

The state of betrayal trauma theory: Reply to McNally—Conceptual issues and future directions

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Betrayal trauma theory (Freyd, 1994, 1996, 2001) is an approach to conceptualising trauma that points to the importance of social relationships in understanding post-traumatic outcomes, including reduced recall. We argue in this paper that child sexual abuse very often constitutes a severe betrayal trauma and that it is thus “genuinely traumatic”. We will also argue that one reasonably common effect of child sexual abuse—particularly the more it involves betrayal trauma—is some degree of forgetting or “knowledge isolation” about the event. This last claim speaks to the heart of betrayal trauma theory that McNally has summarised and critiqued. In this paper we will respond to aspects of McNally’s critique as well as offer our own perspective on the state of betrayal trauma theory. We discuss (1) conceptual issues, (2) critiques of empirical studies, and (3) future directions. Although our interpretation of data diverges from McNally’s in many places, we have all arrived at a surprisingly common endpoint. McNally suggests a child may not think about the abuse for several reasons, such as fears that disclosure may break up the family. In accord with betrayal trauma theory, we note that the failure to think about events will contribute to poorer memory for the event and that these processes are mediated by the unique demands placed on a child exposed to betrayal traumas.

The notion that individuals can develop amnesia for seemingly unforgettable traumatic events, followed by “recovery” of these memories months or years later, has been part of the folklore of psychiatry and clinical psychology for more than 100 years... Genuinely traumatic events—those experienced at the time as overwhelmingly terrifying and life-threatening—are seldom, if ever, truly forgotten.

(Kihlstrom, McNally, Loftus, & Pope, 2005, pp. 1182–1183)

What is a “genuinely traumatic event”? Is child sexual abuse genuinely traumatic? McNally (2007, this issue) opens his contribution by suggesting that all traumas are not created equal. We certainly agree with this claim (see Freyd, 2001, as traumas can differ along several dimensions (see Figure 1). However, when McNally refers to the “the conceptual bracket creep in the definition of trauma” (2007, this issue, footnote 1 p. 280) and comments “traumatologists now speak of survivors of childhood sexual abuse (CSA) just as they speak of survivors of the Holocaust” (p. 280)

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this might suggest to some readers that child sexual abuse may not always “count” as traumatic (see McNally, 2007, this issue). We argue in this paper that child sexual abuse very often constitutes a severe betrayal trauma and that it is thus *genuinely traumatic*. We will also argue that one reasonably common effect of child sexual abuse—particularly when it involves betrayal trauma—is some degree of forgetting or “knowledge isolation” about the event. This last claim speaks to the heart of betrayal trauma theory (Freyd 1994, 1996, 2001), the theory that McNally (2007, this issue) summarises and critiques. In this paper we will respond to aspects of McNally’s critique, as well as offer our own perspective on the state of betrayal trauma theory. Our paper is organised into three main sections: (1) conceptual issues, (2) critiques of empirical studies, and (3) future directions.

CONCEPTUAL ISSUES

Terminology: Memory

McNally and others are correct when they note that the terminology in this area is fraught with inconsistency and ambiguity. He is also correct that there is a fundamentally fascinating and important question regarding the nature of not-knowing: Is it really traumatic amnesia or some more everyday sort of forgetting? We assume that the answer is “yes”—sometimes trauma survivors cannot recall an event due to a profound amnesia, and sometimes the underlying processes are better characterised as ordinary forgetting. We

also assume that sometimes trauma survivors do not encode the event in a memorable way in the first place, and that, at other times, trauma survivors who have encoded an event well initially may later experience retrieval inhibition (Freyd, 1996).

Freyd (1996) addressed the confusion of terminology in this area. She wrote: “Whatever we call it—repression, dissociation, psychological defense, denial, amnesia, unawareness, or betrayal blindness—the failure to know some significant and negative aspect of reality is an aspect of human experience that remains at once elusive and of central importance” (1996, p. 16). She also noted (p. 15):

All of these concepts can be subsumed under the general term “knowledge isolation”, though there are distinct types of knowledge isolation. For example, a distinction can be made between a lack of awareness of the past (which may be called memory repression or traumatic amnesia) and a lack of awareness of the current situation (which may be called repression of affect or dissociative state of consciousness).

Betrayal trauma theory was designed to address knowledge isolation, although at various times Freyd has used terms such as *amnesia* when she really should have used *knowledge isolation*. We often do not have sufficient information to know the cognitive or mechanistic details of the knowledge isolation. In such cases, it may be misleading to use a term such as *amnesia* (although *apparent amnesia*, e.g., Peters, Uyterlinde, Consemulder, & van der Hart, 1998, may describe the phenomenon). We are grateful that McNally reminds contributors to this field to be careful about terminology. For the purposes of this paper, we use the term *knowledge isolation* to encompass the range of ways in which information may be hidden from awareness, unless we are discussing more specific mechanisms of unawareness. We use the term *unawareness* to refer to the phenomenon of information inaccessibility; we use this term so that we do not imply a particular way by which information becomes inaccessible (e.g., dissociation, everyday forgetting, encoding failures). We use the terms *amnesia* or *apparent amnesia* if they were the terms used in the primary research. One more clarification is perhaps warranted. McNally defines amnesia as “an abnormal, pathological inability to remember”

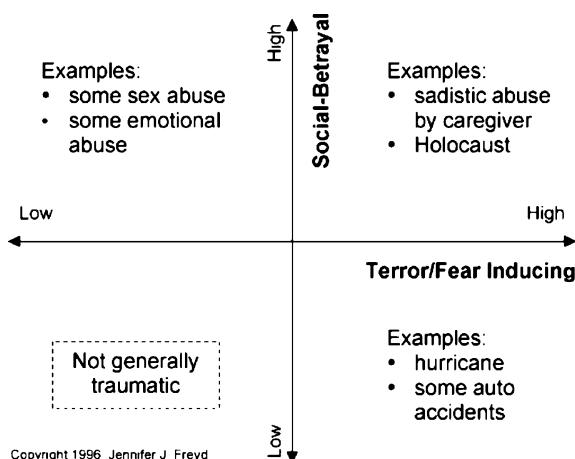


Figure 1. Freyd’s two-dimensional model for traumatic events.

(2007, this issue, p. 291). A more generic definition is simply a lack of memory, and we would argue that in some situations it could be adaptive.

