

Recovered Memories

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Glossary

Betrayal trauma theory A theory that predicts that the degree to which a traumatic event involves social betrayal by a trusted caregiver will influence the way in which that event is processed and remembered.

Dissociation A psychological state involving alterations in the integration of thoughts, feelings, and experiences into the stream of consciousness.

False memory A memory for an event that did not occur.

Hysteria A psychological disorder first documented in ancient Greece, with symptoms resembling post-traumatic stress disorder.

Memory accuracy The degree to which a memory is historically true.

Memory persistence The degree to which a memory has remained available over time.

Posttraumatic stress disorder Symptoms following

exposure to a traumatic event, including intense thoughts, emotions, and bodily sensations.

Prospective trauma studies A research methodology in which participants who have been identified as having a documented traumatic experience are assessed over time following the event.

Psychogenic amnesia The report of forgetting experiences, usually traumatic in nature, due to psychological rather than physiological factors.

Rape trauma syndrome A pattern of psychological reactions observed in women and children who have been sexually assaulted.

Recovered memory The recollection of a memory that the individual reports had been unavailable for some period of time.

Repression An intentional forcing of distressing material from consciousness due to internal conflict.

Retrospective trauma studies A research methodology in which participants (often adults) are asked about traumatic events that occurred in the past.

MEMORY ALTERATIONS AND RECOVERED MEMORIES for traumatic events are among the many outcomes associated with trauma examined by researchers and clinicians. This article considers the history of studying memory for trauma, including recent controversy, as well as theory and empirical evidence for memory impairment associated with trauma. This article examines the relations between gender, trauma, and memory, as well as the contributions of feminist analyses to understanding recovered memory issues.

I. Introduction

The past 30 years have produced painful public and private awareness of the extent of childhood trauma. Revelations of sexual and domestic abuse, first spurred by the feminist movement of the 1970s, led children and adults of all ages to begin to tell their stories. Powerful sensory and affective memories of the horror of child abuse were recounted in shocking numbers. At the same time, pioneering studies in the prevalence of rape and childhood sexual abuse confirmed the picture emerging from the stories: sexual violence was not an uncommon experience for women and children in the United States. Furthermore, a wide array of emotional, psychosocial, and behavioral effects could be linked to childhood trauma, extending well into adulthood. Another picture also emerged from these stories: as people described their memories and the effects of rape and childhood abuse, the similarity between them and survivors of other types of trauma became clear.

One of the more perplexing sequelae of trauma is the apparent loss, and then recovery, of conscious awareness of the traumatic experience. Many lay people and professionals have erroneously assumed that a horrible experience will be vividly etched forever in the mind; in fact, the phenomenon of selectively forgetting and then recovering conscious memory for a traumatic event has been discussed in the psychological literature for over a century. The failure of memory across time has been documented in survivors of the full range of traumatic human experiences, including childhood sexual abuse.

As public awareness of childhood sexual abuse grew, so did the number of people (predominantly women) who sought assistance for dealing with recollections of childhood abuse of which they had been previously unaware. Some of these were well-known public figures, including Marilyn van Durber, a for-

mer Miss America, whose two sisters corroborated her memories with their own continuous memories of abuse at the hands of their father. Others sparked widespread outrage. For example, after Frank Fitzpatrick recovered memories of abuse by Father James Porter, dozens of other survivors stepped forward, most of whom had continuously recalled the abuse but had been silenced by social pressure not to speak ill of priests. Several won major court victories after recovering and obtaining corroboration for their memories.

Currently, more than 70 studies, using clinical and nonclinical samples, reporting retrospectively and prospectively, have found evidence of delayed memories for childhood trauma. Among adults reporting childhood abuse, as many as one-third also report some period during which they had no memory for the abuse. The existence of recovered memories of trauma has been recognized in the most recent edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, which defines dissociative amnesia as follows:

[A]n inability to recall important personal information, usually of a traumatic or stressful nature too extensive to be explained by normal forgetfulness. This disorder involves a reversible memory impairment in which memories of personal experience cannot be retrieved in a verbal form (or, if temporarily retrieved, cannot be wholly retained in consciousness).

Recovered memories have also been recognized by the American Psychological Association's Working Group on Investigation of Memories for Childhood Abuse.

Feminist analyses of recovered memories, and the response to them, reveal important gender dynamics. Studies of the family and cultural dynamics that place children in sexual danger—most often from older males—have offered vivid evidence that women and children are vulnerable not only because of their smaller size and strength, but also because patriarchal social roles deprive children of the power to refuse and mothers of the power to protect. In a patriarchal society, sexual abuse is rarely spoken about, unspeakable horrors are severely underreported, and abusers are rarely prosecuted. The patriarchal dynamics that have silenced victims also silences their memories, and the patriarchal attitudes that have allowed abusers to go unpunished reappear as efforts to undermine adult survivors' reports of their memories.

In spite of innumerable anecdotal reports, a long history of clinical observations, and the flurry of re-

cent research concerning recovered memories, an explanation of how traumatic memories are lost and then recovered and how to best help those coping with the experience of recovering traumatic memories remains elusive. This article discusses a historical and a conceptual framework for understanding abuse memories, reviews the data and theories that inform our understanding of recovered memories, and offers currently accepted approaches for working with clients with traumatic memory issues. In doing so, we will suggest the unique contributions of gender to the phenomenon of recovered memories and to the status of sexual abuse survivors who have recovered memories.

