of locus of control. It will be shown how the three constructs are linked via their phenomenological and aetiological features and how an understanding of these interrelationships can lead to a deeper understanding of normal dissociative processes.

The main assumption underlying the proposed cognitive model is that, in non-

clinical adult populations, many dissociative phenomena overlap with phenomena also categorised as emotion-focused coping strategies and that both dissociation and emotion-focused coping are associated with a subjectively perceived lack of personal control. Individuals reporting a pervasive sense that they lack control over their life are considered to have a strong External locus of control. The development of an External locus of control orientation in adulthood shares aetiological factors with the development of dissociative tendencies in adulthood. As can be seen from this brief overview of the model, these three constructs are very much interdependent. In addition to increasing our understanding of normal dissociative phenomena, this model has implications for currently accepted models of coping and locus of control. These implications will become apparent as the relevant literature is reviewed.

A three-stage approach was taken to testing the proposed model in which five main hypotheses and five auxiliary research questions were examined. In Study 1, empirical evidence for the conceptual interrelationships between dissociation, emotion-focused coping and External locus of control was sought. In Study 2, the assumption that everybody has the capacity to dissociate was tested as was the assumption that the conditions precipitating dissociation in higher dissociators are more generalised than for lower dissociators. Finally, in Study 3, the hypothesis that hyperarousal and uncontrollability are essential features of peritraumatic dissociative phenomena was tested.

Prior to reporting on the three studies, reviews of the relevant literature pertaining to normal dissociation, coping and locus of control are presented in Chapters 2, 3 and 4, respectively. Chapter 5 brings the three bodies of literature together, providing a rationale for the cognitive model. Chapter 6 provides reviews of the main psychometric instruments used in the present research: the Dissociative Experience Scale (Bernstein & Putnam, 1986; Carlson & Putnam, 1993); the Acute Dissociation Inventory (Harrington & Leonard, 1998); the Ways of Coping Questionnaire (Folkman & Lazarus, 1988); and Levenson's Multidimensional Locus of Control Scale (Levenson, 1972). Next, each of the three studies is reported, and their findings discussed, separately in Chapters 7, 8 and 9. This is followed by a general discussion of the overall research project in Chapter 10.

The remainder of the present chapter, Chapter 1, comprises a review of the

literature pertaining to the recent history, theory and nosology of dissociative phenomena. First, the task of defining dissociation is considered and criteria for distinguishing dissociation from other psychological phenomena are reviewed with the aim of arriving at a working definition. This section is followed by a brief description of the five core dissociative phenomena and the dissociative disorders in which they feature.

Having determined what dissociation is, an account of the modern history of dissociation is provided. The rise and fall and rise of clinical and research interest in dissociation is put into an historical context and recent developments regarding the conceptualisation of dissociation as a dimensional or categorical construct are discussed.

Research findings regarding the childhood antecedents of adult dissociation are reviewed next. The focus of this research appears to have shifted from specific forms of childhood abuse (eg., sexual or physical) to more pervasive childhood experiences such as abuse in general (ie., physical, psychological and sexual), family environment, unresolved grief and guilt regarding childhood abuse and disorganised-disoriented attachment.

Over the past 150 years, very few explanatory models for the dissociative mechanism have been offered. Three of the more credible models – the neurological, hypnosis and perceptual models - are presented here. Related to the question of the dissociative mechanism is the question of triggers for dissociation. Three precipitating factors are considered: threat of death and loss of control, physiological hyperarousal and the overwhelming cognitions associated with philosophical musing.

What is dissociation?

A wide range of definitions for psychological dissociation have been offered by researchers and clinicians. While they might differ in the details, what is common to all definitions is a reference to the lack of usually expected connections between mental content. Dissociative experiences are characterised by a compartmentalisation of consciousness, that is, certain mental events that would ordinarily be expected to be processed together (e.g., thoughts, emotions, motor activity, sensations, memories and sense of identity) are functionally isolated from

one another and, in some cases, rendered inaccessible to consciousness and/or voluntary recall (Steinberg, 1994).

The 4th edition of *The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*; (American Psychiatric Association, 2000) [APA] defines dissociation as the process whereby the usually integrated functions of consciousness, memory, identity, or perception of the environment are disrupted.

According to Nemiah (1998), dissociation is characterised by “the exclusion from consciousness and the inaccessibility of voluntary recall of mental events, singly or in clusters, of varying degrees of complexity, such as memories, sensations, feelings, fantasies, and attitudes”.

Butler et al (1996) see the disruption, across a number of domains, of awareness and voluntary control as being central to a definition of dissociation. They describe how dissociation can occur in the domains of perception (e.g., focused attention as in absorption), behaviour (e.g., automatised actions like driving a car), affect (e.g., the numbing of emotional response to overwhelming circumstances) and memory and identity (e.g., amnesia for traumatic events and uncertainty regarding identity during depersonalisation).

Assumptions about the fundamental unity/disunity of the self underlie some definitions of dissociation. Braude (1995) has stated that the self can be considered functionally unitary while Putnam (1994) has proposed that the natural state of the self is fragmentary. Erdelyi’s (1994) systems theory approach to dissociation incorporates these two viewpoints into a coherent working model of the dissociated self.

Erdelyi (1994) asserts that most individuals, most of the time, have a compelling sense of being unitary, that is, they have a subjective sense of the unity of self. This subjective perception of the self-system as unitary is, according to Erdelyi, central to the concept of dissociation. “Dissociation represents some discrepant manifestation of a system’s subsystems; both the system and subsystems are *sine qua nons* of dissociation” (Erdelyi, 1994, p. 7). Experiences of dissociative phenomena can be alarming to the experiencer as they reveal the subsystem structure of that which they usually perceive as unitary (ie., the self-system). When the self-system is running smoothly, it is subjectively perceived as unitary. When there is disharmony between the subsystems, the smooth running of the self-

system breaks down, resulting in experiences of dissociation of subsystems.

Definitions of dissociation also differ according to whether states or traits are being discussed. The notion of a dissociative state implies that dissociation can be an episodic phenomenon. State dissociation is experienced by some people, some of the time, is time limited and presumably, situationally triggered. The dissociative trait refers to dissociation as a common personality feature which, like all personality features, is expressed in greater or lesser degree in each individual.