Terminology: Betrayal trauma theory

Before addressing specific comments by McNally, we provide a brief overview of the original tenets of betrayal trauma theory. This overview provides an important framework for evaluating several of McNally's claims. Betrayal trauma theory (BTT; Freyd, 1994, 1996, 2001) is, at its core, an attempt to account for *why* victims of abuse may appear to remain largely unaware of their abuse. Freyd's 1996 book explored motivations (the why question and core of BBT), as well as speculated on possible mechanisms (the how question). The ideas proposed in the 1996 book were further developed in subsequent articles (Freyd, 1999, 2001), and will presumably continue to evolve. BTT is an approach to conceptualising trauma that points to the importance of social relationships in understanding post-traumatic outcomes, including reduced recall.

The phrase *betrayal trauma* thus refers to a social dimension of trauma, independent of the individual's reaction to the trauma (Freyd, 1991, 1994, 1996). Betrayal trauma occurs when the people or institutions on which a person depends for survival violate that person in a significant way. Childhood physical, emotional, or sexual abuse perpetrated by a caregiver is an example of betrayal trauma. The phrase BTT refers to a theory about psychological response to betrayal traumas. Specifically, the theory proposes that the way in which events are processed and remembered will be related to the degree to which a negative event represents a betrayal by a trusted, needed other (Sivers, Schooler, & Freyd, 2002). The initial focus of BTT was on the response of unawareness, but as the theory has been extended and developed, other responses such as alexithymia, depression, and anxiety have been considered (e.g., Goldsmith & Freyd, 2005).

Freyd (1996, 1999) also introduced the term *betrayal blindness*, which denotes unawareness of betrayals. Notably, BTT does not argue that this blindness needs to be complete. Partial awareness may protect the victim from knowledge that leads to behaviours that alienate the needed offender. The theory argues that victims, perpetrators, and witnesses may display betrayal blindness in order to preserve relationships, institutions, and social

systems upon which they depend. Thus, betrayal trauma theory in no way requires that knowledge isolation be complete.

McNally's critiques

As McNally (2007, this issue) reviews, BTT draws on studies of social contracts (e.g., Cosmides, 1989) to acknowledge that humans are usually excellent at detecting betrayals. Usually, people respond to violations or betrayals by withdrawing from the relationship or confronting the offender. However, BTT argues that in cases where a victim is dependent on a caregiver, withdrawal or confrontation are often not viable options. A child could certainly respond to awareness of abuse by withdrawing (e.g., emotionally or in terms of proximity) or confronting; however, attachment is a two-way street. To the extent that the child's withdrawal or confrontation has a negative impact on elicitation of care-giving behaviours or increases violent behaviours in the caregiver, withdrawal will actually be at odds with ultimate survival goals. In such cases, the child's well-being would be better ensured by isolating the knowledge of the event, thus remaining as engaged as necessary with the caregiver to continue to be an active participant in the attachment relationship.

In contrast to McNally's claims (2007, this issue), the theory does not require that abusive caregivers be highly reliable caregivers to argue that unawareness of the betrayal may help children maintain the attachment relationship. Presumably, a dependent child who receives minimal care is at an advantage compared to a child who receives less than minimal care; thus, unawareness of the betrayal may help the child engage in attachment behaviours that ensure at least the minimal care offered by the abusive caregiver. Recent research by DePrince (2005) points to conditions under which the cheater-detection abilities proposed by Cosmides (1989) are actually impaired, supporting the BTT proposition that some experiences may be associated with diminished ability to detect betrayals. DePrince found that young adults who reported interpersonal revictimisations made more errors on social contract problems than those who did not report revictimisations; the groups did not differ in number of errors made in response to abstract (non-social) problems. Further, revictimisation status was significantly

related to reporting the presence of a betrayal trauma before age 18.

McNally (2007, this issue) argues that “the caretaking relationship may already be imperilled in at least some incestuous families, thereby eliminating the motivation for forgetting abuse” (p. 291). Although this suggestion has some merit and may explain why forgetting is not always observed in certain samples (such as the prosecution sample of Goodman et al., below), the matter is not all-or-none. If the relationship is imperilled but the abuser continues to engage in some care-giving behaviours, the child may be motivated to maintain the attachment relationship in order to encourage whatever care-giving behaviours do occur. If the relationship is so imperilled that care-giving behaviours do not occur (or do not occur frequently), then presumably the motivation to remain blind would be reduced or eliminated. Betrayal blindness may then be most likely to be seen in instances where the families are otherwise high functioning and where all involved (or knowledgeable) family members behave as if nothing improper was happening.

McNally (2007, this issue) also argues that there is no necessity for amnesia in order for a child to maintain a relationship with an abuser—that simply not talking about the abuse would suffice. However, BTT recognises that attachment is an active process, requiring inputs from both the child and the caregiver (Bowlby, 1988). Thus, a core component of BTT is that a child can endanger an attachment relationship by failing to engage in an active way with the caregiver (e.g., by withdrawing); thus, simple silence is not sufficient. McNally’s proposal also apparently assumes that children have control over their attachment behaviours (including non-verbal behaviours and emotional reactions), even at a young age. Related to this, McNally questions what danger the child would be in without unawareness. The danger arises precisely from the damaged attachment bonds that serve to ensure care giving. We would expect a graded relationship—if the caregiver becomes less attached, one would expect less care giving; in turn, decreased care giving would increase the child’s risk of harm from poor care (whether this be failure to provide or protect) or increased abuse.

McNally asks (2007, this issue, p. 290): “If one fails to survive, one dies. But it is unclear how the child would perish. Would the perpetrator murder the child? Would he expose the child to fatal neglect, such as refusing to feed her? Would he

evict her from the parental home?” McNally is correct that most cases of child abuse do not end in children actually perishing (although the reality of child abuse fatalities should not be minimised; see Sirotnak, 2006); however, failure to consider survival as a motivation for many behaviours in the face of abuse would be shortsighted. Risk of perishing is probabilistic. If one does not wear a seatbelt on a given trip, one probably won’t actually perish. However, one has certainly increased the odds of perishing by failing to wear a seatbelt. Care giving from parents is graded, and the lower the degree of care giving the higher the risks of perishing become—whether that is because the child is not monitored, not fed sufficiently, or not encouraged in ways that foster thriving, etc. Thus, just as a passenger in a car is wise to wear a seatbelt, the child may indeed make a good investment in survival by increasing the odds of care giving and thus decreasing the odds of perishing, even if the odds of perishing are not enormously high. Perhaps more importantly, McNally (2007, this issue) seems to focus only on physical survival, and does not consider the effect of emotional neglect on child development (e.g., difficulties with attachment, self-esteem, depression, etc.) and the needs children have to maintain close emotional attachment. Betrayal blindness may be the only mechanism by which children may seek out and accept emotional closeness from the same individual that is abusing them.

