Dispelling Confusion About Traumatic Dissociative Amnesia

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How survivors of trauma remember—or forget—their most terrifying experiences lies at the core of one of the most bitter controversies in psychiatry and psychology: the debate regarding repressed memories of childhood sexual abuse. Most experts hold that traumatic events—those experienced as overwhelmingly terrifying and often life-threatening—are remembered very well; however, traumatic dissociative amnesia theorists disagree. Although acknowledging that traumatic events are usually memorable, these theorists nevertheless claim that a sizable minority of survivors are incapable of remembering their trauma. That is, the memory is stored but dissociated (or "repressed") from awareness. However, the evidence that these theorists adduce in support of the concept of traumatic dissociative amnesia is subject to other, more plausible interpretations. The purpose of this review is to dispel confusion regarding the controversial notion of dissociated (or repressed) memory for trauma and to show how people can recall memories of long-forgotten sexual abuse without these memories first having been repressed.

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CSA = childhood sexual abuse; PTSD = posttraumatic stress disorder

Are traumatic experiences engraved in memory? Or does the mind protect itself by banishing memories of trauma from awareness? These questions lie at the heart of the bitter controversy regarding the reality of dissociated (or "repressed") memories of childhood sexual abuse (CSA).[1]

A substantial body of evidence indicates that documented traumatic experiences—those triggering terror and fear of impending death—are seldom, if ever, truly inaccessible to awareness.[1,2] Release of stress hormones during trauma fosters consolidation of the experience, rendering it relatively resistant to forgetting.[3] Nevertheless, the mind does not operate like a videotape recorder, infallibly capturing all our sensory impressions. Even memories of trauma may change over time.[4] However, when the details change or fade, trauma survivors still remember the gist of their experience remarkably well.[5] It is easy to see how the capacity for remembering trauma might constitute an evolutionary adaptation, whereas a capacity for forgetting it would seemingly imperil survival.

This consensus notwithstanding, traumatic dissociative amnesia theorists hold that a sizable minority of survivors develop "massive repression"[6p12] of their trauma, making it difficult for them to recall it until it is safe to do so, often many years later. In fact, some believe that the more traumatic an event is, the more likely some survivors will be unable to remember it. As Brown et al[7p97] argued,

> when emotional material reaches the point of being traumatic in intensity—something that cannot be replicated in artificial laboratories—in a certain subpopulation of individuals, material that is too intense may not be able to be consciously processed and so may become unconscious and amnesic.

The traumatic dissociative amnesia theorists believe that these survivors are unable, not merely reluctant, to recall their trauma, precisely because it was so emotionally distressing. Moreover, they affirm that dissociated trauma must be remembered for healing to occur[8] and that special techniques are sometimes needed to help patients recover the traumatic memories they are otherwise unable to recall. As Brown et al[7p647] put it, "Because some survivors of sexual abuse will repress their memories by dissociating them from consciousness, hypnosis can be very valuable in retrieving these memories. Indeed, for some survivors, hypnosis may provide the only avenue to the repressed memories." These beliefs provided the theoretical rationale for what critics have called *recovered memory therapy*. Critics worried that suggestive methods, such as hypnosis for memory retrieval, increased the risk of patients developing false memories of abuse.[9]

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Traumatic dissociative amnesia theorists have not ignored the clinical science of memory. Instead they have often misinterpreted the very studies they cite in support of the alleged phenomenon of dissociated memory of trauma (discussed in detail in published reviews[1,10]). The purpose of this article is to dispel confusion regarding the relevant studies and to provide an account of how some people may recall long-forgotten memories of CSA without having first repressed them.

EVERYDAY FORGETFULNESS IS NOT TRAUMATIC DISSOCIATIVE AMNESIA

After experiencing a trauma, some survivors report problems with memory.[11] These difficulties have been misinterpreted as evidence for traumatic dissociative amnesia.[12] In

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reality, this kind of memory problem refers to everyday forgetfulness that emerges in the wake of trauma; it has nothing to do with difficulty remembering the trauma itself. Indeed, intrusive recollection of the trauma may interfere with everyday memory functioning. Everyday memory problems that develop *after* a trauma must not be confused with amnesia *for* the trauma.