Conceptual criteria for dissociation

The philosopher Braude (1995) makes a concerted effort at delineating what dissociation is and is not. Braude posits four basic assumptions about dissociation which act as a set of tentative criteria for the identification of dissociation in both its normal and pathological forms.

First, Braude (1995) assumes that dissociation is a state of being and that all humans have the capacity to be in that state in much the same way that all humans have the capacity to be in other states such as happy, anxious or confused. Building on this assumption, he asserts that, as with any human state and capacity, dissociation varies among individuals. That is, the degree to which people experience dissociative states and their capacity to attain such states, varies from person to person. In this sense, dissociation, as a state and capacity, has certain features in common with other human states and capacities. Braude calls this the *non-uniqueness assumption*.

Braude's second assumption is that, like other human states and capacities, dissociation may be expressed in very different ways from one person to the next. Some expressions of dissociation may be adaptive (e.g., tolerance of unavoidable pain); some may be maladaptive (e.g., chronic amnesia). Some expressions may be mild (e.g., day-dreaming); some may be extreme (e.g., fugue states). Braude calls this the *assumption of diversification*.

The third assumption draws a line between filtering and dissociation. Braude describes filtering as the process whereby the perception of some stimulus is blocked. For example, if I look out my window, I can see and hear a small military band playing a familiar jazz tune. A blindfold would filter the visual stimuli of the band and earplugs would filter the aural stimuli of the music; filters, thus, prevent

the stimuli from being perceived by me because they prevent the stimuli from reaching me in the first place.

In cases of dissociation, however, the stimuli are perceived (that is, they reach me and are registered), but the perception is not experienced consciously. In the case of the view from my window, I may be lost in thought as I gaze out the window and, while the sensorially rich scene below reaches me and is registered by me, I do not experience it consciously. If later asked the name of tune the band was playing, I may reply, "I don't know. I wasn't really listening" or even, "What band?" However, when I hear the tune played on the radio the next day, I suddenly recall – "Ah! That's the tune the band was playing!". I had perceived the sensory information, but, at the time, I was not consciously aware of the perception.

It is not always sensory experiences that are dissociated, however. In the case of automatic behaviour under highly stressful conditions (e.g., jumping into a fast flowing river to save a drowning person), the behaviour is not perceived and then dissociated. The behaviour is produced while the rescuer is in a dissociative state. That is, the behaviour was able to occur *because* the rescuer's cognitions regarding their own safety were dissociated from conscious awareness.

So, the difference between filtering and dissociation is that "in the case of filtering, information or data never reach the subject . . . whereas dissociation merely blocks the subject's awareness that they have perceived something" (Braude, 1995, p. 96). To be clear, it is not the stimuli but the perception of the stimuli that has been dissociated from conscious experience. As dissociated perceptions belong to the perceiver, Braude calls this assumption the *assumption of ownership*.

Braude's final assumption of dissociation concerns the accessibility of dissociated material. Dissociated perceptions, information, feelings, thoughts, etc., have not been erased; they still exist but are dissociated or separated from conscious awareness. This means that, in principle, dissociated material can be accessed and known (as illustrated in the window-gazing example above). Braude calls this the *accessibility assumption*.

Dissociation as a defence

According to Cameron (1963), one of the main strivings of the human

psychodynamic system is to maintain organisation and avoid disintegration. Defences are those mental and behavioural activities that protect the system from threats to this organisation such as overwhelming, conflicting and intolerable emotions. Simply stated, the purpose of a defence is to protect the individual by helping them avoid or manage these threats (McWilliams, 1994). Popular use of the term 'defence' tends to imply pathology or maladaptiveness, however, it should be noted that defences are not inherently pathological; they begin as "global, inevitable, healthy, adaptive ways of experiencing the world" (McWilliams, 1994, p. 96).

In childhood, individuals develop a preference for particular defences which, in adulthood, are relied upon and invoked unconsciously to allow the individual cope with stressful situations. Factors influencing one's preference for a given defence or set of defences include:

- (1) one's constitutional temperament; (2) the nature of the stresses that one suffered in early childhood; (3) the defenses modeled – and sometimes deliberately taught – by parents and other significant figures; and (4) the experienced consequences of using particular defenses (McWilliams, 1994, p.97).

The status of dissociation as a defense is acknowledged in the psychoanalytic literature (see Cameron, 1963, and Ellenberger, 1970). It is understood as "an attempt to preserve ego integration by reducing ego span, that is by eliminating some ego functions in order to bring emotional tension within manageable limits. . . . The normal person practices dissociation in order to hold off something traumatic, so that he [or she] can prepare [them]self to accept, digest and ultimately assimilate it" (Cameron, 1963, p. 341).

Dissociation is not repression or suppression

It is worth making clear the difference between dissociation, the psychodynamic notion of repression and the conscious act of suppression.

Repression refers to the sequestering of unacceptable, conflicting or intolerable psychic material from conscious awareness. Repressed material is unconscious, that is, it is not directly accessible to consciousness. In fact, repressed psychic material cannot make itself know directly; its existence is inferred through slips of the tongue, dreams and other symbolic phenomena.

Dissociated material can, in comparison, be said to be *subconscious*. Knowledge of dissociated material can be as direct as knowledge of any other kind of conscious material. That is, it need not be inferred and can be directly observed by the self or others under the right circumstances (for a full discussion, see Braude, 1995).

In describing the differences between repression and dissociation, Braude (1995) and Gruenewald (1985) invoke Hilgard's image of repressed material as existing below a horizontal barrier, above which lies consciousness and dissociated material as being separated from consciousness by vertical barriers.

Suppression can be distinguished from both repression and dissociation in that it involves a conscious effort to 'not think about' something. The person engaged in suppression does not have amnesia for the suppressed material, the material does not reside sub- or unconsciously and the suppressed material can be accessed readily.

Spiegel and Cardena (1991) make the important observation that "although the concept of dissociation does involve the coexistence of psychological processes that have been compartmentalized and separated from each other, the concept does not require that these processes be completely independent of each other. . . . [O]ngoing psychological processes of which a person [reports] no introspective awareness can affect the execution of ongoing behavior and cognition" (p. 367).

Core dissociative phenomena

Five core dissociative phenomena have been identified: *amnesia*, *depersonalisation*, *derealisation*, *identity confusion* and *identity alteration* (Bernstein & Putnam, 1986; Kirmayer, 1994; Steinberg, 1994). These phenomena may be subjectively experienced or observed by others and are only considered dissociative when not due to the direct physiological effects of a substance (e.g., drugs, alcohol, or medication) or a medical condition (APA, 2000).