McNally (2007, this issue) writes that “if *any* episodes of abuse are available to awareness and not forgotten, then this should imperil survival” (italics in original; p. 290) Although BTT predicts unawareness, the theory does *not* predict that such unawareness and forgetting is (or needs to be) perfectly implemented. Indeed, because under most circumstances, awareness and remembering are adaptive, achieving complete unawareness or forgetting would be difficult. Thus, one might expect to see a range of degrees of unawareness and forgetting when pressures to maintain the attachment relationship cause lack of awareness to have some utility (Becker-Blease, Freyd, & Pears, 2004). This is what we would expect as a consequence of two opposing processes. Indeed, partial awareness may be an adaptive compromise under some conditions, allowing both the maintenance of necessary relationships and sufficient awareness for self-protection. Forgetting and unawareness may be more likely for events (or aspects of events) that

are more threatening to the dependency relationship, so that survivors who later recover memories may report things like "I always knew things were bad, just not how bad." How useful partial awareness versus no awareness is to children navigating attachment relationships in which abuse occurs remains a very important empirical question, the answer to which is likely context dependent. McNally also argues that BTT requires "that victims banish memories of abuse from awareness shortly after each molestation episode" (p. 289). The theory actually makes no temporal predictions. In fact, one might assume that awareness could vary by situation and in response to a feedback system in which awareness does or does not cause problems for the victim.

It is also very likely that, in addition to implicit motivations for not-knowing that the betrayed person may have in order to maintain a relationship, the victim may have other reasons for not-knowing and silence. At least one such reason is demands for silence from the perpetrator and others (e.g., family, society). Demands for silence (see Veldhuis & Freyd, 1999) may lead to a complete failure to even discuss an experience. Experiences that have never been shared with anyone else may have a different internal structure from shared experiences (Freyd, 1996).

EMPIRICAL RESEARCH

Evidence for knowledge isolation

McNally (2007, this issue) argues that "... documented traumatic stressors are seldom, if ever, forgotten" (p. 281). Supporting this claim, McNally notes that negative emotional arousal results in the consolidation and heightening of emotional memories, thus arguing that amnesia is actually not possible (or at least very unlikely) in the face of trauma. However, research from the affective science literature points to decreases in deficits in processing caused by negative stimuli. For example, Most, Scholl, Clifford, and Simons (2005) found that emotionally negative pictures (taken from the International Affective Picture Stimuli set that include trauma-related material; e.g., images of physical assault) actually caused deficits in processing target pictures that followed the negative pictures. Termed *emotional bottlenecks*, these data provide initial evidence that emotionally negative stimuli do not uniformly attract attention and heighten processing. Speci-

fically, the authors state "Thus, attentional biases to emotional information induced a temporary inability to process stimuli..." (Most et al., p. 654). A follow-up study revealed that individual differences in harm avoidance moderated the emotional bottlenecking phenomenon. Specifically, individuals low in harm avoidance were able to reduce the effects of the negative stimuli on processing later stimuli; however, individuals high in harm avoidance were unable to temper the bottlenecking effects. This research points to conditions under which emotionally salient stimuli are associated with decreased—and not heightened—processing. While these data do not speak to memory for stimuli, they do point to provocative alterations in attentional processes. Given the strong relationship between attention and memory, future work on emotional bottlenecking and memory may inform issues related to decreases in memory for trauma-related information.

Two lines of research have documented knowledge isolation following trauma and bear directly on McNally's claim that traumas are rarely (if ever) forgotten. In the first, descriptive line of inquiry (including naturalistic observations and case studies), memory disruptions following trauma have been observed for more than a century. These disruptions have included both intrusive memories and apparent inability to remember (see Freyd et al., 2005b, 2005c). The issue of intrusive memories per se is not controversial and will not be reviewed here. However, in marked contrast with the claims of McNally (2007, this issue) and colleagues (e.g., Kihlstrom et al., 2005), PTSD is not simply a disorder of intrusions. These memory disruptions are reflected in the criteria for post-traumatic stress disorder (PTSD; American Psychiatric Association, 2000) and, as noted by Leskin, Kaloupek, and Keane (1998, p. 986): "The hallmark of PTSD adjustment is the reciprocal oscillation between re-experiencing and avoidance." Similarly, as Widiger and Sankis (2000) noted, "difficulty forgetting (or letting go of) a horrifying experience may simply be the opposite side of the same coin of difficulty remembering (accepting or acknowledging) a horrifying experience" (p. 391). Further, McNally focuses on PTSD; however, PTSD is not the only diagnosis associated with childhood victimisation and alterations in memory. The dissociative disorders (including dissociative amnesia) are clearly associated with a history of trauma and are defined

largely in the basis of alterations in memory (American Psychiatric Association, 2000).

Numerous examples of apparent amnesia have been well documented in the literature on combat and war trauma (e.g., Grinker & Spiegel, 1945; Sargent & Slater, 1941; Thom & Fenton, 1920). Sargent and Slater (1941) described a sample of 1000 cases during World War II. Over 14% exhibited "loss of memory" (either fugue states or large amnesic gaps). These cases were not thought to be organically based. The frequency of reported amnesia was associated with the severity of the psychological trauma that the person had experienced. Of those who had experienced severe stress, 35% exhibited significant amnesia. The alterations in memory experienced by victims of wartime trauma have been reported to range from selective amnesia to generalised amnesia (amnesia for one's entire life). In describing many of these cases, Grinker and Spiegel (1945, p. 10) wrote:

There may be total amnesia, including both events on the battlefield and the patient's previous life, or memory for part of the battle experience may be retained, with a gap involving the actual precipitating traumatic factors and the events which followed. The majority of patients make persistent attempts to recover their lost memories, and in many instances their efforts may be successful without an aid from the therapist.

Such recovery of memory was well documented and became accepted and effective treatment for such psychiatric causalities. Thus, the topic of amnesia for trauma and subsequent memory recovery was never controversial when it was contained within the wartime trauma literature. The topics only became controversial when the same phenomenon was observed in the context of CSA.

The second line of research/evidence relies largely on correlational and non-experimental prospective and retrospective methods to examine the relationship between variables that moderate risk for reduced recall and to evaluate individuals' perceptions and reports of their memories. This research focuses on memory for trauma in the real world to address "what, who, why?" questions that help to define the phenomenon of apparent amnesia. For example, this line of inquiry asks what percentage of people report

amnesia, who is likely to report it, and what contextual factors predict its occurrence.