Organic Amnesia Is Not Traumatic Dissociative Amnesia

Some traumatic dissociative amnesia theorists have cited cases of organic amnesia as relevant to repression of traumatic memory. Brown et al[7pp609-610] describe a finding by Dollinger[13] that "two of the 38 children studied after watching lightning strike and kill a playmate had no memory of the event." However, Brown et al failed to mention that both amnesic children had also been struck by side flashes from the main lightning bolt, knocked unconscious, and nearly killed. The other children present during the disaster who were not struck by lightning remembered the event all too well. Therefore, amnesia in the 2 children struck by the lightning resulted from the physical, not psychic, aspects of their trauma. One must not confuse amnesia resulting from direct physical insult to the brain with traumatic dissociative amnesia.

Psychogenic Amnesia Is Not Traumatic Dissociative Amnesia

Psychogenic amnesia is an unusual syndrome characterized by sudden, massive retrograde memory loss that cannot be attributed to physical damage to the brain.[14] The syndrome sometimes emerges after the person has experienced a stressful event, but these events are often relatively mundane (eg, romantic disappointment). Whether a retrospectively identified stressor that preceded the onset of amnesia was, in fact, its cause is also unclear.

Psychogenic amnesia should not be confused with a selective inability to remember a specific traumatic event.[1pp186-189] Psychogenic amnesia involves complete memory loss, including loss of one's personal identity. Fortunately, it rarely lasts for more than a few weeks, usually remitting without therapeutic intervention. Finally, it is termed *psychogenic* amnesia not because we know it has a psychological cause, but because we have not identified an organic cause.

Incomplete Encoding Is Not Traumatic Dissociative Amnesia

One of the diagnostic criteria for posttraumatic stress disorder (PTSD) is an "inability to recall an important aspect of the trauma."[15p428] Unfortunately, the meaning of this criterion is ambiguous. The ambiguity arises because not every aspect of an experience, including a traumatic one, is encoded into memory. Under conditions of intense emotional arousal, people usually attend to the central features of the event at the expense of the peripheral features. If survivors cannot recall an aspect of the trauma, it is difficult to tell whether they encoded it but cannot recall it or whether they never encoded it in the first place. For example, persons mugged at gunpoint sometimes are unable to recall the face of their assailant, not because they have amnesia but because their attention was so fixed on the gun that they never encoded the assailant's face. Accordingly, incomplete encoding must not be confused with traumatic dissociative amnesia.

Nondisclosure Is Not Traumatic Dissociative Amnesia

Some known abuse survivors fail to acknowledge their abuse when questioned by survey interviewers.[16] However, it is often unclear whether the survivors cannot recall abuse or whether they are merely reluctant to disclose it to a stranger conducting a survey. In one small but important study, researchers recontacted respondents who had not disclosed abuse during a previous interview and found that none of them had forgotten their (physical) abuse.[17] For various reasons (eg, dislike of the interviewer), each nondisclosing participant had been unwilling to acknowledge the maltreatment. Accordingly, if someone fails to disclose abuse, one cannot automatically assume that the person is unable to remember it.

Childhood Amnesia Is Not Traumatic Dissociative Amnesia

People can remember little of their lives before the age of 4 or 5 years. Neurocognitive changes in language capacity and brain maturation make it very difficult for older children and adults to recall events encoded during their preschool years. Accordingly, if a person cannot recall an episode of molestation from the preschool years,[18] one should not assume its inaccessibility is attributable to traumatic dissociative amnesia. Because of normal childhood amnesia, nearly all events from these years will be lost forever.

Dissociation During a Trauma Is Not the Same as Being Unable to Remember the Trauma Later

The concept of dissociation is extremely broad, embracing diverse processes. All of the following have been deemed dissociative: the sense of being disconnected from one's body (depersonalization), derealization, the sense that time is slowing down, emotional numbing, the inability to remember parts of the trauma, and the ability to remember trauma all too well (ie, flashbacks). However, the experience of depersonalization does not prevent the survivor from recalling the trauma later. Indeed, dissociation during the trauma predicts later PTSD,[1] a disorder characterized by vivid, intrusive recollections of the trauma.