Amnesia

Dissociative amnesia is "the absence from memory of a specific and significant period of time" (Steinberg, 1994), p. 61). Dissociative amnesia is viewed as a

functional amnesia as it occurs in the absence of any known organic aetiology (Steinberg, 1994) and is distinguished from other forms of amnesia, such as childhood amnesia, in that it does not reflect normal psychological development. For example, most individuals do not have memory for events before the age of 2 or 3 whereas most do have memories, even if scant, for the years following. Individuals experiencing dissociative amnesia typically retain the ability to learn and recall new information; memory loss is restricted to a circumscribed period of time or category of events in the individual's life, usually of a traumatic or stressful nature (APA, 2000). As opposed to the memory disturbance due to degenerative brain disease, injury and other severe organic causes, dissociative memory loss is reversible and may be recovered via hypnosis or on the individual's removal from the stressful situation.

Depersonalisation

Depersonalisation describes the sensation that one is in some way detached from one's self. The depersonalised individual may feel as though they are living in a dream or a movie, that they are not real or even that they are dead. This feeling of personal unreality may also include the sensation that one is detached from all or parts of one's body, as if one were not in control of one's actions or as if one were an automaton (Steinberg, 1994). The depersonalised individual typically describes symptoms of detachment in 'as if' terms, that is, the individual maintains intact reality testing and does not believe that the symptoms represent a real detachment from self or body as may be the case for an individual suffering a psychotic disorder such as schizophrenia. In clinical populations, chronic depersonalisation is the third most often reported symptom after depression and anxiety (Gershuny & Thayer, 1999).

Derealisation

While depersonalisation concerns feelings of unreality regarding one's self, derealisation refers to the sensation that one's surroundings are unreal. An individual experiencing derealisation may feel as though they have lost contact with external reality; that their home, workplace, friends or relatives are unfamiliar or strange. The experience of derealisation often involves a failure to recognise familiar objects and people, for example, one's car or best friend. Depersonalised

individuals may also report distortions in their perceptions of space and time (Charbonneau & O'Connor, 1999; Steinberg, 1994).

Transient states of depersonalisation and derealisation are common and spontaneous, “especially under conditions of fatigue, anxiety and danger” (Butler et al, 1996, online). Cameron (1963) also points out the relationship between derealisation and travel. Individuals may experience feelings of strangeness and unreality during the days following arrival at a holiday destination and again on arriving home.

Identity confusion and identity alteration

Identity confusion refers to subjective feelings of uncertainty regarding one's personal identity. The individual experiencing identity confusion may report an inner battle between themselves and ‘another person inside of them’ who is struggling to take control of behaviour. Identity alteration on the other hand, is characterised by “objective behaviour indicating the assumption of different personalities” (Steinberg, 1994, p.63). Such behaviours include the objectively reported use of different names and third-person references to oneself. Individuals usually become aware of periods of identity confusion or alteration on the discovery of items among their belongings that they do not recall purchasing or receiving and the unexplained acquisition of new skills and abilities.

The dissociative disorders

The core phenomena described above represent the main features of the five dissociative disorders included in the *DSM-IV-TR* (APA, 2000): *Dissociative Identity Disorder*, *Dissociative Amnesia*, *Dissociative Fugue*, *Depersonalisation Disorder* and *Dissociative Disorder Not Otherwise Specified*. Janet grouped these (and other) disorders under the general classification of hysteria because they presumably shared the same underlying dissociative mechanism. In contrast, nosological considerations, that is, description rather than aetiology, are behind the current classificatory division of these disorders (Butler et al, 1996).

Dissociative Identity Disorder (DID, formally known as Multiple Personality Disorder) is characterised by the presence of two or more distinct personality states, or alters, that recurrently take control of the individual's behaviour (APA, 2000). Although psychologically normal individuals may exhibit pronounced

'personality' changes in terms of behaviour, affect and attitude across different social situations and roles, memory for these episodes remains intact as does one's sense of personal and temporal continuity. For the DID sufferer, there are frequent gaps in personal history that are not adequately explained by ordinary forgetfulness and may span in duration from minutes to years as alters take control of behaviour. Alters often report being of a different age and gender to the sufferer and may display behavioural characteristics, knowledge and skills not possessed by the primary personality.

Dissociative Amnesia (formerly Psychogenic Amnesia) is characterised by an inability to recall important personal information that is too extensive to be explained by ordinary forgetfulness (APA, 2000). The *DSM-IV-TR* describes five kinds of dissociative amnesia: *localised amnesia* refers to a total loss of memory for events that occurred during a circumscribed period of time, for example, the victim of a violent crime may have no recall for the week following the incident. *Selective amnesia* is characterised by the loss of recall for some, but not all, events occurring within a specified period of time. For example, the victim of childhood abuse may recall selected details from the period of abuse. *Systematised amnesia* refers to the loss of memory for certain categories of personal information such as information concerning one's family, school years or certain people. The individual experiencing *continuous amnesia* reports an inability to recall any events following a specific time, up to and including the present while individuals experiencing *generalised amnesia* experience total memory loss spanning their entire life.

The various forms of dissociative amnesia are distinguished from non-pathological amnesias in that they do not reflect developmentally appropriate amnesia (ie., childhood amnesia) or an organic aetiology.

Dissociative Fugue (formerly Psychogenic Fugue) is characterised by sudden, unexpected travel from one's usual place of residence or daily activities coupled with an inability to recall some or all details of one's personal history (APA, 2000). The period of flight may be brief, lasting a few hours or days, or may extend over several weeks or months during which time the individual may establish a new social identity, place of residence and social ties. Dissociative Fugue can be distinguished from DID and Dissociative Amnesia in that identity confusion and

amnesia are experienced only during, or in relation to, the period of flight.

Depersonalisation Disorder is characterised by persistent or recurrent feelings of detachment from one's self or body. The individual typically reports feelings of unreality, as if they were living in a dream, and a sense of disconnectedness from their self, as though they were an outside observer of their own mental processes or body. The individual, however, maintains intact reality testing, that is, they recognise that their feelings of disconnectedness and estrangement are just feelings and do not reflect a real division of, or separation from, one's self.

Dissociative Disorder Not Otherwise Specified encompasses disorders where the predominant features are dissociative in nature but the criteria for a specific dissociative disorder have not been met (APA, 2000).

