

Recovered Memories

Richard J. McNally and Elke Geraerts

A New Solution to the Recovered Memory Debate

Richard J. McNally¹ and Elke Geraerts²

*¹Harvard University, and ²University of St. Andrews, St. Andrews, United Kingdom, and
Maastricht University, Maastricht, The Netherlands*

Address correspondence to Richard J. McNally, Department of Psychology, Harvard
University, 33 Kirkland Street, Cambridge, MA 02138; e-mail: rjm@wjh.harvard.edu.

ABSTRACT—The controversy regarding recovered memories of childhood sexual abuse (CSA) has been characterized by two perspectives. According to one perspective, some people repress their memories of abuse because these experiences have been so emotionally traumatic, and they become capable of recalling the CSA only when it is psychologically safe to do so many years later. According to the other perspective, many reports of recovered memories of sexual abuse are false memories, often inadvertently fostered by therapists. In this article, we provide evidence for a third interpretation that applies to a subset of people reporting recollections of CSA; it does not require the concepts of repression, trauma, or false memory. These people did not experience their CSA as traumatic; they either failed to think about their abuse for years or forgot their previous recollections, and they recalled their CSA spontaneously after encountering reminders outside of psychotherapy. Their recovered memories are corroborated at the same rate as those of people who never forgot their abuse. Hence, recalling CSA after many years is not the same thing as having recalled a previously repressed memory of trauma.

Few debates in the history of psychology have been as contentious as the one concerning allegedly repressed and recovered memories of childhood sexual abuse (CSA; McNally, 2003). Many people report remembering having been sexually abused as children after not having thought about their abuse for many years. This much is not in dispute. But opinions differ dramatically regarding what to make of such reports.

Two strikingly polarized interpretations have dominated the debate. According to the *repression interpretation*, some victims of CSA are incapable of recalling their abuse until it is psychologically safe for them to do so many years later. Theorists endorsing this view rightly assume that traumatic experiences are ordinarily memorable, and they assume that sexual abuse qualifies as traumatic. Indeed, the text accompanying the diagnostic criteria for posttraumatic stress disorder (PTSD) in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000) states that: “For children, sexually traumatic events may include developmentally inappropriate sexual experiences without threatened or actual violence or injury” (p. 464). Therefore, they conclude, if certain people fail to think about their abuse for many years, then some defensive, inhibitory mechanism must have been blocking access to the memory during the years when it apparently never came to mind.

According to the *false memory interpretation*, recovered memories of abuse do not correspond to real events. That is, given that traumatic events are highly memorable, people who claim to have been entirely unaware of having been sexually traumatized in childhood must be mistaken. Those endorsing the false memory view are especially skeptical of reports

of traumatic memories that surface during hypnosis, guided imagery, or other similar memory-recovery methods.

The purpose of our article is to sketch a third interpretation that is qualitatively distinct from both the repression account and the false memory account. This interpretation is not a “middle-ground” position that blandly affirms that some people repress and recover memories of CSA and others develop false memories of abuse. Rather, building on our research and that of others, we provide a third account that relies neither on the concept of repression nor on the concept of false memory. More specifically, this account suggests that there are two groups of people who report recovering memories of CSA. One group does indeed develop false memories of CSA, just as the false memory interpretation claims. The second group recalls memories of CSA that may very well be genuine. This group reports having been sexually abused during childhood, having not thought about their abuse in many years, and having recalled their abuse during adulthood. Although some clinicians have regarded such cases as documenting the recovery of long-repressed memories of trauma (e.g., Briere & Conte, 1993), our third interpretation provides a different explanation.

In a nutshell, it includes the following elements. First, cases explained by our third account often involve CSA events that were not experienced as traumatic at the time of their occurrence. Hence, recalling an episode of CSA is not synonymous with recalling an episode of trauma. Second, not having thought about something for a long time is not the same thing as having been unable to remember it. Cases explained by our third account often involve either an absence of reminders of the abuse or deliberate and successful attempts to avoid dwelling on the experience during the long period of time when memories

of it apparently never came to mind. Third, in some cases, people do recall their abuse, but then forget having done so. That is, some people forget their prior recollections, thereby producing the illusion that the memory of abuse had never surfaced for many years. Fourth, CSA memories recalled spontaneously outside of therapy are more often corroborated than are those returning gradually during therapies designed to recover such memories. Fifth, laboratory studies document cognitive differences between groups of people who recover CSA memories either spontaneously or during these suggestive therapies. Those who spontaneously remember their abuse are more prone to forget prior recollections of other material in laboratory tasks, whereas those who recall memories during psychotherapy are more likely to exhibit false memory effects for material in laboratory tasks, and vice versa.