From this correlational approach, a significant body of research has now demonstrated a relationship between apparent amnesia and victimisation. Brown, Scheflin, and Whitfield (1999) reviewed the literature, concluding: "in just this past decade alone, 68 research studies have been conducted on naturally occurring dissociative or traumatic amnesia for childhood sexual abuse. Not a single one of the 68 data-based studies failed to find it" (p. 126). This body of work includes prospective (e.g., Williams, 1994, 1995) and retrospective (Elliot, 1997; Feldman-Summers & Pope, 1994; Freyd, DePrince, & Zurbriggen, 2001; Schultz, Passmore, & Yoder, 2003; Sheiman, 1999; Stoler, 2000) methods. Cases of amnesia have also been documented for corroborated cases of abuse (Cheit, 2005). Although most studies of this nature do not (and cannot) address McNally's question of whether actual forgetting, failure to think about the event, or failure to report the event have occurred, Williams (1992, 1994, 1995) provides converging data from a prospective sample that suggest a significant minority of women did not remember sexual abuse that was documented in an emergency room 17 years earlier.

Studies from this correlational line of research also indicate reduced recall in the case of abuse by caregivers or close others (e.g., Edwards, Fivush, Anda, Felitti, & Nordenberg, 2001; Freyd et al., 2001; Schultz et al., 2003; Sheiman, 1999; Stoler, 2000). In writing her book more than a decade ago, Freyd (1996) reported finding, from re-analyses of a number of relevant data sets, that incestuous abuse was more likely to be forgotten than non-incestuous abuse. These re-analysed data sets included the prospective sample assessed by Williams (1994, 1995), and retrospective samples assessed by Cameron (1993) and Feldman-Summers and Pope (1994).

Using data collected from a sample of undergraduate students, Freyd et al. (2001) found that physical and sexual abuse perpetrated by a caregiver was related to higher levels of self-reported less-persistent memories of abuse compared to non-caregiver abuse. Research by Schultz et al. (2003) and a doctoral dissertation by Stoler (2000; also see Stoler, 2001) have revealed similar results. For instance, Schultz et al. (2003, p. 67) noted that "Participants reporting memory disturbances also reported significantly higher numbers of perpetrators,

chemical abuse in their families, and closer relationships with the perpetrator(s) than participants reporting no memory disturbances." Sheiman (1999) reported that, in a sample of 174 students, those participants who reported memory loss for child sexual abuse were more likely to experience abuse by people who were well known to them, compared to those who did not have memory loss. Similarly Stoler (2000, p. ii) noted: "Quantitative comparisons revealed that women with delayed memories were younger at the time of their abuse and more closely related to their abusers." Interestingly, Edwards et al. (2001) reported that general autobiographical memory loss measured in a large epidemiological study was strongly associated with a history of childhood abuse. Women and men with histories of sexual and/or physical abuse had twice and 1.5 times (respectively) the prevalence of autobiographical memory loss compared to those without abuse histories. One of the specific factors associated with this increased memory loss was sexual abuse by a relative.

Although there is much for future research to clarify about the nature of memory for traumatic experiences, the relationship between betrayal and reported reduced recall has been observed in at least seven data sets (see above). Some researchers have presumably failed to find a statistically significant relationship between betrayal trauma and recall. When a relationship is not found, the question then is whether it does not exist or simply cannot be detected due to sampling, measurement, or power limitations. For instance, Goodman et al. (2003) reported that "relationship betrayal" was not a statistically significant predictor for forgetting in their sample of adults who had been involved in child abuse prosecution cases during childhood. It is not clear whether the relationship truly does not exist in this population (which is very possible given the unusual sample in which children presumably did not need to remain dependent on perpetrators who were being charged with a crime) or whether there was simply insufficient statistical power to detect the relationship (see commentaries by Freyd, 2003, and Zurbriggen & Becker-Blease, 2003).

Several methodological issues can cloud interpretation of findings. For example, betrayal trauma theory identifies dependence as a crucial factor in the victim–perpetrator relationship. That is, the victim may have cause to remain unaware of the abuse to some extent in order to

protect a necessary relationship when the perpetrator is a caregiver. Thus, to test betrayal trauma theory, one ideally measures dependence or care giving of the perpetrator (for such a study see Freyd et al., 2001). Betrayal and dependence cannot be equated with parents only; non-parental abuse may also include dependency in the victim–perpetrator relationship (priests and ministers, coaches, superior officers, babysitters, possibly extended family). This sentiment has been expressed by numerous survivors of abuse by trusted non-family members. For example, Frank Fitzpatrick, who recovered memories of sexual abuse and then initiated the investigation of James R. Porter, which led to a successful prosecution in part because dozens of victims came forward, described the feelings of betrayal he had during his memory recovery process: "I felt an immense, monstrous betrayal by someone that I loved" (Fitzpatrick, 1994, p. 5).

Operationalisation of memory phenomena in studies remains a critical issue. For example, McNally, Ristuccia, and Perlman (2005) stated that they "do not assume that memories were inaccessible (dissociated or repressed) at any time" (p. 9) in a group classified as "recovered memory", but that the participants did not think about the memory for a while. Using such operationalisations, some (or all) of the people in the "recovered" group might not have ever experienced any memory loss. In addition, memory loss is not simply an all-or-nothing categorisation (which is why we have frequently used the term *reduced recall*). Researchers must struggle with how to categorise people who report partial memory loss, such as remembering some but not all details of the event. If partial memory loss were to be categorised as continuous memory (because some aspect of the event was always remembered), the net effect would be to make it unlikely to see any differences between discontinuous and continuous memory groups.

Many researchers note the risk of false positives in sexual abuse research, but fail to consider the risk of false negatives. The literature on false negatives for abuse (e.g., Fergusson, Horwood, & Woodward, 2000) requires that researchers entertain and discuss the possibility that people reporting they were not abused, when actually they were (false negatives), end up in control (no-abuse) groups. False negatives may occur when people remember the abuse but decline to report it for myriad reasons, or when they do not remember the event. Given that little is known

about what motivates people to self-select into research studies on sexual abuse, the possibility remains that both false positives *and* negatives influence findings.

Future research will also have to grapple with the populations in which memory or lack of it is expected. For example, betrayal trauma theory does not predict that there is a difference in awareness and memory for abuse in victim groups already selected on the basis of willingness to respond to a newspaper advertisement about child sexual abuse. Such identification will likely trump anything else going on regarding forgetting or unawareness—these are the victims who for whatever reason apparently embrace a social status and label that most victims avoid.