ASD & PTSD

In addition to the five dissociative disorders, dissociation represents a major diagnostic feature of Acute Stress Disorder (*ASD*) and Post Traumatic Stress Disorder (*PTSD*; APA, 2000; Carlson, 1994; Putnam, 1994). *ASD* is associated with exposure to a traumatic event in which the individual was confronted with the threat or actuality of death or serious injury to themselves or to others (APA, 2000). *ASD* was included in *DSM-IV* (APA, 1994) to allow for the diagnosis of clinically significant post-traumatic symptomatology occurring within the first four weeks post-trauma. The *ASD* diagnostic criteria, more so than the *PTSD* diagnostic criteria, reflect the prevalence and importance of dissociative phenomena in the post-trauma period. The key diagnostic feature (apart from duration of symptoms) that distinguishes *ASD* from *PTSD* is the presence of three or more dissociative symptoms during or after the precipitating trauma. *PTSD* is characterised by the presence, at least four weeks after the precipitating trauma, of symptoms in the domains of re-experiencing, avoidance and hyper-arousal. Although less emphasis is placed upon it diagnostically, dissociation represents an important component of *PTSD*, and *PTSD* populations tend to report higher levels of dissociation than do non-clinical populations (Carrier, Lamberts, Fouwels & Gersons, 1996).

The recent history of dissociation

The earliest documented account of dissociative phenomena has been credited to

the 17th century physician Paracelsus who described a patient exhibiting multiple personalities, one of whom would steal her money while she remembered nothing of it (Bliss, 1984). Further cases of multiple personality came to light during the 18th and 19th centuries but it was not until the French physician Pierre Janet's work in the late 19th and early 20th century that the connection was made between dissociative symptoms and the traumatic memories of unassimilated events (Putnam, 1989).

Janet is usually credited with having coined the term dissociation, derived from the French term *desagregations psychologiques*, literally, psychological disaggregation. However, contemporary scholars of the history of dissociation point out that Janet's ideas on dissociation had their derivation in the 1845 work of Moreau de Tours (Braude, 1995; Ellenberger, 1970; van der Hart & Friedman, 1989). Janet can be given credit, however, for being the first clinician and researcher to identify and study dissociation's role as a coping response to overwhelming stress and trauma (Gershuny & Thayer, 1999).

The first to distinguish between non-pathological and pathological forms of dissociation, Janet believed that dissociation is a normal coping response to trauma, but that dissociation experienced in the absence of trauma or overwhelming circumstances was always pathological.

For Janet, an individual's mental life was "like a balance sheet, with the [individual's] resources sometimes equal to the demands or the stresses placed upon him and sometimes not" (Murphy & Kovach, 1972, p. 157). Generally speaking, psychopathology was the consequence of insufficient psychological resources; this psychopathology took the form of dissociation in 'loosely put together' individuals; "the individual [is] either well or loosely put together; and if the latter, various components like seeing and hearing and remembering and thinking and willing may fall apart" (Murphy & Kovach, 1972, p. 157).

Janet grouped together a range of disorders he believed shared "a fundamental pathogenic mechanism – dissociation" (Butler, et al., 1996), p.2). This group of disorders, which were subsumed under the rubric 'hysteria', included those which would now be classified as dissociative disorders, somatoform and conversion disorders, Borderline Personality Disorder and Posttraumatic Stress Disorder. Janet believed that these forms of hysteria could be explained and understood in

terms of auto-hypnotic processes as individuals presenting with these disorders were often highly hypnotisable and their symptoms often resolved under hypnosis.

During the late nineteenth century, dissociation was an important topic in mainstream psychology and psychiatry in Britain and North America. The field of psychiatry embraced dissociative phenomena in its varied forms; multiple personality, sonambulisms, trance speaking, automatic writing, hypnosis and hysteria were popular and legitimate topics of investigation (Alvarado, 2002; Ellenberger, 1970). While Janet was championing the cause in Europe, in North America, dissociative phenomena were investigated by James and Morton Prince. In Britain, the bulk of research regarding dissociation was conducted by members of the Society for Psychical Research (SPR; Alvarado, 2002). The research carried out by the SPR differed from that of the psychiatric fraternity in that the SPR did not focus on the pathological aspects of dissociation, expanding their investigations to include dissociation's less maladaptive expressions.

Mainstream interest in dissociation remained steady before dropping dramatically in the third decade of the twentieth century. According to Putnam (1995), dissociation did not completely disappear from the research and psychiatry literature, however, it appeared in a different form, namely, as battle fatigue and shell-shock (Putnam, 1995).

Ross (1996) has identified three factors which contributed to dissociation's fall from favour: Freud, Bleuler and Behaviourism. Originally, Freud had been a proponent of dissociation and the trauma-dissociation link suggested by Janet. However, he shifted to a repression model of psychopathology in which repression represented a defence against thoughts, feelings, memories, etc., that threatened the integrity of the psychic whole. Freud effectively substituted Janet's conception of dissociation for one of repression and there was no room, theoretically speaking, in this model for dissociative phenomena or, for that matter, the notion of childhood sexual abuse. Providing a socially more palatable explanation of events, Freud's theory rose in popularity and interest in the investigation and treatment of dissociation waned.

Bleuler contributed to the clinical and academic rejection of dissociation by including dissociative symptoms under the diagnostic heading of schizophrenia. Specifically, he asserted that the attribution of multiple personality states to

hysteria was a mistake and that they properly belonged under the rubric of 'psychosis'. This assertion has had a profound and long-lasting impact on the diagnosis and treatment of dissociative disorders. For many years, sufferers of Dissociative Identity Disorder and other dissociative disorders have been misdiagnosed and mistreated pharmacologically as schizophrenia sufferers.

Ross (1996) points to the rise of Behaviourism as delivering the third blow against dissociation. There is no place in a Behaviourist paradigm for the discussion or investigation of consciousness – it is not objectively observable and, therefore, irrelevant.

Professional and academic resistance to the investigation of dissociation continued toward the final decades of the 20th century, and persists to the present day in many countries. Despite this, the past twenty years has seen a rapid resurgence in interest in dissociation and the dissociative disorders. Once again, Ross (1996) provides a three-pronged explanation for the phenomenon, this time involving societal acceptance of child sexual abuse, the Vietnam War and the media.