II. Historical Context

In the late 19th century, the French neurologist Jean-Martin Charcot conducted the first systematic research into the disorder known as "hysteria." Hysteria had been accepted as a disorder afflicting women (its name was derived from the Greek word for the uterus, in which it was believed to be located) for hundreds of years. Charcot's careful observation and classification of the symptoms of hysteria inspired Sigmund Freud and Joseph Breuer of Vienna and Pierre Janet of France to set out to discover its cause. After extensive interviewing of patients, they independently reached the conclusion that hysteria was caused by unbearable emotional reactions to traumatic events, most often incest or other sexual trauma. The somatic symptoms of hysteria were disguised representations of intensely distressing events that had been exiled from memory and could be treated by a "talking cure" that would help patients recover, relive, and assimilate their memories of trauma.

Freud's famous paper, "The Aetiology of Hysteria," was met with an icy reception from colleagues, and unlike most other presentations of the time it received very little newspaper coverage. Freud felt that he was being shunned by the medical and scientific community; within a year, he recanted his thesis concerning hysteria. Freud's correspondence from this time makes frequent references to his growing concern about the social implications of his theory: if it was correct, then by implication, sexual abuse of children was widespread, not only in French lower classes but in respectable upper- and middle-class families of Vienna. This idea was simply not credible to Freud and many others of his day. There has

been much speculation, but many believe that Freud succumbed to the pressure of the German medical establishment, which offered no scientific criticism of Freud's thesis, only disavowal and disgust.

A contemporary of Freud's, Pierre Janet, introduced the term "dissociation" in late 19th century France to capture the fragmentation of memory that he observed in his traumatized patients, mostly women. Janet suggested that people with hysteria were unable to integrate traumatic memories, leaving the traumatic memory as a fixed idea set apart from normal memory processes. During Janet's career, the study of dissociation reached a pinnacle; shortly thereafter, research and clinical attention to dissociation and traumatic memory severely declined until the First World War. [See GENDER DEVELOPMENT: PSYCHOANALYTIC PERSPECTIVES.]

The First and Second World Wars once again led psychiatrists to note the link between traumatic experiences and memory disruptions in soldiers (mostly men) suffering from "shell shock." World War II brought about a strong interest in efficacious treatment for shell shock, which, like earlier work on hysteria, focused on the recovery and cathartic reliving of traumatic memories of combat, along with all the attendant emotions of terror, rage, and grief. In an attempt to speed the recovery of shell-shocked soldiers, hypnosis and drugs such as sodium amytal were used to aid in the recovery of traumatic memories. However, the psychiatrists who pioneered these techniques noted that retrieval of the memories did not by itself constitute effective treatment, but rather that the memories and their attendant emotions must be integrated into consciousness.

Trauma and its effect on memory once again received scrutiny as returning veterans of the Vietnam War began to speak out about their experiences. In response, the Veterans Administration commissioned comprehensive studies on the impact of war experiences on veterans. As a result of these studies, the American Psychiatric Association included the diagnosis of posttraumatic stress disorder (PTSD) in its official manual of mental disorders. Thus, formal recognition of the effects of psychological trauma entered the diagnostic nomenclature in 1980. Alterations in memory were included in the PTSD criteria as an inability to recall aspects of the traumatic event. [See POSTTRAUMATIC STRESS DISORDER; TRAUMA ACROSS DIVERSE SETTINGS.]

In the early 1970s Ann Burgess and Lynda Holmstrom began studying the psychological effects of rape, observing a set of reactions they called "rape

trauma syndrome" and noting that some rape victim's symptoms resembled those of combat veterans. By the early 1980s it was recognized that victims of rape and child abuse often suffered from the same type of memory losses after sexual trauma that had been identified in war veterans and accident, crime and disaster survivors.

For a decade or so, documentation and information about recovered memories were accepted, and new avenues of treatment for survivors were explored. Public acknowledgment of child sexual abuse grew by leaps and bounds as the popular press provided previously unheard of coverage and first-person accounts of child sexual abuse. The early 1990s saw the advent of what many authors have called a backlash against feminism; in this context a backlash against recovered memories arose in the form of the "false memory" controversy. The fundamental characteristic of a backlash is that those who have drawn awareness to disturbing issues are the very ones who are responsible for creating or fabricating these issues. A primary accusation of this backlash, then, was that recovered memories of childhood sexual abuse are false, usually implanted in vulnerable women by their therapists or self-help books. The False Memory Syndrome Foundation (FMSF) was founded in 1992 to promote this view, primarily in the media and in court settings. The FMSF directed most of its efforts at undermining the credibility of women reporting recovered memories and their therapists, underscoring the stereotypical view of women as passive, suggestible, and unwilling to take responsibility for self-imposed problems.

III. *Recovered Memories: Data, Theory, and Mechanisms*

The effort to describe and explain the phenomenon of traumatic memory loss and the mechanisms behind such a loss has caused considerable confusion and debate. Various ways of characterizing such a memory loss include amnesia, repressed memories, recovered memories, delayed memories, discovered memories, betrayal blindness, fragmentation, and forgetting. Regardless of the term applied, there is evidence for various complex forms of memory loss: general amnesia for the childhood period during which abuse occurred; amnesia for part but not all of a childhood trauma (e.g., a person remembers being physically but not sexually abused or remembers

one incident while forgetting others); amnesia for previous memory of a traumatic abuse (e.g., a person discloses abuse during childhood or as an adult and then later fails to remember the abuse or the disclosure); and amnesia for all abuse, including inaccurately recalling childhood in unrealistically positive ways.