Our article is organized as follows. We first review arguments adduced in support of the repression and false memory interpretations of recovered memories of CSA. We next summarize research, including laboratory studies, relevant to these two interpretations. Finally, we provide arguments and evidence for our third interpretation of certain recovered memories of CSA.

THE REPRESSION INTERPRETATION

Repression theorists interpret recovered memories of CSA as previously repressed ones (e.g., Briere & Conte, 1993). If individuals say that they had not thought about their abuse in many years, then this must mean that they were unable to remember it. Indeed, why else would someone forget a seemingly unforgettable experience?

Some repression theorists use other terms such as *traumatic amnesia*, *dissociative amnesia*, *traumatic_dissociative amnesia*, or simply *dissociation*, but the idea is the same. A

victim has encoded a traumatic experience, and because it was so emotionally devastating, the victim is unable to remember the experience until it is psychologically safe to do so, often many years later. In fact, these theorists hold that the more traumatic an event is, the harder it may be to remember it. Brown, Schefflin, and Hammond (1998) made the following claim:

...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. (p. 97)

Moreover, these theorists hold, repressed memories of CSA are not dormant. As Breuer and Freud (1893/1955) put it, a repressed memory of sexual abuse “acts like a foreign body which long after its entry must continue to be regarded as an agent that is still at work” (p. 6). Hence, a repressed memory of CSA is akin to an undetected malignant tumor, silently poisoning the emotional life of its unwitting victim. Accordingly, if therapists suspect that repressed memories of CSA are causing the patient’s psychological symptoms, then they must help the patient surmount the amnesic barrier and bring the memories into awareness. Special techniques may be required to achieve this aim (e.g., Courtois, 1992; Olio, 1989). Brown et al. (1998) argued as follows:

Because some victims of sexual abuse will repress their memories by dissociating them from consciousness, hypnosis can be very valuable in retrieving these memories. Indeed, for some victims, hypnosis may provide the only avenue to the repressed memories. (p. 647)

By excavating these toxic memories, therapists hope to foster healing by helping patients integrate the abuse memories into the narrative of their lives.

Summarizing this perspective in his book entitled *Repressed Memories*, Spiegel (1997) wrote the following:

...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. (p. 6)

As Herman (1992) expressed it, “The ordinary response to atrocities is to banish them from consciousness” (p.1).

THE FALSE MEMORY INTERPRETATION

False memory theorists do not dispute the potentially traumatic character of CSA. But they argue that memories of abuse are not exempt from the principles governing the remembering and forgetting of other emotional memories. Because emotional arousal strengthens memory for the central features of an experience, and to the extent that an episode of CSA is emotionally traumatic, it ought to be remembered better, not less well, than other events. Therefore, they are skeptical of those who reportedly recall emotionally traumatic abuse after many years of being entirely unaware of it. They are especially skeptical if the memory emerged during hypnosis or similar procedures (Ceci & Loftus, 1994).

WHAT DOES THE SCIENCE SAY?

The repression interpretation does not withstand empirical scrutiny (McNally, 2003, pp. 186–228; McNally, 2004; Piper, Pope, & Borowiecki, 2000). More specifically, although repression theorists have adduced data from many studies in support of the claim that trauma victims are often unable to remember horrific experiences (Brown et al., 1998; Brown, Schefflin, & Whitfield, 1999), these data are subject to interpretations more plausible than the repression one. In some studies, the memory problems actually refer to everyday forgetfulness that occurs after a trauma, not an inability to remember the trauma itself. Other examples include mistaking a failure to encode an experience with an inability to recall it, assuming that not thinking about something for a long time implies an inability to remember it, confusing reluctance to disclose a trauma with an inability to recall it, confusing attempts to forget a trauma with the ability actually to do so, and mistaking organic amnesia for psychic repression of trauma.

Moreover, an analysis of studies involving corroborated traumatic events uncovered no convincing evidence that victims had forgotten, let alone repressed, their trauma (Pope, Oliva, & Hudson, 1999). Genuinely traumatic events are highly memorable, as dramatically exemplified by PTSD.