At the beginning of the 1980s, the official word on the prevalence of parent-child incest was that it was extremely rare, occurring in only one in a million North American families (Ross, 1996). The most recent data puts the prevalence of incest at one in fewer than one hundred families. According to the the Australia's Centre Against Sexual Assault,

Prevalence rates for adult survivors of childhood sexual abuse vary due to the complex and diverse definitions used. A recent study by Fergusson and Mullen (1999) has reviewed recent population studies of the prevalence of child sexual abuse (CSA) published in the English language since 1990. Only studies of 100 subjects or more were used. They found that definitions which included non contact sexual abuse like pornography, photography, watching, exposing/flashing, comments have a prevalence rate ranging from 8% to 62% for woman and 3% to 29% for men. When the definition narrows to stringent criteria of penetration or intercourse, including digital, oral, vaginal and anal the prevalence rate goes from 1.3% to 28.7% for women and 1.1% to 14.1% for men. These are disturbing numbers and the estimates lie between these two extremes. However, based on a range of behaviours where children are used for someone's sexual gratification, the prevalence rate is 1 in 3 women and 1 in 6 men. (online, 2004),

As the formerly taboo topic of childhood sexual abuse came to be discussed by professionals, so did its sequelae, namely, dissociative symptomatology.

Acknowledgement in the field of medicine, and psychiatry in particular, of the post-traumatic effects of combat during the Vietnam War was another important factor in dissociation's return to the mainstream. Dissociation was recognised as an important component of Posttraumatic Stress Disorder. This development also had implications for the recognition of the posttraumatic effects of childhood trauma.

Finally, the media introduced dissociation and dissociative disorders into popular culture via the books *The Three Faces of Eve* (Thigpen & Cleckley, 1957), *Sybil* (Schreiber, 1973) and *The Minds of Billy Milligan* (Keyes, 1981). Dissociation started to be talked about, accepted and noticed by the lay community.

Hacking (1992, cited in Kirmayer, 1994) notes that the recent waves of interest in dissociation seem to have coincided with social movements that foster the clinical and academic discussion of the topic. For example, the first modern wave of interest, in the late nineteenth and early twentieth century, coincided with great popular interest in spiritism. "The advent of spiritism was an event of major importance in the history of dynamic psychiatry, because it indirectly provided psychologists and psychopathologists with new approaches to the mind.

Automatic writing, one of the procedures introduced by the spiritists was taken over by scientists as a method of exploring the unconscious" (Ellenberger, 1970, p. 85). The onset of the latest wave of interest, as has been noted by many authors (e.g., Ross, 1996), coincided with the wide-spread acknowledgement, investigation and treatment of child abuse, a factor strongly implicated in the aetiology of dissociative disorders.

Dimension or category?

Janet's original conceptualisation of dissociation seems to centre around a series of dichotomies regarding the nature of mental activities, psychopathology and psychological constitution.

In regard to the nature of mental activities, Janet conceived of two types: those activities that "preserve and reproduce the past and activities which are directed toward synthesis" (van der Hart & Friedman, 1989, p. 5). Normal mental functioning comprises a combination of the two activities where material from the

past is synthesised and integrated. Where there is a focus on the preservation and reproduction of material from the past and a failure to synthesise and, ultimately, integrate this material, pathological dissociation results.

According to Braude (1995), Janet saw mental states as having particular patterns of associative links between them and that when these links are broken, certain mental states become dissociated from the rest. Furthermore, Janet believed that such pathological dissociations only happened in individuals suffering from particular kinds of mental illness (ie., hysteria).

In terms of constitution, Janet held the firm view that people who experienced pathological dissociative phenomena are a special group of individuals, different from 'normal' individuals with regard to their physical constitution, emotionality and suggestibility (Putnam, 1997). As noted earlier, Janet conceived of pathological dissociators as 'loosely put together' while normal individuals were 'well put together'.

Implicit in Janet's conceptualisation is the view that dissociation is a categorical construct in that: 1) people who dissociate differ in important ways from people who do not dissociate; and 2) normal dissociation differs in important ways from pathological dissociation.

However, contemporaries of Janet such as Morton Prince and James, argued that dissociation represents a continuous construct, and is experienced to a lesser or greater extent by all people. This view took hold and led to the dimensional reconceptualisation. According to dimensional view, dissociative phenomena rest upon a continuum reflecting their severity in terms of frequency of occurrence and disruption to functioning. At the 'normal' end of the continuum are commonly reported, transient and non-disruptive dissociative experiences such as becoming absorbed in an activity, day-dreaming and performing well-learned actions without conscience awareness. At the pathological end of the continuum are rarer but more pervasive and life disrupting experiences such as chronic depersonalisation and identity alteration. The continuum model survived the lull in dissociation research in the middle of the twentieth century and continued through the 1980s and early 1990s as the prevailing conceptualisation of dissociation. It is possible that Janet came around to this dimensional way of thinking later in his career as suggested by his statement that "pathological phenomena are only exaggerations

of normal phenomena” (Janet, 1925, cited in Putnam, 1989, p. 415).

Putnam (1997) noted that although the dimensional conceptualisation of dissociation is not ideal, it has allowed for the development of psychometric measures of dissociative phenomena and for the scientific investigation of their correlates in both clinical and non-clinical populations. As the co-author of one of the most popular continuum-based measures of dissociation (Dissociative Experiences Scale [DES]; Bernstein & Putnam, 1986; Carlson & Putnam, 1993), Putnam was also cognisant of the fact that the frequency and type of dissociative experiences reported by members of certain diagnostic groups suggested “the existence of two or more discrete dissociative types” (Putnam, 1997, p. 66). This possibility was investigated and confirmed by Waller (1995) in his psychometric review of Carlson and Putnam’s scale leading to the description in the literature of the dissociation taxon (Waller, Putnam & Carlson, 1996).

The dissociation taxon

Waller et al (1996), in an investigation of dissociative experiences in clinical and non-clinical populations, discerned two types of dissociative phenomena - pathological and non-pathological - and two groups of dissociator - again, pathological and non-pathological. The pathological type of dissociative phenomena, or dissociative taxon, includes those phenomena proposed by Nemiah (1980) as reflecting pathology, namely, amnesia and identity alteration with the addition of depersonalisation and derealisation. Individuals experiencing phenomena of this type belong to the pathological group of dissociators. According to Irwin (1999), the frequency and severity of dissociative taxon experiences are not normally distributed suggesting that the dissociation taxon represents a category rather than a dimension of its own (Irwin, 1999).