Experimental studies

McNally questions, broadly, whether evidence from experimental studies conducted by Freyd and colleagues supports BTT. Although the experimental studies reviewed by McNally were certainly guided by BTT, they notably do not contribute to the core “why” questions addressed by the theory. As a group, these studies represent tests of one of the “how” mechanisms proposed by the theory. Specifically, the studies examine the relationship between dissociation and memory in the lab. Because dissociation is associated with family violence and reduced recall, it was quite logical a decade ago to predict that dissociation would be associated with information-processing changes in the lab. Addressing McNally’s concern that the experimental research provides “at best, equivocal support” (2007, this issue, p. 289) for BTT, it is notable that the studies were not designed to test the theory per se, but to test one factor predicted to be associated with both family violence and dissociation. To the extent that the core goal of BTT was to elucidate why unawareness of betrayal traumas may occur, using the experimental tests as evidence for or against the theory as a whole is problematic. If research fails to uphold a relationship between dissociation and memory, this does not negate the core premises of BTT; rather, such research would merely point to the need to evaluate other mechanisms to explain how unawareness occurs.

McNally’s (2007, this issue) curiosity about whether experimental studies that he reviewed support BTT raises critical issues about the role

and implications of experimental research in understanding memory for trauma. The research motivation for lab-based studies and the interpretations that can be made to the more general issue of memory for victimisation must be carefully specified. Although research using both experimental and non-experimental methods contributes to a general understanding of memory for trauma, these approaches contribute in very different ways. Researchers must be clear about the logical inferences that can (or cannot) be made from each of the two approaches. Specifically, research in the cognitive psychology experimental lab (*how* questions) typically cannot be used to establish validity of forgetting outside the lab (*what, who, and why* questions). As noted by Mook (1983, p. 384), laboratory research may best illuminate “what *can* happen [in the real world], rather than what typically *does*. ”

Experimental and cognitive psychology laboratory-based research on mechanisms of forgetting has been completed using both trauma and non-trauma stimuli. There is a great deal more research on forgetting of non-trauma stimuli than trauma stimuli. Perhaps the latter are most directly generalisable to forgetting of trauma; however, the former research constitutes an enormous body of empirical evidence for potential mechanisms of forgetting that may operate in some cases of amnesia for trauma stimuli (see Anderson et al., 2004; Gleaves, Smith, Butler, & Spiegel, 2004; Sivers et al., 2001). Existing experimental research on the forgetting of trauma stimuli points to three conditions under which reduced recall for specifically trauma-related information is likely to occur in the laboratory. These conditions involve: (1) attentional context, (2) dissociation, and (3) intimate abuse.

McNally (2007, this issue) reports that his group has failed to replicate memory findings from Freyd and colleagues as they relate to dissociation. Given the “synoptic, not exhaustive” (p. 282) scope of McNally’s review, it is important to note at the outset that researchers outside Freyd’s group have found relationships between trauma-related distress and reduced recall in the lab (see DePrince, Freyd, & Malle, 2007). For example, Moulds and Bryant (2002) compared participants diagnosed with Acute Stress Disorder (ASD, a disorder partially characterised by dissociative symptoms; see Spiegel & Cardeña, 1991) and non-traumatised controls on a directed forgetting task, where participants were directed to remember some words and forget others. At the end of the task,

participants were tested on their recall of all words, regardless of the instruction to remember or forget. All ASD participants had been exposed to some form of physical threat. The ASD group showed poorer recall of to-be-forgotten trauma-related words than the non-traumatised group. In a replication and extension, Moulds and Bryant (2005) found that membership in a trauma-exposed ASD group was associated with reduced recall compared to trauma-exposed-no-ASD and no-trauma groups.

McNally (2007, this issue) comments on findings from McNally et al. (2005), who claimed to replicate the procedure of DePrince and Freyd with a different participant population and obtained different results: participants recruited through newspaper advertisements who reported no, continuous, or recovered memories of child sexual abuse showed greater memory for trauma words under both selective and divided attention. However, the descriptive statistics suggest problems with their method. Curiously, the pattern of results points to better recall of some words under divided than selective attention conditions. When participants are trying to do something in addition to remembering the to-be-remembered words, they should be less able to commit the words to memory. In contrast, the descriptive statistics reported in McNally et al. suggest that the trauma words were remembered *more* in divided attention conditions by *all* groups whereas neutral words were remembered more in selective attention conditions as expected. This curious pattern makes it difficult to interpret much about other data discrepancies with DePrince and Freyd.

Researchers outside McNally's group have also failed to find reduced recall in the lab. For example, Elzinga, de Beurs, Sergeant, van Dyck, and Phaf (2000) examined directed forgetting performance for neutral and sex words among undergraduate volunteers and dissociative-disordered patients. Under the standard selective attention instructions, directed forgetting of sex words decreased with higher levels of dissociation. Further, dissociative patients and highly dissociative students remembered more overall compared to the low-dissociative group. Elzinga and colleagues (2000) argued that the highly dissociative participants may demonstrate special learning abilities. In particular, drawing on activation/elaboration theory, the authors argued that highly dissociative participants may be skilled at elaboration and constructing conscious

experiences. Further, elaboration can be used to detect discrepancies. In the case of the directed forgetting paradigm, Elzinga and colleagues argued that forgetting threatening information, such as sex words, may actually be discrepant to dissociative participants. Thus, the dissociative participants exhibited better recall of sex words relative to the low-dissociative group. Elzinga and colleagues (2000) argued that highly dissociative individuals may use their capacity to construct separate conscious experiences to keep threatening or painful memories from current awareness.

Although there is ample evidence for apparent amnesia outside the lab, the phenomenon is not demonstrated uniformly in lab tasks. Of course, there is no reason to expect that it should necessarily be observed in the lab; rather, specific conditions under which forgetting occurs must be identified and tested. Reduced recall seems much less likely to occur in the lab under several conditions: presence of an anxiety (i.e., PTSD; McNally, Metzger, Lasko, Clancy, & Pitman, 1998) or personality disorder (e.g., Cloitre, Cancienne, Brodsky, Dulit, & Perry, 1996), and selective attention conditions (McNally et al., 1998). Several studies point to dissociative processes as candidate mechanisms for apparent amnesia in the lab (e.g., Moulds & Bryant, 2005), while also suggesting that high levels of anxiety are not likely to be associated with the phenomenon.

However, in general, failure to find apparent amnesia in the lab does not question the reality of the real-world phenomenon or theories seeking to account for it or similar phenomena. McNally (2007, this issue, p. 288) states that the failure of the recovered memory group to demonstrate "superior forgetting trauma cues, especially in view of their history of not having thought about their abuse for many years, seems inconsistent with betrayal trauma theory". The finding (and the entire study) actually seems completely irrelevant to BTT. Why should people who have been identified as sexual abuse survivors with recovered memories of abuse have poorer recall for trauma-related stimuli in the lab relative to people who have had continuous access to memories? If they are now able to remember their past, whatever factors led to the initial inability to remember are apparently no longer present. More critically, BTT predicts that individuals will not know or remember information that may threaten attachment relationships—thus, in grouping participants

based on their history, the most important factor for BTT predictions will be the victim–perpetrator relationship.