A. EMPIRICAL DESCRIPTIONS OF RECOVERED MEMORY

There are often empirical limitations on studying memory: for the most part, it is retrospective, and researchers must often rely on self-report without external corroboration. Nevertheless, an impressive body of theory and research has developed on normal and traumatic memory processes, in some cases using prospective cases—that is, people with traumatic experiences, such as children identified through medical documentation and witnesses as being abused, are followed into adulthood.

Recovered memories are not like continuous memories, in a number of ways. Most first appear in the form of a flashback, a bodily sensation, a sensory impression or memory, an intense affective response such as a panic attack, or even a dream. These sorts of memories have been referred as implicit, behavioral memories—"remembered" in the body and senses. They might be described as snapshots, often without context or sequential ordering, but are vivid in some details and laden with intense emotion. In contrast, survivors describing their continuous memories of childhood abuse, including those who have forgotten some part of the abuse, describe their experiences in a narrative form, with a fairly detailed visual description and connected to time, place, and context. Only a small proportion of people discussing their recovered memories ever comfortably describe them as narrative memories, even with post-recovery therapy; any narrative form of the memory usually emerges over a long period of time.

Individuals often cannot make coherent sense of the memories, not describe them adequately, yet they can be quite consistent and strong through multiple repetitions. Over time more pieces of the memory, including additional events, may emerge and the individual can begin to place the experience in context, forming a narrative about the experience. This process often involves a construction of the most likely scenario, which is subject to all the influences and distortions of normal memory, but tends to maintain its experiential core. People report less confi-

dence in the accuracy of these recovered memories, even when they are corroborated, and often never get a satisfactorily complete narrative of what happened to them.

These memories are often originally triggered by some external event in the environment, a personal experience, or an event. For example, one woman reported that she first began to recall being sexually abused by her father when she was involved in an auto accident: while she was trapped in the car, a paramedic tried to soothe her by stroking her hair in a way reminiscent of her father. Other triggers are more commonplace, such as first becoming sexual with a chosen partner, having a child, and watching a television show or movie. It is not uncommon to be unaware of exactly what triggered the memory.

It is difficult to study these fragmentary memories in laboratory memory research; memories created under controlled conditions do not undergo this sort of fragmentation, and subjects are not stressed enough to produce dissociative responses. Thus, little research has been done on the memory quality. However, in one of the best prospective observational studies of the qualities of abuse memories among severely abused children, Ann Burgess and her colleagues identified both implicit behavioral abuse memories—which showed up as flashbacks, physical complaints such as unexplained pain, and reenactments of the physical movements involved in the abuse—and explicit, narrative abuse memories—describing the events verbally. As older children, some of these survivors could not produce the explicit narratives of their abuse, but continued with the implicit behavioral responses even 10 years later.

At least 30 peer-reviewed published retrospective studies of adult survivors of child sexual abuse have documented forgetting and the later recalling some or all of the abuse in between 19 and 59% of subjects. In a large-scale survey, assessing multiple types of trauma, Diane Russell found that 32% of those with trauma history indicated that they have experienced delayed recall of the traumatic event.

In Linda Meyers Williams's prospective study of adults whose childhood sexual abuse had been documented through hospital records, approximately 38% did not recall being sexually abused. An additional 16% who did recall the documented abuse reported having forgotten about the abuse for some period of time. Regardless of the sample, or whether the study was retrospective or prospective, abuse-specific amnesia has been a robust finding, with every

known study assessing amnesia for abuse having found it in at least some portion of subjects.

Two factors—younger age at time of abuse and more severe, violent abuse—have been associated with delayed recall of abuse in the literature. These variables often overlap, however, with another factor that has also been associated with delayed recall: abuse perpetrated by a caretaker. Indeed, abuse (physical and sexual) by a caretaker has been shown to be associated with memory impairment even when age at time of abuse and duration of abuse are controlled for. In addition, survivors who recover memories also describe a strong attachment to their abusers, with positive or mixed feelings about them except for their abusive behavior and a failure of other family members to believe the child or to end the abuse. Furthermore, sexual abuse is two times more likely to be forgotten than either physical or emotional abuse. [See CHILD ABUSE.]

B. THEORETICAL EXPLANATIONS FOR RECOVERED MEMORY

Betrayal trauma theory, proposed by Jennifer Freyd, addresses why traumatic experiences might be forgotten. The theory proposes that amnesia for childhood abuse exists not for the reduction of suffering, but for survival in the face of that suffering. From a logical analysis of developmental and cognitive research, she has argued that under certain conditions—such as sexual abuse by a parent—blocking cognitive information can be expected.

Betrayal trauma theory starts with the presumption that children rely on a caregiver for survival. If that caregiver is also causing harm, or is enabling harm to occur, the child is at great risk from two kinds of trauma. One kind of trauma is physical harm: threats to one's life or acts that can cause bodily harm and often do. This kind of trauma leads to terror, the extremely fearful emotional state required in the definition of traumatic response. However, often overlooked is the other kind of trauma: social harm. When a caregiver is causing the trauma, another dimension is triggered: betrayal of trust, along with threats to the maintenance of social relationships necessary for survival. Some traumas are high on both these dimensions. For instance, sadistic abuse by a caregiver, the Holocaust, some combat experiences, and many childhood sexual abuse situations including trusted authorities such as religious figures are both terrorizing and involving a betrayal of a relationship. While the anxiety responses found

in PTSD have been linked to the terror dimension, betrayal trauma theory suggests that amnesia for traumatic events involving social relationships are linked to betrayal.