Dissociative phenomena of the non-pathological type include absorption and imaginative involvement. Waller et al. (1996) suggest that these non-pathological phenomena are manifestations of a dissociative *trait*, qualitatively different from the pathological type of dissociation experienced by those individuals in the pathological group. Although the frequency and severity of non-pathological dissociative phenomena are not normally distributed (typically, they are positively skewed), non-pathological dissociation clearly represents a trait or dimension (Irwin, 1999).

The identification of the dissociation taxon marks a return to Janet's original conceptualisation of dissociation as a discontinuity of awareness experienced only by the mentally unwell (Putnam, 1995; Waller, et al., 1996). According to this categorical conceptualisation of dissociative phenomena, the distinction between normal and pathological dissociation represents not only a difference in degree but also a difference in type (Waller et al., 1996). Support for the dissociative taxon can be found in the literature examining dissociation in non-clinical populations which shows that "individuals who report high levels of dissociative experiences are not necessarily dissociative disordered" (Ruiz, et al., 1999, p. 240).

Not all researchers currently working in the field of dissociation agree with the new trait-taxon conceptualisation (Waller et al., 1996) and the view that dissociation exists on a continuum for both non-clinical and clinical populations has endured in the research literature. A hybrid of the two conceptualisations may prove to be more accurate, for while much of the current research is based upon the premise that dissociation is a continuous variable across both clinical and non-clinical groups, the findings of Waller et al. (1996) suggest that differences between pathological and non-pathological dissociation may reflect a qualitative shift at some point along the continuum. In this way, both the dimensional and categorical conceptualisations can be accepted.

Antecedents of dissociation

One of the most important lines of inquiry regarding dissociative phenomena concerns aetiological factors. Current research provides strong evidence that the antecedents of adult dissociation lie in early childhood. Two models for the aetiology of adult dissociation are presented here, the first relating adult dissociation to childhood trauma and second, to disorganised-disoriented attachment in infancy. Research findings show these two models to be inter-related and, considered together, they constitute a coherent model for the aetiology of adult dissociation.

Childhood trauma

First recognised by Janet, the relationship between trauma and dissociation has been well established in the literature (Bernstein & Putnam, 1986; Giolas & Sanders, 1992; Putnam, 1994; Steinberg, 1994). However, the specifics of this relationship are only now beginning to be uncovered.

In terms of pathological dissociation, a number of studies have revealed associations between the development of Dissociative Amnesia and Dissociative Fugue and the experience of acute situational traumas such as the termination of an important relationship, the death of a significant other and serious financial loss. Transient depersonalisation reactions have been linked with the experience of life-threatening trauma, as typified in *ASD*, while Depersonalisation Disorder has been linked with adolescent and adult experiences of torture or abusive confinement (APA, 2000; Putnam, 1989).

The most reliably established predictor of adult dissociation in general, and DID in particular, is early childhood trauma. Childhood trauma encompasses such experiences as sexual abuse, physical and psychological abuse, neglect, abandonment and the witnessing of extreme violence. It is thought that traumatic childhood experiences teach the child the ability to 'split off' the suffering engendered by physical or psychological pain:

Abusive or traumatic childhoods teach [the child] the ability to "go away" from pain as a means of defence. The ability is presumed to then generalize and be used either spontaneously or intentionally in other situations of increasingly greater dissimilarity" (Giolas & Sanders, 1992, pp. 207-208).

Research has revealed a history of childhood trauma in 72 - 98% of all individuals diagnosed with a dissociative disorder (Sanders et al., 1989; Steinberg, 1994). A particularly strong connection has been established between severe child abuse (sexual and/or physical) and the development of DID with the incidence of child abuse among DID patients being estimated at between 75 - 83% (Sanders et al., 1989). Steinberg (Steinberg, 1994) notes, however, that the actual incidence of child abuse among DID patients may be a good deal higher; given the amnesic component of the disorder, patients may have no recall for traumatic antecedents of their condition. It has been suggested that trauma experienced in early childhood (up to 12 years of age) is more likely to produce increased dissociative experiences than trauma experienced later in life (Becker-Lausen, Sanders, & Chinsky, 1995; Carlson, 1994; Putnam, 1994; Sanders et al., 1989).

Singh Narang and Contreras (2000) note that there is considerable empirical evidence showing childhood trauma to be related to adult dissociation in both clinical and non-clinical populations. However, the findings emerging from research involving non-clinical adults suggest that there are different pathways leading from childhood trauma to pathological and non-pathological adult dissociation.

Childhood abuse

In non-clinical populations, it appears that a combination of abuse modalities (ie., physical, sexual, psychological) in childhood is predictive of adult dissociation. Sanders, et al. (1989) found that university students who reported having experienced either physical or psychological abuse in childhood reported higher levels of dissociation than students who had experienced no abuse in childhood. However, students who reported having experienced both physical and psychological abuse in childhood, produced higher dissociation levels than any of the other three group of students.

Startup (1999) found that, in a university student population, neither childhood physical abuse nor childhood sexual abuse alone predicted dissociation levels, however, having experienced both physical and sexual abuse in childhood was predictive of high levels of adult dissociation.

Zelikovsky and Lyn (2002) suggested that "the negative effects of physical abuse that appear to persist into adulthood may be a function the combination of physical

and emotional abuse. Alternately [sic], psychological abuse may be responsible for the many negative sequelae that have been attributed to physical abuse" (p. 30). The authors tested this hypothesis in a study involving 100 North American university students and found that level of dissociation differed significantly between students who had experienced both psychological and physical abuse ($n=35$), students who had experienced psychological abuse only ($n=30$) and students who had not experienced abuse ($n=35$).

The specific role of childhood sexual abuse in the aetiology of dissociative tendencies in non-clinical adults was investigated by Mulder, Beautrais, Joyce and Fergusson (1998). The authors conducted clinical interviews with a large ($N=1028$) sample of adults from the general population in New Zealand. The interviews produced data regarding each participant's experience of mental illness, dissociative phenomena, childhood sexual abuse and childhood physical abuse. While the authors found a direct link between the experience of childhood physical abuse and high levels of adult dissociation, only an indirect link was found between childhood sexual abuse specifically and adult dissociation; this link appeared to be mediated by a more general relationship between childhood sexual abuse and psychopathology.