McNally (2007, this issue) seems to be arguing that such individuals must have some special ability to block out unwanted information. If they could block out information in the past, they should be able to block out word lists. Again, above and beyond the fact that they have no real motivation to block out word lists, the argument is simply illogical if the inability to remember is viewed as *an effect* of the traumatic experience. The argument would basically be that if amnesia is not observed for minor stressors (e.g., reading stressful words), then it would not be observed for severe stressors (e.g., child sexual abuse). Using a physical trauma analogy and the same logic, one could argue that since a mild head trauma (e.g., an apple dropped on one's head) causes no significant brain damage, then there is no reason to believe that a more severe injury (e.g., from a shotgun blast) would have any effect. Failure to find the phenomenon in the lab suggests the appropriate conditions for forgetting are not present.

Identifying the conditions under which forgetting occurs in the lab is important to modelling how such phenomena in the real world may occur. However, researchers do not yet understand the scope and specificity of conditions for forgetting. For example, how idiosyncratic to the original trauma must stimuli be? Must participants be naive to show reduced recall? For example, differences in samples stand out in McNally et al.'s directed forgetting research (1998; McNally et al., 2005) compared to DePrince and Freyd (2001, 2004). McNally's group recruited participants who were apparently tested numerous times (although the number of times they were tested and whether they were previously exposed to the directed forgetting—or similar—task was not reported). DePrince and Freyd's (1999, 2001, 2004) studies involved college students selected on the basis of pre-screening for dissociation. Participants did not self-select for a study on trauma or memory, or have prior experience of participating in such research.

Is social betrayal really trauma? Research on betrayal, distress, and health

As noted earlier, McNally (2007, this issue) opens his paper by raising questions about what counts

as a trauma. A wide range of events, such as child abuse, sexual assault, medical traumas, and natural disasters, meet the PTSD Criterion A1 for a traumatic event. Some of these events (such as some child abuse, sexual assault) involve social betrayals. A growing body of research now demonstrates that events high in betrayal are associated with significant distress, as would be expected if these events were traumatic by the more common use of the term. Freyd, Klest, and Allard (2005a) found that a history of betrayal trauma was strongly associated with physical and mental health symptoms in a sample of ill individuals. Goldsmith, Freyd, and DePrince (2004) reported similar results in a sample of college students.

Edwards, Freyd, Dube, Anda, and Felitti (2006) used data from the second wave collected as part of the Adverse Childhood Experiences (ACE) Study (Felitti et al., 1998) to examine the hypothesis that social betrayal is harmful in relation to a variety of adult health outcomes. Edwards et al. tested whether adults whose abuser was a family member or non-relative living in the home would report substantially poorer health than those whose abuser was a family friend, relative living outside the home, or a stranger. Participants in the second wave included slightly less than 7000 of the 17,337 full participant pool in the ACE study. All participants were HMO members undergoing a complete physical examination. A total of 3100 (17.4%) reported one form of childhood sexual abuse (fondling, attempted intercourse, or intercourse) and also identified their abuser. Of sexual abuse survivors, 32% reported exposure to events high in betrayal, defined as an abuser who was a family or non-family member living in the home. High-betrayal abuse was related to depression, anxiety, suicidality, panic, and anger. High-betrayal participants had poorer health functioning on the SF-36 role-physical, role-emotional, and social functioning scales than low-betrayal victims.

The Edwards et al. study is in line with other research that suggests abuse perpetrated by caregivers is associated with worse outcomes than non-caregiver abuse. For example, Atlas and Ingram (1998) reported that, in a sample of 34 hospitalised adolescents (aged 14 to 17.10 years), sexual distress was associated with histories of abuse by family members as compared to no abuse or abuse by a non-family member, whereas post-traumatic stress was not. Turell and Armsworth (2003) compared sexual abuse

survivors who self-mutilate with those who do not. The authors reported that self-mutilators were more likely to have been abused in their family of origin than abused only by a non-family member.

Betrayal and dissociation

Betrayal trauma theory posits that knowledge isolation is predicted by the threat that the information poses to the individual's system of attachment (Freyd, 1994, 1996). Thus, it follows that high-betrayal traumas, as compared with low-betrayal traumas, should be associated with higher levels of dissociation. Consistent with this, Chu and Dill (1990) reported that childhood abuse by family members (both physical and sexual) was significantly related to increased dissociation scores (as measured by the Dissociative Experiences Scale) in psychiatric inpatients, and abuse by non-family members was not. Similarly, Plattner et al. (2003) found significant correlations between symptoms of pathological dissociation and intrafamilial (but not extrafamilial) trauma in a sample of delinquent juveniles. These correlations held up even when accounting for age and duration of abuse. DePrince (2005) found that the presence of betrayal trauma before the age of 18 was associated with membership in a pathological dissociation taxon group and with revictimisation after age 18. Further, individuals who reported being revictimised in young adulthood following an interpersonal assault in childhood performed worse on reasoning problems that involved social and safety information compared to individuals who did not report revictimisation. Goodman et al. (2003) found that higher levels of dissociation were associated with decreased likelihood of disclosing childhood sexual abuse in a sample of young adults who had participated in criminal proceedings related to sexual abuse allegations approximately 10 years earlier.

DISCUSSION

Implications for recovered memories

Betrayal trauma theory actually says little about the conditions under which people may later access memories that were previously inaccessible. Of course, the very fact that the knowledge is

theoretically isolated, rather than banished or non-encoded, suggests that recovery is clearly possible. Although conscious appraisals of betrayal may be inhibited at the time of trauma and for as long as the trauma victim is dependent on the perpetrator, eventually the trauma survivor may become conscious of strong feelings of betrayal or other emotions (e.g., rage; DePrince & Freyd, 2002b). This would be most likely to occur after the individual is no longer dependent on the perpetrator. Future research is needed to uncover the motivations for and mechanisms of memory recovery.

Implications for "how" questions

Betrayal trauma theory implicates dissociative processes as a potential mechanism in apparent amnesia. By implicating dissociative processes, the theory does not require that there be special dissociative mechanisms for forgetting. Indeed, betrayal trauma theory does not ever argue that special cognitive processes are necessary. Rather, the theory builds on the observation that dissociative processes are associated with a range of cognitive alterations, including memory disruption. The theory makes no particular argument that dissociative processes are required for reduced recall to occur; nor does the theory argue that the same phenomenon cannot occur along various other routes, such as via inhibitory mechanisms. As reviewed above, several studies have examined dissociative tendencies and memory performance in the lab; however, these studies are not tests of betrayal trauma theory per se. Failure to detect associations between dissociation and reduced recall in the lab does not falsify betrayal trauma theory; such failures simply add to the available literature on whether dissociation contributes to the conditions under which the phenomenon occurs in the lab.