Not Thinking About Something for a Long Time Is Not Traumatic Dissociative Amnesia

The most common mistake made by traumatic dissociative amnesia theorists is to confuse not thinking about something with an inability to remember it. In one influential questionnaire study, researchers noted that nearly 60% of adult patients who reported having been sexually abused as children answered affirmatively when questioned whether there had ever been a time that they could not remember the molestation.[19p24] These results have been interpreted as evidence for sexual abuse–related repression.[20p26] By replying affirmatively to this question, patients indicated that they had spent time trying unsuccessfully to remember their abuse. But if they had blocked out all memories of the abuse, why would they try to recall it in the first place? Most likely, respondents interpret such questions as meaning, "Has there ever been a time when you did not think about your abuse?" But not thinking about one's abuse is not the same as being unable to recall it, and it is the inability to recall that counts as amnesia. Had they been asked about past abuse, these patients may well have recalled it.

Distinguishing between not thinking about something for a long time vs being unable to remember it is not merely a semantic quibble. Indeed, it has immense clinical implications. If patients have not thought about their abuse in many years, then questions during an intake interview are likely to prompt recollection. In contrast, if therapists believe that patients often experience traumatic dissociative amnesia, then a mere question or two should not unlock the memories. If therapists believe that recalling repressed or dissociated memories is vital for healing, they may embark on a treatment regimen that could foster false memories of abuse.

Experimental Cognitive Research

If adult survivors of CSA are prone to repress, dissociate, or otherwise forget their abuse, then one might be able to detect this heightened forgetting skill in the laboratory. My colleagues and I have conducted experiments designed to test for the presence of cognitive mechanisms that ought to be operative in those who have acquired skill in blocking out information related to trauma.

In one study, we tested 3 groups of women: those with CSA-related PTSD; those exposed to CSA, but without psychiatric disorder; and nonabused controls.[20] In this directed-forgetting experiment, participants viewed a series of words on a computer screen that were trauma related (eg, incest), positive (eg, carefree), or neutral (eg, banister), and each word was followed by instructions directing the participant either to forget or remember the word. After this encoding phase, participants were asked to recall as many words as possible, regardless of the original forget/remember instruction. Participants with PTSD exhibited memory deficits for positive and neutral words, but, contrary to the dissociation hypothesis, recalled trauma-related words very well, including those that they were instructed to forget.

Subsequent experiments by our group[21-23] and others[24] have involved participants who claimed to harbor repressed memories of CSA or who reported having forgotten and then recalled their abuse, having never forgotten their abuse, or having no history of abuse. In none of these experiments have participants who reported CSA, as continuous, recovered, or repressed memories, exhibited heightened forgetting of trauma-related words.

Our research uses controlled methods of investigation and involves participants who report memories of abuse. However, it centers on trauma-related words, which are of course pale proxies of autobiographical memories of abuse. But if someone can block out autobiographical memories of abuse, then forgetting mere trauma-related words should be relatively easy. The rationale for this conjecture is as follows. Intense negative arousal tends to strengthen memory for the core aspects of the emotional experience, rendering it difficult to forget.[3] A person who managed to block out autobiographical memories of abuse should be easily able to block out a less emotionally provocative experience, such as encountering an abuse-related word in an experiment. My colleagues and I have yet to uncover any evidence of the heightened forgetting of negative emotional material in CSA survivors, and those with PTSD seem to exhibit a breakdown in the ability to forget such material.

Even if the aforementioned reasoning is correct, remembering and forgetting trauma-related words in the laboratory is somewhat artificial and may differ from remembering and forgetting traumatic events. Although our research group has conceptualized a heightened forgetting ability as a skill that can be applied in the laboratory, this assumption may be incorrect. Perhaps persons lose their capacity to forget abuse-related material once their autobiographical memories of abuse have returned.