In some major studies of non-clinical populations, the purported relationship between childhood abuse and adult dissociation has failed to emerge. Two studies have found that, in non-clinical populations, high dissociators did not differ from low dissociators in the severity of childhood abuse reported. Ross, Ryan, Voigt and Eide (1991) found that high and low dissociators differed in the number of types of childhood sexual abuse reported but not in the severity of childhood sexual abuse. Similarly, in a community sample of women in New Zealand ($N=345$), Romans, Martin, Morris and Herbison (1999) found no difference in the dissociation levels of women who had suffered childhood sexual abuse and those who had not.

Family environment

Irwin (1996) states that “traumatized children differ in the extent to which their social environment promotes a healthy resolution of the experiences of trauma” (Irwin, 1996, p. 701) so all traumatised children should not, therefore, be expected to develop dissociative tendencies in adulthood as a result of this trauma. Similar claims have been made by Kluft (1984).

Putnam (1997) notes that other “non-trauma-related factors, such as disturbed family environments, make important contributions to pathological dissociation” (p. 63). In particular, Putnam points to inconsistent parenting - where a child's behaviour is sometimes positively reinforced, sometimes punished by the parent - as being associated with dissociation in adulthood. Similarly, Merckelbach and Muris (2001), in a review of the literature regarding the traumagenesis of adult dissociation, found that the relationship between childhood abuse and adult dissociation appears to be modulated by the effects of family environment. Walker (2002) suggests that “it is likely that the [dissociative] psychopathology arises in a repeatedly abused child within a dysfunctional family which fails to protect the child and in which there are prohibitions against the child being able to disclose the abuse” (p. 59). Walker's views echo those of Putnam (1995a) who stated that significant others also play an important role in the development of dissociative tendencies; he suggested that the generalisation of dissociative defences may be encouraged by the failure of significant others to provide adequate nurturance and reassurance.

Recognition of the influence of family environment in the aetiology of adult dissociation has put into question earlier findings regarding the central role of childhood abuse. In a major review of the traumagenic literature, Gershuny and Thayer (1999) found that, in non-clinical populations, high levels of dissociation in adulthood appear to be related to the experience of childhood abuse. Nash, Hulse, Sexton, Harralson and Lambert (1993), whose work was included in the review, reached the same preliminary conclusions. However, when Nash et al (1993) reanalysed their findings introducing 'level of family pathology' as a co-variate, the relationship between childhood abuse and adult dissociation disappeared. This finding was initially disputed by some authors but later confirmed in a meta-analysis of studies examining the relationship between adult

dissociation and childhood abuse in non-clinical student populations (see Gershuny & Thayer, 1999).

Further evidence of the role played by family environment comes from a study by Ray and colleagues (1996). In a sample of 737 North American university students, moderate correlations were found between dissociative tendencies and all types of childhood abuse ($r=.38$) and neglect in particular ($r=.34$). In fact, neglect was more strongly correlated with dissociative tendencies in this non-clinical population than was childhood sexual abuse ($r=.19$).

A similar finding was obtained by Irwin (1996) in an Australian non-clinical adult sample ($N=239$). He found that, although dissociative tendencies in adulthood were predicted by physical and sexual abuse and family-related loss, the effects of these events were mediated by the perceived availability of childhood emotional support. Irwin (1996) concluded from these findings that perceived emotional support in childhood plays a mediating role in the relationship between childhood trauma and the development of dissociative tendencies in adulthood.

Modestin, Lotscher and Erni (2002) explored the relationship between adult dissociativity and perceived quality of parenting, as measured by the Parental Bonding Instrument (Parker, Tupling & Brown, 1979) in a Swiss undergraduate population ($N=276$). They found a significant negative correlation between adult dissociation and perceived parental care from both mother ($r=-.26$) and father ($r=-.29$).

In a sample of 311 female North American university students, Gipple (2002) found that scores on the DES (Carlson & Putnam, 1993) correlated significantly with the Negative Home Environment ($r=.32$), Punishment ($r=.28$) and, to a lesser extent, Sexual Abuse ($r=.14$) sub-scales of the Child Abuse and Trauma Scale (Sanders & Giolas, 1991).

Particularly compelling evidence of the impact of family environment on dissociative tendencies comes from Tyler, Cauce and Whitbeck's (2004) investigation of the dissociative experiences of homeless and runaway youth, a population which, by definition has experienced an intolerable family environment. The participants were 328 North American young people aged between 13 and 21 years (median=17 years) who, at the time of the study, "resided in a shelter, on the street, or [were] living independently (eg., [with] friends, transitional living) because

they had run away, had been pushed out, or had drifted out of their family of origin" (Tyler et al., 2004, p.357). The investigators found that participants' dissociative tendencies, as measured via the DES, were significantly correlated with reports of parental rejection ($r=.12$), parental neglect ($r=.19$), familial sexual abuse ($r=.20$), familial physical abuse ($r=.27$) and familial mental illness ($r=.19$).

The findings of Ray (1996), Irwin (1996), Modestin, et al (2002), Gipple (2002) and Tyler et al. (2004) also provide support from non-clinical populations for Liotti's (1992) proposal that childhood trauma accompanied by poor attachment relationships may increase the likelihood of adult dissociative tendencies.

In summary, it appears that childhood abuse, and in particular sexual abuse, is implicated in the development of dissociative disorders. The situation is less clear in non-clinical populations where family environment appears to play an important role in the aetiology of adult dissociation. The status of the traumagenic model as it applies to non-clinical populations is uncertain; "although it is clear that trauma plays an important role in certain dissociative . . . responses, it has not been shown that trauma represents an essential pathway in their development" (Laria & Lewis-Fernandez, 2001, p. 22).

1.0.0.1 *Unresolved grief and guilt*

As part of a series of investigations into the correlates of dissociation in non-clinical populations, Irwin (1998) investigated the possible role of unresolved feelings of grief, shame and guilt in mediating the relationship between childhood trauma and dissociative tendencies in adulthood.

Irwin (1994) proposed that dissociation in non-clinical populations may only be indirectly, if at all, related to childhood trauma and more directly related to unresolved feelings of loss resulting from childhood trauma. Specifically, he hypothesised that the strength of feelings of unresolved guilt would influence an individual's reliance upon dissociation as a coping strategy.