Failure to report traumas may occur for a variety of reasons, ranging from amnesia to simple nondisclosure in the context of intact memory. Interestingly, Foynes, Freyd, and DePrince (2006) reported that whether or not young adults report having previously disclosed childhood abuse (yes/no) was predicted by the closeness of the perpetrator, above and beyond participant gender, age at the time of the event, and severity of injuries in physical abuse. Thus, disclosure does appear to be an important factor to consider in the mix of recall and reporting of previous traumas. Lack of

disclosure may influence recall to the extent that the abuse memories are not rehearsed. Future research will be necessary to evaluate the relationship between lack of disclosure and memory failure.

Although betrayal trauma theory did not originally focus on active inhibition processes in unawareness of betrayals (Freyd, 1996), recent work by Anderson and colleagues (Anderson, 2001; Anderson & Green, 2001; Anderson et al., 2004) converges nicely with betrayal trauma theory. Active inhibition induces forgetting when a representation (Representation A) is associated with two or more other representations (B and C) and links to one of those representations (B) is rehearsed more frequently than the other (C). Under those conditions, Anderson and others have observed reduced recall for C. That is, the act of rehearsing A–B seems to actively inhibit C. Anderson (2001) has proposed that a parallel learning context exists for children in the untenable position of rehearsing very different associations regarding caretakers—e.g., parent–abuse (A–C) and parent–care(A–B). To the extent that many socio-cultural forces encourage practising the association parent–care and/or the child victim is motivated to rehearse the parent–care association, active inhibitory processes may decrease recall for parent–abuse information. Active inhibition provides a parsimonious explanation for how children exposed to repeated abuse could forget the event. Although some have argued that repeated abuse must be all-too-well remembered because basic memory principles dictate that repetition is associated with strengthened memory traces, the active inhibition literature provides a tenable explanation for reduced recall in the context of repeated events (Anderson, 2001). Using the think/no-think paradigm, Anderson and Green (2001) extended this work by demonstrating that active inhibition (suppression) leads to reduced ability to recall previously formed memories. Anderson et al. (2004) identified neural systems involved in keeping such unwanted memories out of awareness. Research on active inhibitory processes in the context of trauma-related memory is needed.

Gender and betrayal trauma

Controversy about the reliability of abuse allegations, particularly those involving recovered memory, has often included explicit or implicit

attributions of gender or gender politics. For instance, it is common to see the female pronoun used as the generic victim, or even to read of “radical feminists” (e.g., Van Til, 1997) who are presumably guilty of causing “hysteria” (e.g., Ofshe, 1994) and planting inaccurate memories. Is there in fact a relationship between these issues and those of gender? Various authors have analysed aspects of the gender politics involved in debates about the credibility of abuse allegations (see McFarlane & van der Kolk, 1996; Stoler, Quina, DePrince, & Freyd, 2001). McFarlane and van der Kolk (1996, p. 566) suggest that gender politics are in fact a factor in societal reaction to recovered memories:

It appears that as long as men were found to suffer from delayed recall of atrocities committed either by a clearly identifiable enemy or themselves, the issue was not controversial. However when similar memory problems started to be documented in girls and women in the context of domestic abuse, the news was unbearable; when female victims started to seek justice against their alleged perpetrators, the issue moved from science into politics.

Although gender assumptions are often made about memory and abuse, we are aware of no evidence that females are more likely to forget or remember a particular event as compared with males. However, to the extent that some abuse events are more likely to be remembered than others, as predicted by betrayal trauma theory, then gender effects on frequency of exposure for betrayal traumas may make it more likely that one gender or the other reports recovered memories. In fact Freyd and Goldberg (2004) discovered a strong relationship between gender and betrayal trauma exposure in an adult community sample. The Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006) was administered to a large community sample on two occasions separated by a 3-year interval. In contrast to previous surveys, the BBTS included separate items for events that involved mistreatment by someone close, mistreatment by someone not so close, and non-interpersonal events. For both kinds of interpersonal events, separate items focused on physical, sexual, and emotional types of potential abuse. For each event, respondents indicated separately the extent of their exposure prior to and after age 18. Substantial differences between men and women were found for many

of the reported events on both occasions (see Table 1).

These large gender differences relate to the amount of betrayal inherent in the event: men report more traumas with lower betrayal (e.g., assault by someone not close to the boy or man) and women report more trauma with higher betrayal (e.g., assault by someone close to the girl or woman). We were able to rule out at least one response bias explanation for our results (that men and women interpreted the word "close" differently).

Closer inspection of the data from Freyd and Goldberg (2004) reveals patterns that are critical to thinking about the intersection of gender and trauma exposure. For example, men in this sample were more likely to report exposure to accidents, particularly in adulthood. Women report more sexual abuse in both childhood and adulthood. Rates of exposure to physical abuse appear comparable between men and women overall, although women report more physical abuse in adulthood and men in childhood. However, women report more physical abuse by someone with whom they were close in both childhood and adulthood (see Figure 2). These data reveal that even for an event, such as physical assault, that appears to affect men and women at a comparable rate, women experience assault by close others more often than men.

Freyd and Goldberg (2004) also examined rates of women and men reporting at least one event high in betrayal (e.g., abuse by a close other) or low in betrayal (e.g., motor vehicle accident). This analysis revealed a significant interaction of gender by trauma type (see Figure 3). Men and women did not differ in overall rates

of trauma; however, they differed in the types of events to which they were exposed. Women were more likely to report events perpetrated by a close other than males, who were more likely to report events that were perpetrated by someone with whom they were not close.

To the extent that betrayal traumas are potent for some sorts of psychological impact and non-betrayals potent for other impacts (e.g., Freyd, 1999), these gender differences would imply some very non-subtle socialisation factors operating as a function of gender (DePrince & Freyd, 2002b). These results may also help to account for the apparent gender asymmetry in reports of forgetting trauma. If we assume men and women have similar reactions to a given trauma but that frequency of some traumas that lead to forgetting is higher in women, we would expect to see higher rates of reports of forgetting trauma among women than men in the population.

Another explanation?