Furthermore, in accordance with the false memory interpretation, several lines of evidence suggest that some recovered memories are not genuine (McNally, 2003, pp. 229–259). First, some recollections are extremely implausible, including memories of satanic ritual abuse (Lanning, 1992; Victor, 1993), space alien abduction (Clancy, 2005; McNally & Clancy, 2005; McNally, Lasko, et al., 2004), and past lives (Peters, Horselenberg, Jelicic, & Merckelbach, 2007). Second, people usually “remember” these experiences only after

undergoing recovered-memory procedures (e.g., guided imagery, hypnosis) likely to foster false memories (Ceci & Loftus, 1994). Third, a substantial number of individuals who report having recovered memories of horrific abuse have later retracted their reports (Ost, Costall, & Bull, 2002; Pendergrast, 1996, pp. 344–397). Fourth, as Porter, Yuille, and Lehman (1999) have demonstrated, experimenters using guided imagery and repeated retrieval attempts can implant false memories of emotionally negative experiences (e.g., being attacked by an animal during childhood) in about 30% of college students. (During the debriefing, Porter et al. informed subjects that the memories were false and ensured that subjects were not distressed by the experiment.) Moreover, we found that false beliefs and memories can lead to long-term attitudinal and behavioral changes (Geraerts, Bernstein, et al., 2008).

Moreover, our laboratory research on adults who report recovered memories of CSA has provided evidence of false memory propensity in these subjects relative to those who say they had never forgotten their abuse. For example, in the Deese–Roediger–McDermott paradigm (Deese, 1959; Roediger & McDermott, 1995), recovered memory subjects are especially likely to remember having encountered critical lure words (e.g., *sweet*) that reflect the essence of lists of emotionally neutral words they actually did encounter (e.g., *sugar, candy, taste, tooth*; Clancy, Schacter, McNally, & Pitman, 2000). Recovered memory subjects are also especially likely to exhibit this effect for words related to trauma (Geraerts, Smeets, Jelicic, van Heerden, & Merckelbach, 2005). Of course, these results do not confirm that their CSA memories are false; they are merely consistent with this possibility.

Using the DRM paradigm, we have also found that people whose recovered memories are almost certainly false likewise exhibit heightened false memory propensity in this paradigm. These studies involved people who report memories of space alien abduction (Clancy, McNally, Schacter, Lenzenweger, & Pitman, 2002) and past lives (Meyersburg, Bogdan, Gallo, & McNally, in press). Finally, recovered memory subjects have a tendency to exhibit reality monitoring deficits on tasks requiring them to discriminate whether they had seen a word or merely imagined having seen it (McNally, Clancy, Barrett, & Parker, 2005). This finding is consistent with the possibility that they may have difficulty discriminating memories of images (“fantasy”) from memories of perceptions (“reality”).

As data consistent with false memory propensity accumulated, we also failed to find evidence consistent with the repression account. For example, in directed forgetting experiments requiring subjects to remember certain words while forgetting others, recovered memory subjects failed to exhibit a superior ability to forget emotional words related to trauma relative to subjects who had never forgotten their abuse or to control subjects who reported no history of abuse (Geraerts, Smeets, Jelicic, Merckelbach, & van Heerden, 2006; McNally, Clancy, Barrett, & Parker, 2004; McNally, Clancy, & Schacter, 2001; McNally, Ristuccia, & Perlman, 2005). Hence, the hypothesis that recovered memory subjects would be especially capable of forgetting material related to abuse was not supported.

A THIRD INTERPRETATION OF RECOVERED MEMORIES

In our opinion, the repression interpretation lacks convincing scientific support, whereas the evidence shows some people do recover “memories” of trauma that never occurred, consistent with the false memory interpretation. Does this mean that all recovered

memories of CSA are false? We do not believe that it does. In our early research (e.g., Clancy et al., 2000), we did not distinguish between two types of recovered memory experience (or recovered memory subject). However, our later work strongly suggests that there are, indeed, two types: one involving false memories and the other involving authentic memories (Clancy & McNally, 2005/2006; Geraerts et al. 2007). In the sections below, we describe the factors that contribute to cases of genuine recovered memories of CSA that do not involve repression, trauma, or even total forgetting.

The Abuse Was Not Experienced as a Trauma

According to the repression account, individuals repress their memories of abuse because the abuse was so emotionally traumatic. The overwhelmingly terrifying nature of the experience is precisely what supposedly activates defensive, inhibitory mechanisms that banish it from awareness and prevent it from coming to mind.

Sexual abuse of children is morally reprehensible, but it is not invariably traumatic, as revealed by a study involving in-depth interviews with 27 adults (17 women), recruited from the community, who reported recovered memories of CSA (Clancy & McNally, 2005/2006). Only 2 of 27 subjects remembered the experience as terrifying, overwhelming, or traumatic. The other subjects remembered it as weird, confusing, or uncomfortable. Moreover, only 2 subjects understood the experience as sexual at the time it occurred. Indeed, the average age of the group at the time of their abuse was only 7.7 years old. This finding replicates a questionnaire study of college students who reported recalling CSA (Joslyn, Carlin, & Loftus, 1997). In this study, the vast majority of episodes were not

understood by the victims as sexual, and, perhaps because of this, the victims had not thought about the abuse in years.