Irwin (1994) investigated the possibility of this relationship in an Australian sample of non-clinical adults ($N=121$). He did not inquire directly about childhood trauma, rather, he inquired about feelings of grief on the grounds that "traumatic memories may be difficult to tap, but associated emotions may be relatively more accessible to observation" (Irwin, 1994, p. 86). Multiple regression analysis revealed that as

much as 54% of variance in level of dissociation was accounted for by gender and unresolved grief. Irwin (1994) interpreted these results as suggestive of the mediating role of grief in the relationship between childhood trauma and dissociative tendencies in adulthood.

In regard to shame and guilt, Irwin (1998c) hypothesised that if childhood trauma leads to feelings of shame and guilt, lack of resolution of these affects may, in turn, lead to a reliance on dissociative coping strategies in later life. According to the literature (for a review, see Irwin, 1998c), shame and guilt differ in that shame is related to one's negative evaluation of oneself while guilt relates to one's negative evaluation of one's own behaviour. In an Australian sample of non-clinical adults ($N=103$), Irwin found that as much as 32% of variance in level of dissociation was accounted for by age and feelings of shame and grief. Irwin (1998c) interpreted these results as suggestive of their mediating role in the relationship between childhood trauma and adult dissociation.

Schumaker (1995, cited in Dorahy & Schumaker, 1997) has stated that "adaptive dissociation regulates mental health, so that stimuli aversive to psychological well-being are filtered out before integrating with conscious experience. . . . Individuals who have adaptive dissociative processes operating effectively will be less troubled by transient guilt than individuals with more inefficient dissociative functioning" (p. 968). That is, a tendency toward high levels of guilt reflects a high level of 'adaptive' dissociation. By this argument, Irwin's findings may reflect an association between guilt and maladaptive, rather than adaptive, use of dissociation.

Dorahy and Shumaker (1997) in a later (although earlier published) study, further investigated Irwin's (1998c) findings regarding dissociation and guilt. The authors administered trait measures of dissociation and guilt to an Australian adult non-clinical population ($N=259$) and found that trait guilt was predictive of dissociation, providing support for Irwin's (1998) findings.

Dorahy and Schumaker (1997) integrate their findings with those of attachment theorists (e.g., Liotti, 1992) who state that the on-going effects of childhood trauma may be ameliorated to some extent by stable and supportive attachment experiences. Dorahy and Schumaker (1997) note that guilt arising from trauma during childhood cannot be redressed or ameliorated by the child's own actions or

by the support of an attachment figure because “an interpersonal transgression did not create the feeling” (Dorahy & Schumaker, 1997, p. 970). But, because the child was not responsible for the guilt-producing event, they are unable to reduce the feelings of guilt by use of dissociation.

Disorganised-disoriented attachment

Attachment investigators have associated the development of dissociative tendencies, and possibly dissociative disorders, with disorganised-disoriented attachment patterns in infancy (Cassidy & Mohr, 2001; Main & Morgan, 1996). Attachment refers to the adaptive tendency of an infant to seek proximity to their primary caregiver in times of perceived stress and danger. Proximity is sought by the infant through the performance of attachment behaviours such as crying or reaching for the caregiver. Infants tend to form their first attachments between the ages of 6 and 9 months, however, they do not necessarily choose reliable, attentive individuals as their attachment figures; they may form attachments with maltreating, unpredictable individuals if that is all that is available (Main & Morgan, 1996).

Infant attachment patterns can be investigated via Ainsworth’s (1969) Strange Situation procedure. The Strange Situation is a procedure carried out in a comfortable room filled with toys and involves a series of separation episodes played out with a one-year-old infant, their parent (usually their mother) and a ‘stranger’ (an investigator). In the first episode, the infant and parent are alone in the room together for three minutes. In the second episode, the stranger joins the infant and parent in the room and attempts to engage the infant. In the third episode, the parent exits the room, leaving the infant alone with the stranger before returning. The fourth episode begins with only the infant and parent in the room. The parent exits the room leaving the infant on their own. The stranger then enters the room and comforts the infant if necessary. The parent then rejoins the infant and stranger in the room. Each time the parent returns to the room, they call the infant’s name from outside the door and then stand in the doorway to greet the infant (Main & Morgan, 1996).

Initially, Ainsworth observed three patterns of attachment behaviour in the Strange Situation: A – insecure-avoidant; B – secure and; C – insecure-resistant. Demonstrated by two-thirds of her original sample (Ainsworth, 1969), B

attachment refers to the use of the parent as a secure base from which to explore the room and toys. The securely attached infant shows signs of missing the parent in their absence and of seeking proximity to them on their return. Parents of securely attached infants tend to be sensitive and responsive to the infant's attachment behaviours.

The remaining third of Ainsworth's (1969) original sample demonstrated one of the two insecure attachment patterns. Pattern A infants tended to focus mostly on the toys when their parent was present and avoided the parent on their return. This pattern of attachment appears to be related to the parent's rejection of the infant's attachment behaviours. Pattern C infants tended to be very distressed by their parent's absence yet failed to be comforted by their return. This resistant pattern of attachment appears to be linked to the parent's inconsistent or unpredictable responding to the infant's attachment behaviours.

By the 1980s, it had become clear to Strange Situation researchers that the attachment behaviours of a small number of infants in both low- and high-risk populations were unclassifiable according to Ainsworth's ABC system. These infants displayed

“a diverse array of inexplicable, odd, disorganized, disoriented or overtly conflicted behaviors in the parent's presence. Many of these behaviors were suggestive of an underlying experience of distress or even fright without solution, and many could be most readily interpreted if it was presumed that the infant was experiencing distress, apprehension or fright while having nowhere to run” (Main & Morgan, 1996, p. 115).

The unifying theme in these behaviours, which included approaching the parent with head averted, 'freezing' part way through an attachment behaviour and calling for the absent parent and then retreating on their return, was conflict and disorganisation; the attachment behaviours observed appeared to reflect conflicted intentions on the part of the infant. Main and Solomon (1990) labelled this pattern of attachment behaviour pattern D – disorganised-disoriented attachment.

Investigation of the parenting behaviour of the parents of D infants revealed 1) maltreatment and 2) expressions of fear, in the infant's presence, that have no discernible source in the immediate environment. It has also been found that the parents of D infants demonstrate lapses in reason and discourse when talking about traumatic episodes in their own early lives. “Parents of D babies seem . . . to