Betrayal trauma theory has been supported by research on the factors that make amnesia most probable. In accordance with the theory, childhood abuse is more likely to be forgotten if it is perpetrated by a parent or other trusted caregiver, particularly when it involves a social attachment and the caregiver-perpetrator also fills other survival needs. Betrayal trauma theory notes that if the child processed such a betrayal in the normal way, he or she would be motivated to stop interacting with the betrayer. In order to continue interacting with the abuser, to preserve the important attachment, the child blocks or disconnects information about the abuse from other mental mechanisms, notably those that control attachment and attachment behavior.

To support the notion that amnesia will be more likely when the victim is dependent on the perpetrator, several sets of extant data demonstrate higher rates of amnesia for parental or incestuous abuse than for nonparental or nonincestuous abuse. Further, Freyd and her students have collected survey data questioning individuals' memory for a wide array of specific situations of physical, emotional, and sexual abuse in childhood. The preliminary results support the prediction that the greater the victim's dependence on the perpetrator, the less persistent are memories of abuse. Together, these data sets suggest that social dependence may play an important role in memory for traumatic events.

How is a child to manage blocking out abuse information on a long-term and sometimes nearly daily basis? How is the child to succeed at maintaining this necessary relationship when a natural response is to withdraw from the source of the pain? Betrayal trauma theory proposes that the child blocks the pain of the abuse and betrayal by isolating knowledge of the abuse/betrayal from awareness and memory. There are various avenues for achieving this isolation, including conscious memories without affect and the isolation of knowledge of the event itself from awareness. Most likely, there are multiple ways for the abused child to disrupt knowledge integration and awareness of the abuse, while facilitating the important and crucial relationship. Further, there are multiple ways for the adult survivor of childhood abuse to recover these memories, and these different ways will depend in part on how the memories were isolated in the first place.

These memory processes are likely enhanced by characteristics of many of the sexual abuses perpetrated by family members: they occur at night when that normal processing is already fuzzy and when the child may interpret (or be told by abusive parents to interpret) the experience as a dream or nightmare. Another possibility is that the child is confused by an alternate reality, when denial or suggestion by an abusive parent overtakes the child's (and perhaps the abuser's own) beliefs about what must have happened. In keeping with this idea, Linda Stoler found forgetting more likely in women whose abuse was a family secret, likely happening to other related children, but who could not get any adult to believe them or to intervene.

Data from confessed child sexual abusers also supports betrayal trauma theory. In interviews, these men indicated that they actively selected and groomed certain children for betrayal. In particular, they sought out targets who were not likely to not speak up or who would not be believed if they did. The main characteristic they sought was a lack of confidence, but is also helped if the children were young, small, had family problems, and were alone. The abusers then actively isolated children further, turning family members against them or keeping them away from friends; made the children feel special, creating a strong bond of mutual attachment; developed a public persona and a relationship with the children's families as an exceptionally good person; desensitized the child to their advances; created an alternative reality such as that the sexual contact was the children's fault or idea; and promoted self-blame, including threats to family if the children did tell. These abusers had learned that children who felt shame and guilt and who had some loyalty to the abuser and to their family were well groomed for silence.

Furthermore, it has been widely reported that currently abused children often cling to a view of their abuser as good, talking about how they love and miss them, and physically clinging to them. These observations suggest that attachment to an abuser can be complex, including suppression of negative information about an attachment figure even while abuse is ongoing.

The plausibility of amnesia with mechanisms already recognized by cognitive psychology does not negate the potential for false memories to occur. Indeed, the cognitive mechanisms that support knowledge isolation and subsequent recovery may be in part the same mechanisms that may support memory errors. Furthermore, although the betrayal trauma

theory has considerable potential, the current evidence in support of it is largely preliminary and exclusively correlational in nature. Although a relationship has tentatively been observed between reported memory persistence and the relationship of the victim to the alleged perpetrator, it does not necessarily follow that the cause of this relationship is betrayal trauma processes. In principle a variety of other potential factors could account for these correlations including age at the time of the event, differences in the interpretations of abuse associated with caretaker versus stranger abuse, and differences in the likelihood of talking about the two types of abuse or differences in the likelihood that the memories of the two types of abuse may be fabricated. Freyd and her colleagues are measuring some of these potentially confounding variables and will be able to evaluate statistically the contribution of these covarying factors in predicting memory impairment. Preliminary analyses indicate that one factor, age at the time of the event, cannot itself account for memory persistence over time. Some issues will require specialized populations. For instance, to evaluate the possibility that there is a difference in the likelihood that memories of types of abuse are fabricated, it will be necessary to use a prospective methodology with documented abuse samples. In correlational research there is always the possibility of unmeasured confounds; because we cannot ethically vary many of the factors of interest related to real abuse, the best we can currently do is systematically evaluate the contribution of covarying factors that we identify as possibly accounting for differences in rates of reported forgetting.

Betrayal trauma theory has important implications for any analysis of recovered memories that considers gender. Betrayal trauma theory highlights the importance of the victim-perpetrator relationship, drawing particular attention to abuse perpetrated by trusted caregivers. In terms of sexual abuse, girls and boys appear to experience different patterns of abuse. Specifically, girls tend to report more sexual abuse by family members that begins at a younger age and continues for a longer duration than boys do. Boys, on the other hand, tend to report more sexual abuse by people outside of the family. This abuse tends to be shorter in duration and to occur at older ages compared to girls. This pattern in childhood sexual abuse suggests that girls may be experiencing more betrayal traumas, in terms of sexual abuse, than boys do. In turn, this might lead girls to experience higher degrees of memory impairment than boys, though this has yet to be established empirically.