McNally (2007, this issue) asks if there is another explanation for why people may appear to recover memories of abuse after several years, then goes on to offer several possibilities. He notes many areas of overlap between his explanation for abuse-related memory phenomena and BTT. For example, Freyd (1996) noted that there are likely to be many routes to unawareness. Concurring with this, McNally notes (2007, this issue, p. 291): "One need not invoke repression, dissociation, amnesia triggered by betrayal, and so forth to explain this phenomenon parsimoniously." BTT also acknowledges important

TABLE 1
Gender differences: Freyd and Goldberg (2004)

	<i>High Betrayal Items</i>	<i>Medium Betrayal Items</i>	<i>Low Betrayal Items (6 items)</i>
<i>Women report more of these events than men:</i>	Emotional Abuse Adult Emotional Abuse Adult Close Sex Abuse Child Emotional Abuse Child Close Sex Abuse Adult	Not-close Sex Abuse Child Not-close Sex Abuse Adult Witness someone close attack family member Adult	
<i>Men report more of these events than women:</i>		Not-close Attack Child Not-close Attack Adult	Witnessed Not-close Death Adult Accident Adult Witness Not-close Attack Child

Observed gender differences in trauma exposure by betrayal level. From Freyd and Goldberg (2004). All differences are significant ($p < .001$).

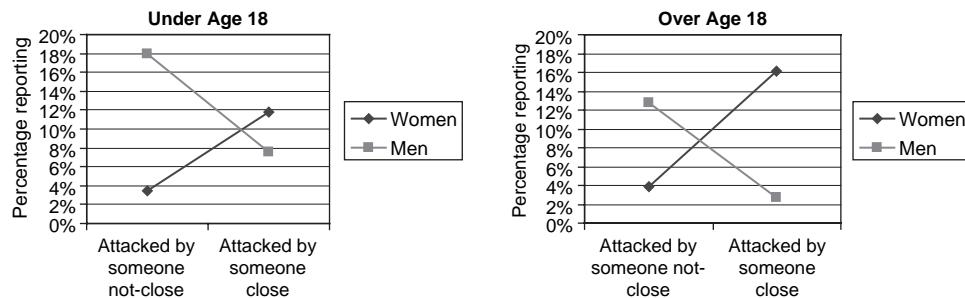


Figure 2. Physical abuse reported by gender and closeness to perpetrator before and after age 18 (Freyd & Goldberg, 2004).

developmental processes in children's cognitive development. As such, we agree with McNally's claim that "... if the child were especially young at the time, he or she may have failed to understand the betrayal or its sexual nature until after having recalled the abuse years later" (p. 291). Indeed, children may not think about the experience and years later may (appropriately) reinterpret experiences as abuse. Not thinking (and not talking) about events will of course decrease memory for the event because the event is not rehearsed (Freyd, 2003).

McNally (2007, this issue, p. 291) also argues:

Older children, however, are far more likely to know what is occurring, but they may be less likely to forget it, too, even though they may dread disclosing the abuse, not for fear of their lives (i.e., survival), but for fear of breaking up the family by causing the offending parent to go to prison. These children may actively try not to think about the abuse, to put it out of mind, and so forth—processes that do not require one to postulate a dissociative mechanism ...

We find this incredibly vague statement equally puzzling. Given that he is talking about

people who later recover memories of trauma, McNally is arguing that these children are somehow able to *successfully* "put out of mind" memories of incest for years. This statement is, of course, in complete contrast with the false-memory position that "Not only do victims of child incest not repress such painful memories . . . ; they try *unsuccessfully* [italics added] to forget them" (Gardner, 1993, p. 372). It is also inconsistent with what McNally has argued earlier in his own paper, that "documented traumatic stressors are seldom, if ever, forgotten" (2007, this issue, p. 281). Either he is saying that incest is not a documented traumatic stressor or he is simply wrong and there is some mechanism at work. If putting memories of incest "out of one's mind" does not involve "repression, dissociation, amnesia triggered by betrayal, or memory blockage" then it apparently involves some *other* mechanism that has the same properties but some other name. It seems to us that in trying to explain away the fact that many victims of incest report delayed recall, McNally has made a convincing argument that something special and worthy of study is going on in such individuals.

We also agree that children may fear breaking up the family. Where we diverge from McNally is in our appreciation that, from a developmental perspective, children's dependence on adults means that breaking up the family presents a potentially severe and threatening consequence of disclosure; such severe consequences may trigger appraisals related to the ability of the child (mother, family, siblings) to survive (literally or figuratively) in the face of that break up. Further, McNally's emphasis on literal death implies that attachment behaviours in children (which function to help the organism survive) would only emerge when survival is imminently threatened. An extensive attachment literature demonstrates that this is simply not the case;

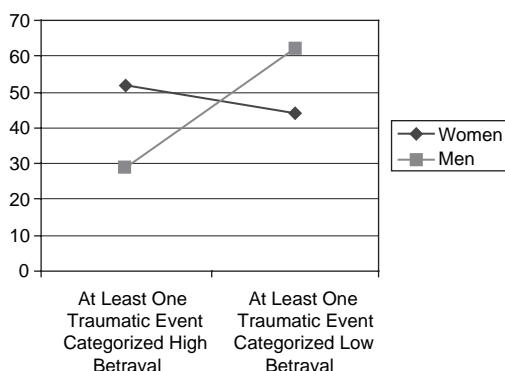


Figure 3. Betrayal trauma exposure by gender (Freyd & Goldberg, 2004).

children often respond to relatively minor threats by investing in the attachment relationship (Bowlby, 1988). As noted earlier in this article, children have reason to reduce the risk of survival threats even when the chance of actual death in the moment is relatively low, just as passengers have reason to wear seatbelts even when the chance of actual death in the moment is relatively low. As stated above, we agree that dissociative mechanisms are not required, as BTT (Freyd, 1996) clearly states that multiple routes to unawareness likely exist.

Although our interpretation of data diverges from McNally's in many places, we have all arrived at a surprisingly common endpoint. McNally cites several central processes in the dynamics of familial violence. For example, a child may not think about the abuse for several reasons, such as fears that disclosure may break up the family, or a trusted other grooms the victim to believe non-violent abuse is OK. We diverge in that McNally stops here, arguing children may simply fail to think about events. While we agree that children may fail to think (and thus talk) about abuse events for many reasons, failure to think about events will contribute to poorer memory for the event. The processes proposed by McNally (e.g., failure to think about the event) are actually mediated by the unique demands placed on a child exposed to betrayal traumas, as children abused in contexts where there is no (or less) dependency do not face the pressures to avoid information about the abuse that children abused intrafamiliarily do.

CONCLUSION

This discussion provides a unique opportunity to revisit BTT more than a decade after its initial formulation. Good theories change over time in the face of new evidence and perspectives. BTT is no exception. We are delighted that a decade of research pushes thinking about this theory, as well as issues of memory and trauma more generally, forward. After a decade, we admit that we are not surprised that aspects of the original theory can be re-evaluated in light of new evidence. We look forward to additional research that will continue to contribute to the evolution of this and other theories related to how humans respond in the face of abuse and trauma.

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