Although 13 subjects reported multiple occurrences of abuse, the mean number of abuse episodes was only 1.7 (Clancy & McNally, 2005/2006). The most common types of abuse were fondling ($n = 15$) and oral sex ($n = 8$). None of the 27 subjects was abused by a stranger; all knew and trusted the perpetrator.

However, after recalling their experience during adulthood, and viewing it through the eyes of an adult as sexual abuse, many subjects became highly distressed. In fact, 7 met symptomatic criteria for current PTSD, and all the participants believed that the abuse had multiple adverse effects on their lives. Retrospective reappraisal of the abuse as a trauma, after subjects recall it during adulthood, may render the memory pathogenic later in life.

The upshot is that at least some recovered memory subjects forget their abuse not because it was so traumatic, but because it was not traumatic. Therefore, a recovered memory of CSA is not necessarily a recovered memory of a trauma.

Our subjects said that they had forgotten the experience, encountered reminders in adulthood, recalled it, and realized it was abuse. A related phenomenon, documented in questionnaire studies of college students, concerns individuals who had never forgotten the experience at all, but only realized that it was abuse once they had gotten older (e.g., Melchert, 1996). Of course, these subjects do not fall into the recovered-memory category. Reinterpreting an always-remembered experience does not count as a recovered memory.

Absent Reminders of the Abuse

People who report not having thought about their CSA for many years sometimes lacked reminders of the abuse during the long period of time when the memory apparently never came to mind. Seven of the 27 subjects in our interview study said that they had just forgotten their abuse, and 4 of them emphasized the lack of reminders (Clancy & McNally, 2005/2006). Reminders will be scarce if the victim moves to another neighborhood or if the perpetrator dies, for example. Moreover, if the victim fails to disclose the abuse to others, it will not come to the attention of the authorities. When others are unaware of it, socially mediated reminders will be absent. Finally, as we describe below, some people actually recall their abuse, but then forget these prior recollections.

Deliberately Not Thinking About the Abuse

When asked why they had not thought about their CSA in so many years, 14 of 27 subjects said they deliberately tried not to think about the experience (Clancy & McNally, 2005/2006). Their ability to avoid thinking about the abuse was easier to accomplish than it would have otherwise been had the abuse been experienced as a trauma. Of course, merely pushing something out of mind does not mean that it has now become inaccessible to awareness. A “suppressed” memory is not the same thing as a “repressed” one.

The fact that subjects reported successful cognitive avoidance of the experience is consistent with previous questionnaire studies of college students who reported having recalled forgotten memories of CSA (Melchert, 1996). It is also consistent with one of our experiments (Geraerts, McNally, Jelicic, Merckelbach, & Raymaekers, 2008). We tested four groups of subjects: (a) adults who said they had never forgotten their CSA, (b) adults who had spontaneously recovered their memories outside of therapy, (c) adults who had

gradually recovered their memories in recovered memory therapy, and (d) adults who reported never having been abused. Each subject identified the most anxiety-related and most positive event that had occurred to him or her during the past 2 years. These served as the target memories in a thought-suppression procedure (Wegner, 1994). In counterbalanced fashion, subjects first thought about the target memory for 2 min (imagining period), then deliberately tried not to think about it for 2 min (suppression period), and then were permitted to think about anything, including the target thought, for the final 2 min (free expression period). During these three periods, if the thought popped into mind, the subject used a joystick to register the intrusion. Finally, we asked subjects to record spontaneous occurrences of both target thoughts in a diary for the following 7 days.

Intrusions of the positive thought did not vary across groups within each of the three periods. However, the group that had spontaneously recovered its CSA memories indicated fewer intrusions of their anxiety-related target thought during both the suppression and free expression periods, relative to the other three groups. The same pattern emerged for the diary tracking of the two target thoughts. Taken together, these data imply that people who report having forgotten their CSA for many years, only to recall it spontaneously in everyday life, seem especially good at executive control of the contents of consciousness. That is, they seem exceptionally skilled at not thinking about certain things, especially if the content is anxiety related. Note that this finding does not support the notion of repression. Avoiding thinking about something is not the same as repressing it so that one is unable to remember it.

It is unclear how some people manage to avoid thinking about certain memories. Indeed, direct attempts to suppress a thought often increase its frequency of occurrence, producing a rebound effect (Wegner, 1994). Accordingly, some people may direct their attention to competing thoughts rather than simply trying to suppress the unwanted thought directly.