C. MECHANISMS UNDERLYING RECOVERED MEMORIES

Many mechanisms have been proposed to explain the phenomenon of recovered traumatic memories.

1. Automatic/Unconscious Mechanisms

In general, extreme emotional arousal interferes with normal processes of integrating the event into memory. Two mechanisms have been proposed: repression and dissociation. Freud defined repression as a defense mechanism of the ego that forces disturbing material in the unconscious, where it is relatively inaccessible to conscious awareness. Affect associated with the memory is discharged in other ways, and the experience becomes completely absent from conscious memory under normal conditions. Freud further believed that the affect associated with a repressed event was deemed by the person to be unacceptable or impossible to express and resulted in a symptom that could be cured by the recall of the repressed event and consequent venting of unexpressed affect.

Dissociation, rather than repression, was emphasized by Pierre Janet. Janet believed that when an event was too terrifying, bizarre, or overwhelming the experience was compartmentalized and split from consciousness rather than integrated into a unitary whole, remaining disconnected from the person's awareness and thus preventing the person from being able to speak of it.

More than a hundred years later, disagreements about whether the explanatory mechanism of psychogenic amnesia is repression or dissociation still persist. While some authors appear to use the terms interchangeably, amnesia for child sexual abuse is most typically conceptualized in recent literature as dissociation. Some authors have argued that "dissociation" is a more accurate term when referring to memory loss associated with child sexual abuse because the amnesia is induced by an external trauma and not by an internal conflict as Freud suggested; moreover, the concept of dissociation allows for a continuum of coping processes. Other authors argue that dissociation more accurately describes the extensive alterations of consciousness that can result from prolonged abuse and maintain that repression is a more common experience while dissociation emerges only when the more usual defenses such as repression are insufficient.

Currently dissociation appears to be the concept that best describes the available empirical data and

clinically observed symptomatology concerning amnesia for childhood sexual abuse. The American Psychiatric Association uses the descriptive term "dissociation," rather than the more theory-laden "repression." Dissociation, as assessed by the well-validated Dissociative Experiences Scale, is greater among survivors of childhood sexual abuse and in particular is predicted by early abuse onset, multiple forms of abuse, and chronic childhood trauma.

2. Neurobiological Mechanisms

Studies in animals have demonstrated that stress can impair memory function, through stress hormones, brain chemicals that affect the way memories are laid down, and lasting changes in the structure and function of brain areas involved in memory. Some of these findings have been replicated in humans, particularly stress responses in people who have PTSD. Using brain imaging techniques in humans, researchers have found evidence that flashbacks or traumatic memories in individuals who have been diagnosed with PTSD result in very different brain activation patterns than neutral memories. In such studies, traumatic memories were associated with decreased activity in the brain's language production center (Broca's area). In addition, traumatic memories were also associated with increased right hemispheric and decreased left hemispheric activity. Taken together, these findings illustrate changes in brain activity for traumatic memories compared to neutral memories. Further, the pattern of findings suggests that some traumatic memories may be literally unspeakable in terms the patterns of brain activation (i.e., decreased activity in Broca's area and left hemisphere). Other brain structures implicated in recovered memories are the amygdala, which is involved in the evaluation of the emotional meaning of incoming stimuli, and the medial prefrontal cortex, which is considered responsible for social and emotional regulation, including inhibition of fear responses to normal stimuli.

Neurochemical reactions, notably cortisol and norepinephrine levels, which normally increase during stress, show heightened sensitivity in animals exposed to chronic early stress. Low levels of cortisol and elevated levels of norepinephrine have been observed in adults with PTSD, even years after the trauma. This dysregulation may maintain the high level of emotional content attached to the original event, while interfering with long-term storage. [See STRESS AND COPING.]

3. Information Processing Mechanisms

Several mental mechanisms observed in normal cognitive processing may be applied to memory loss and recovery, the ability to process different kinds of information in parallel, selective attention, whether or not the information is or can be shared with others, and the length of time required to process complex information. Each of these could isolate knowledge of the abuse by interrupting the extended processing of the event.

Memory appears to be processed in two ways, with a dual representation of information. The most common form is autobiographical memory, encoded linguistically and verbally accessible in narrative form; but there is also a lower-level perceptually based representation of the event, encoded as bodily sensations and emotions. If a child does not have adequate linguistic capability to comprehend or encode an event, or if the perpetrator confuses the child by using language that distorts the original trauma, only sensory and emotional forms may be "remembered."

Individuals may be able to utilize more conscious mechanisms to invoke selective forgetting of traumatic events. Through selective attention, thoughts may be inhibited and competing thoughts may be facilitated in concert. These processes may occur at the point of encoding a memory, when an individual avoids the narrative rehearsals needed for normal memory storage, or at the point of retrieval, when an individual may learn "how to forget" already encoded unpleasant events, thus preventing their normal recall. In a cleverly designed set of studies, Michael Anderson demonstrated that subjects who are asked to try not to think about some part of the material they had previously learned do indeed forget that part when asked to recall everything they had learned. While thus far only neutral word stimuli have been used, this cognitive suppression deserves further examination as a mechanism that might account for what others have termed "repression."

Another way in which a narrative is assigned to a memory is through sharing it with others. If not shared, the information is likely to remain dynamic and sensory in nature, less accessible for retrieval. Sexual abuse is low in shareability—not something we readily talk about with others—and intrafamilial or intimate violence is perhaps uniquely nonshareable. Furthermore, parents may support an alternative reality in statements like "that never happened," "don't ever tell anyone," or "forget about it," which may erase or change the child's memory.