A Third Perspective on Recovered Memories

In the "memory wars"[25] over the reality of repressed and recovered memories of trauma, especially CSA, 2 polarized positions have developed: the repressed memory view and the false memory view. According to the first view, memory of CSA operates according to principles different from those governing ordinary events. As Spiegel expressed it in *Repressed Memories*,[26p6]

> the nature of traumatic dissociative amnesia is such that it is not subject to the same rules of ordinary forgetting; it is more, rather than less, common after repeated episodes; involves strong affect; and is resistant to retrieval through salient cues.

In other words, the rules that ordinarily govern remembering and forgetting are suspended for at least some kinds of psychological trauma. If one accepts that memory of CSA obeys different rules than memory of other events, one can claim that anyone who reports having recalled long-forgotten abuse must have repressed or dissociated the memory. Traumatic dissociative amnesia theorists postulate special mechanisms because they assume that CSA is nearly always a terrifying, traumatic experience that should otherwise be highly memorable.

The false memory view operates on the (correct, in my opinion) assumption that repetition and emotional arousal should strengthen memory. According to this view, if someone claims to have remembered forgotten traumatic events, especially within the context of "recovered memory therapy," then the recollection is likely false. Indeed, if we assume that CSA usually counts as a terrifying trauma, then the well-established mechanisms of memory should make amnesia difficult, if not impossible.

More than a "middle ground" between these 2 positions, a third perspective[27] goes beyond blandly affirming that sometimes repressed and sometimes false memories occur. In our research program,[28] the typical recovered memory participant reports having been nonviolently molested (eg, fondled) by a trusted adult (eg, uncle) on 1 or more occasions, and having been confused and upset, but not terrified.[27] Aged only 7 or 8 years, the average survivor did not fully understand the unpleasant experience as sexual abuse. Understanding such episodes as sexual abuse likely amplifies its negative emotional impact and hence its memorability. In the absence of such understanding, the episode is less likely to be as memorable as it would otherwise be. Lacking a conceptual framework for the molestation, the CSA survivor managed not to think about the experience for many years, and this ordinary forgetting was fostered by the absence of reminders (eg, perpetrator moved away). Years later, the abuse survivor encounters reminders that trigger recollection of the long-forgotten experience from the perspective of an adult. Because the event was not understood when it occurred and was not experienced as traumatic, no special dissociative mechanism is needed to explain why the person did not think about it for so long. Once CSA survivors in our research program have recalled the event as adults, usually outside the context of therapy, they tend to experience intense distress, and nearly one third of them qualify for PTSD.

These data suggest that survivors of CSA may recall memories of sexual abuse without these memories previously having been repressed or dissociated. A recovered memory does not imply a previously repressed or a traumatic memory.

During a period of forgetfulness, some survivors of CSA may forget having previously recalled an aversive event.[29] Geraerts et al[30] reported that survivors of CSA are more likely to forget having remembered abuse if memories of that abuse (possibly false?) were recalled outside of rather than in psychotherapy.

Even if it is not perceived as terrifying, an act of molestation is no less morally reprehensible. Sexual abuse is a social evil regardless of whether it triggers terror or causes psychiatric illness.

CONCLUSION

This review of the evidence adduced in support of the concept of traumatic dissociative amnesia raises questions about whether such a phenomenon exists as a natural capacity of the brain. Most studies cited by traumatic dissociative amnesia theorists either concern other kinds of memory phenomena (eg, everyday forgetfulness emerging after a trauma) or findings that are more plausibly explained in other ways (eg, not thinking about something for a long time). Indeed, a comprehensive review of the medical and nonmedical literature by Pope et al[31] implied that the concept of traumatic dissociative amnesia (repressed and recovered memory of a trauma) may be a social construction that arose first in the literary culture of Romanticism. They were unable to locate any descriptions of a repressed and recovered traumatic memory before the 19th century. This absence of evidence for repressed memories of trauma contrasts sharply with descriptions of mania, melancholia, auditory hallucinations, and other disorders throughout history and across cultures.

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