Another approach suggests that traumatic events may be stored correctly, but the individual may choose not to allow the memory into "meta-awareness." Jonathan Schooler proposed that some people "discover" memories through a new awareness of what those memories mean—for example, realizing that an event was abusive—which may then be confused with memory for the event itself. Others may have been prevented from explicit description or discussion of the event or unable to self-reflect because of extreme stress or dissociation, so the memory is not available to meta-awareness. Focusing on this aspect of awareness allows one to examine confusing cases where, for example, an individual claims to have no memory of an event, but had reported it to others during the time they believed themselves to be amnesic.

These mechanisms may overlap within an individual, and different mechanisms may be operating for different people. Additional research is needed to further explicate these issues.

IV. The False Memory Controversy

Issues of sexual abuse have been a hotbed of debate and concern throughout history. Current controversies center on the extent of abuse in our culture, whether abuse leaves aftereffects in "normal" individuals, whether children can be believed, whether women "invite" rape by their dress and behavior, and whether therapy is helpful or harmful. These attacks sometimes explicitly name the feminist movement as a negative force; other attacks come from within the feminist movement, labeling those who work with survivors "victim feminists." Terms such as "hysteria," "feminist plot," and "anti-male" are used to combat reports of child sexual abuse, and a few have claimed that the opposition to adult-child sexual contact lies with "radical feminists." Accusations of sexual abuse are attributed to rageful feminist therapists who have turned their own abuse histories into fanaticism.

These debates have been particularly intense with respect to recovered memories, igniting questions about belief (did an event really happen?), narrative (how, when, and to whom can someone speak about trauma?), and power (who has the authority to determine truth and voice?). In feminist analyses of patriarchal systems, these mirror the ways in which women and children are silenced: disbelieved, denied a voice, or given no authority even over their own truths.

The plausibility of amnesia with mechanisms already recognized by cognitive psychology does not negate the potential for false memories to occur. Indeed, the cognitive mechanisms that support knowledge isolation and subsequent recovery may be in part the same mechanisms that may support memory errors.

In fact, studies report corroboration of the core experience in between 47 and 86% of recovered memories, through reports of others who were abused by same perpetrator, reports of relatives, medical and legal record, diaries, and even perpetrator acknowledgments. Studies comparing recovered and continuous memories of abuse show no difference in rates of corroboration; indeed, a review of the literature concludes that there is no scientifically valid evidence to suggest that recovered memories are more or less likely to be inaccurate than continuous memories. The exception is reports of extreme ritual abuse, where corroboration has not often been found. However, even there, the core abuse may have been experienced, with misremembering of the situation or events as they actually occurred.

While it is likely that very few memories of any sort are wholly accurate, some have viewed any error in a memory as evidence of their overall falsehood, and any recovered memory as by definition false. In such positions, the question of whether real memories can be lost and then reliably recovered has not been separated from the question of the extent to which false memories can be implanted through suggestion. This conflagration of ideas is perhaps best represented by the introduction of the term "false memory syndrome" (which has not been accepted as a genuine syndrome by any psychological or psychiatric association) by the FMSF. The letterhead of this advocacy group formed in the early 1990s for parents accused of sexual abuse identified the problem as adult daughters whose therapists had implanted their memories of sexual abuse. Joined by psychologists (urging lawsuits against fellow practitioners) and defense lawyers, members of the FMSF have fueled a national debate and actively attempted to silence voices of survivors. Tactics have included intense media campaigns, distortion and selective presentation of data and court cases, ethical complaints and lawsuits against therapists and scholars, and even picketing of homes and offices of those who study and write about traumatic memory recovery.

This strategy may be an example of what Jennifer Freyd called "DARVO": denial, attack, and reverse

victim and offender. In indignant and self-righteous ways, abusers threaten, bully, and make a nightmare for anyone who holds them accountable or asks them to change their abusive behavior. This attack is intended to chill and terrify those who would speak out, through threats of lawsuits, overt and covert attacks on the whistle-blower's credibility, ridiculing the person who attempts to hold an offender accountable, and so on. The DARVO offender meanwhile portrays himself as a victim of the dangerous (woman) child.

Unilateral disbelief in the existence of recovered memories is similar in appearance to the ways in which women's accounts of oppression have been denied throughout history—there are periods of time when the medical and psychological literature have ignored or denied abuse and related issues. This is not to say that all recovered memories are true; rather, that the claim that all memories are false fits into a societal pattern of denying women's and children's experiences. For example, in the late 1980s and early 1990s, epidemiological research suggested that approximately one in four college women experienced rape or attempted rape. This finding was initially met with a great deal of media attention and concern. By the mid-1990s, a backlash had begun in which the research was attacked and women's experiences of rape were denied. On the heels of the date rape backlash, similar attacks on feminism were seen, including accusations that feminists who brought attention to violence against women had moved toward "victim feminism." Similar ebbs and flows of awareness of oppression can be seen in other areas, such as sexual harassment. As in the cases of date rape and sexual harassment, recovered memories and sexual abuse were brought to public attention as issues affecting mainly women. [See RAPE.]

Reports of large numbers of cases of false memories are from self-reports of parents who claim to have been falsely accused. In fact, the number appears to be small and not typical of most clients or most who recover memories. Three studies of retractors—individuals claiming to have false memories implanted by a therapist—have identified from 63 to 300 cases. One study found that 5% of people who reported recovered memories subsequently considered those memories to be inaccurate. Allan Schefflin and Daniel Brown reviewed 30 court cases involving women who had been in therapy as sexual abuse survivors and were subsequently suing a therapist, claiming the therapist had "implanted false memories" of sexual abuse. They observed that over-

all these women had a number of psychiatric diagnoses (5 to 7 each), had in about a third of the cases demonstrated clinically significant factitious behavior (distorting truth) while in therapy, had often disclosed abuse to previous therapists, and in every case had been exposed to a significant post-therapy suggestion that they were victims of their therapist rather than a sexual abuser. In a rather complicated twist, then, some of these retractors may have been demonstrating both an attention-seeking factitious disorder and the impact of implantation of the false belief that they were not abused.

Elizabeth Loftus has reported successful attempts to implant memories of childhood events such as being lost in a shopping mall in almost a quarter of her subjects. This paradigm relies on plausible events and on an older, trusted family member to suggest to the subject that the event occurred. She and others have generalized these results to memories first reported in therapy, claiming they too are implanted through suggestion. However, newer studies that control for demand characteristics and other biases find that the percentage in whom misinformation can be implanted is much smaller, under 5%, particularly when negative, bizarre, or improbable events are suggested. To the extent that abusers may seek to shape a child's alternate reality, this paradigm would suggest that an insistent parent might convince a more impressionable child that a more positive scenario, involving no abuse, describes their childhood years. However, without research on real-life abuse memories, these questions remain unanswerable.

Perhaps most telling are data from survivors who report recovered memories. Few of them report that a therapist first suggested that they had been abused. While about half of them report they were undergoing therapy when they recovered the memory (although they were not necessarily in a therapy session at the time), they are clear that they had entered therapy for more general symptoms and that the memories emerged as they gained more insight into these symptoms. Some clinicians have suggested that the generalized problems for which the individual sought therapy were signs that memories were about to emerge in any case.

Most laboratory studies of inaccurate remembering have involved memory for lists of words in a classic memory research paradigm. The subject is shown a list of related words and then asked to select them out of a long list of words. For over a century, researchers have shown that the subject is likely

to remember an item that was not in the original list, but was related in content. For example, the subject may have been shown "toe" and "heel," but also recall seeing "foot." While these inaccurate memories can be labeled "false," this research fails to include trauma-related stimuli (e.g., remembering "penis") and cannot be generalized to more complex real-world memories. More helpful are recent studies that try to sort out the factors that enhance memory fallibility or to identify characteristics of individuals who may be particularly susceptible to suggestions of prior experiences.

One interesting aspect of this controversy has been the use of the mantle "scientist" to claim a version of truth about what are ultimately individual lives. Any data obtained from nonlaboratory sources is viewed as unbelievable, asserting that "science" (defined as empirical laboratory data) takes precedence over women's stories. Ironically, this approach seems only to hold for those who report recovered memories. Loftus and Ketcham dedicated their 1994 book, *The Myth of Repressed Memory*, to the principles of science, with its rigors of proof; yet they present personal anecdotes of denial by alleged perpetrators, including one secondhand denial by a widow, as a demonstration that recovered memories are false, without any corroborative evidence. Others have suggested that this and other examples of logical errors can only arise in a patriarchal system which supposes that science is a greater authority than an individual experience, that information labeled "science" has been generated without bias, and that any emotional content must be outside the realm of scientific accuracy.

In a related vein, attacks against recovered memory have not been confined to a specific type of therapy or to unethical or "bad" therapy. Therapy in general has come under attack, with some taking a pseudo-feminist approach that therapy automatically takes away women's power and thus harms women. Parallel attacks have become popular in courtrooms, accusing divorcing mothers of implanting beliefs in children that they were abused by fathers in order to gain custody. Sweeping claims that children cannot tell truth from fiction have been asserted in the courtroom and the media. Assertions that sexual abuse does not usually upset children or lead to adult harm have been coupled with attacks on feminist zeal. Feminist analyses have suggested these seemingly diverse lines of assault on the truth of individuals are very much related. In each case, the rationales and the solutions suggested place the adult daughter in a

weaker, childlike position—ruled by a therapist, a father, or scientific (laboratory) data, which all take an authoritative stance that her own experiences are not valid. Those in power use their authority to infantilize the alleged victims, to regain the power already taken back by survivors and to silence future victims so abuse can continue unabated.

V. Approaches to Treatment

Psychotherapy, as noted earlier, has been cited as the process through which false memories of sexual abuse are created. One study of 350 licensed psychologists found that 25% of participants appeared to focus strongly on "recovered memory" techniques. However, the use of the label "recovered memory therapy" is questionable. It is not a formal or widely recognized therapeutic orientation. Nevertheless, several controversial techniques have been associated with treatment of clients who struggle with memory issues: hypnosis, dream interpretation, guided imagery, and interpretation of physical symptoms. While there is no direct evidence that these techniques can produce false memories when sensibly and responsibly applied, laboratory research suggests the possibility and therefore, clinicians have been advised to be extremely cautious and judicious in their use.

There is also a body of research and clinical experience that therapists can draw on to create therapeutic guidelines that will minimize the possibility of wholly false memories. The reality is that many clinicians will be faced with the task of treating people who present for treatment with suspicions that they have been abused, or with a host of symptoms usually associated with some history of trauma, and it is wise for therapists to prepare themselves.

Because therapy that deals with historical abuse issues usually causes clients, at least initially, to experience increased depression and decreased levels of functioning, some authors have suggested that it should not be practiced. A study of victims of Father James Porter found that indeed, those who had not recalled the abuse continuously had functioned better in their daily lives up to the point of recall, after which functioning declined and distress increased. However, most research has found that as the abuse is resolved, survivors report functioning again increases and distress decreases. Furthermore, there is evidence that the abuse might still have caused devastating consequences even without memory

recovery: among Linda Stoler's survivors who had recovered memories, 93% had suicidal ideation before memory recovery, and 80% had sought therapy for unspecified emotional distress.

Kenneth Pope and Laura Brown noted that therapists need to provide a therapeutic climate in which ambiguity and uncertainty are tolerated. This necessitates finding ways to support clients without jumping to premature conclusions or closure. In addition, they strongly admonish therapists to avoid being polarized in their attitudes toward childhood sexual abuse, that is, neither to regard it as the primary cause of all distress nor to dismiss it as being of little current importance. Based on laboratory research, Daniel Brown also noted that explicit warnings that not all of what is remembered is accurate reduces misinformation suggestibility; highly suggestible clients may be especially vulnerable to distortions of memory in response to therapy; less authoritarian, more egalitarian therapists are less likely to induce memory confabulation; and memory distortions are least likely to occur when a free-recall strategy is employed in contrast to structured inquiry or leading questions.

Cognitive-behavioral, psychoanalytic, feminist, and other theoretical approaches to treatment can be found in the literature. However, in spite of different terminology, most seem to be in agreement on the primary therapeutic tasks that face therapists and clients: creating safety and stabilization through the management/reduction of intrusive symptoms such as flashbacks, nightmares, or extreme affective distress; exploring and voicing memories of the trauma as they are integrated into the client's view of self and the world; dealing with the often overwhelming affect that accompanies not only the memories but the process of integration; and, finally, establishing a new self-world view and relationships that are not determined (although may be informed) by traumatic experience. Art and other expressive therapies may be beneficial, either alone or in conjunction with psychotherapy. Eye movement desensitization and reprocessing (EMDR) is a treatment for victims of trauma that involves the use of therapist directed eye movements. Although current knowledge of neurobiology does not provide a definitive explanation for how or why EMDR works, a significant body of empirical data supporting its efficacy has been collected over the past decade.

The following are practical recommendations made by experienced therapists treating this population. During the initial stage of memory recovery the

client may feel in crisis and needs to have an accessible therapist. As a result, it is helpful to all if the therapist is clear about availability, setting criteria for what constitutes a crisis for which she or he should be contacted, and if the therapist encourages the client to generate self-soothing strategies to try before calling. This not only addresses practical issues but is empowering to the client as it helps restore a sense of control over symptoms and is likely to decrease fear. Therapists should also be familiar with standard protocols for assessing suicidality and dangerousness, help clients to develop a cognitive framework for understanding the intensity of attachment they may feel to the therapist, assess client's current safety and identify any possible current environmental triggers of distress, and help client identify and use resources other than therapy that may be helpful both during crisis and the process of recovery. Finally, therapists with personal histories of sexual abuse must be especially careful to monitor countertransference reactions, that is, their own thoughts, feelings, attitudes, and behavior toward clients who report childhood sexual abuse or the suspicion of it.

It is imperative to gather information about, and be responsive to, potential ways in which the client's race, culture, social class, ethnicity, disability, sexual orientation, and gender may influence the long-term sequelae of trauma, the ability to receive help at the time of the abuse, the responses of others to the abuse history, and the most comfortable route to personal growth. Writings by feminist and multicultural therapists can be particularly helpful in this regard.

VI. Conclusions

As researchers and clinicians have examined memory for trauma, including recovered memories, approaches that capture the complexity of memory have emerged. Researchers have increasingly recognized that accurate, partially accurate, and inaccurate memories occur, perhaps in the same person about the same event. In turn, the field as a whole appears less likely to accept research and thinking that consider only absolutes—that is, claims that all recovered memories are necessarily true or false are increasingly viewed as too limited. Further, the field has also moved toward achieving an important balance between science and human experience. Researchers are increasingly grappling with the tension between excitement over research and the meaning

of scientific data to competing theories with a recognition of the negativity that trauma represents for the individual, as well as the meaning of the abuse experience to the individual.

Future directions for research must include interdisciplinary approaches to questions about mechanisms. Empirical and theoretic work has yet to untangle important questions, such as whether traumatic memories are processed in an ordinary way or by different systems. An interdisciplinary approach that draws on cognitive, developmental, and clinical knowledge is needed to address such questions that capture the complex nature of memory. Beyond research into memory mechanisms, the field also needs to continue to examine important questions that relate to clinical interventions. Systematic study of the ways in which treatment approaches can minimize inaccurate memories, as well as harm when memories are recovered, is needed.

Gender issues in recovered memories and trauma have important implications for women and children. The focus on false positive reports that has resulted from the false memory controversy has led too many people to ignore true reports of abuse and to miss false negative reports (e.g., women who do not say they were abused when they were). The focus on false positives and failure to focus on false negatives has ramifications at multiple levels, including research, clinical work, and policy. The strong emotion spurred by allegations of sexual abuse has also seriously affected the social environment for children. As a society, there is a need to repair damage done both by those who have expressed disbelief in the overall veracity of children's reports and by those who, through their zeal, have inappropriately

applied suggestive techniques that have likely increased errors in reporting abuse.

As empirical and clinical work that considers recovered memories moves forward, there is an urgent need for feminist analyses to continue to examine the politics and social forces that influence the field. Serious threats to individual scientists (e.g., lawsuits) and therapists (e.g., picketing, lawsuits, ethics complaints) and to victim/survivors must be closely examined. Threats in the social environment have the capacity to deeply affect research studies and interpretation of data. There remains a need to be vigilant and to examine carefully the data, as well as the politics behind the data, before interpreting research findings.

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