Forgetting Prior Recollections of CSA

The concept of a recovered memory presupposes that the memory had not come to mind during the long period of time when the subject claims to have forgotten it. However, some subjects may have recalled their abuse on previous occasions, but then forgot having done so. The forgetting of prior recollections will produce the illusion that the memory had not surfaced in years.

In a case series involving corroborated recovered memories, Schooler, Bendiksen, and Ambadar (1997) found that subjects believed that the memories had not come to mind in many years, when, in fact, they had recalled the experience and had discussed it with others. Schooler et al. proposed that such cases illustrate a *forgot-it-all-along (FIA) mechanism*, whereby people forget prior instances of recollection. For example, some individuals may calmly recall and recount their abuse to another person. Years later, they may return to their childhood neighborhood and experience a sudden, surprising recollection. The emotional shock of the later recall, relative to the early one, may produce the illusion that the memory had not come to mind in many years. These individuals may incorrectly conclude that they had forgotten their abuse all along. Schooler et al.'s case studies suggest that at least some

recovered memories reflect genuine abuse episodes that were never forgotten, at least for as long as the subjects believed.

Is it possible that some people with recovered memories are not truly recalling the abuse event for the first time but are forgetting prior occasions of thinking about it? If so, how might this occur? To explore this possibility, we (Geraerts, Arnold, et al., 2006) investigated whether people reporting recovered memories were especially likely to underestimate their prior remembering. We asked subjects with either recovered or continuous memories of abuse to generate an autobiographical memory from their childhood in response to each of 25 cue phrases describing common childhood events (e.g., being home alone, going to the dentist). They were asked to focus on emotionally positive aspects of some events and on the negative aspects of other events. Two months later, subjects returned to the laboratory and generated the same memories. This time, although subjects were asked to retrieve some events in the same emotional frame as before, they were asked to retrieve other events in the opposite emotional frame. So, for example, if they had recalled “being home alone without parents” in a positive light during the first visit (e.g., having lots of freedom), they recalled the same event again, but they focused on the negative aspects (e.g., feeling lonely). Finally, subjects returned to the lab for a third time 2 months later and recalled all the events once again. This time, subjects had to recall each event in the same emotional frame in which they had recalled it during their first visit. Critically, after recalling each of the memories, subjects told the experimenter whether they had recalled that same memory during the second visit. Would people be able to recall having remembered

the event during the second visit? Would this depend on whether it was recalled in the same emotional context both times?

When the emotional frame on the final visit differed from the one on the second visit, subjects more often forgot having remembered the event during that second visit than they did when the emotional frame remained the same during both visits. So, simply shifting the way that people thought about the same memory (either positively or negatively) from one occasion to the next made them forget having thought about the memory before—an effect demonstrated repeatedly in recent cognitive psychology research (Arnold & Lindsay, 2002, 2005). Strikingly, this tendency was significantly greater for people reporting recovered memories than it was for people reporting either continuously available CSA memories or no history of abuse.

So, one reason why people may have a recovered memory experience is that they simply forget their prior recollections, just as Schooler et al. (1997) documented. They may forget prior cases of remembering if, for example, the mental context of their recovered memory experience differs dramatically from the mental context of prior recollections. Therefore, it is not as if they had forgotten the event for years, it is that they simply forgot having remembered it (see also Merckelbach et al., 2006).

Two Types of Recovered Memory Experience

Our laboratory studies show that people reporting recovered CSA memories exhibit a heightened propensity for forming false memories. On the other hand, they also show a pronounced underestimation of prior remembering. How can these phenomena be reconciled? Careful inspection of the precise type of recovered memory experience may

provide an answer. As we interviewed people with recovered memories, we identified two qualitatively different groups of people. One group of people come to suspect that their emotional problems and life difficulties are attributable to blocked memories of sexual abuse. They gradually recall the abuse “memories,” often aided by suggestive therapeutic techniques, such as guided imagery, dream interpretation, and hypnosis.

The other group of people is unexpectedly reminded of events that they believe they had not thought about for many years. They typically recall the abuse suddenly, upon encountering salient retrieval cues (e.g., seeing a movie about CSA, returning to the scene of the abuse).

These recollective experiences are so different that one must wonder whether they are characterized by different rates of corroboration. To examine this issue, Geraerts et al. (2007) studied subjects who had always remembered the abuse, those who had a recovered memory of it during suggestive therapy, and those who had a recovered memory spontaneously after encountering reminders in everyday life (i.e., outside of suggestive therapy). After completing a questionnaire about their memory of the abuse, subjects were asked whether there were other people who could corroborate the reported abuse. More specifically, Geraerts et al. classified a memory as corroborated if another person reported learning about the subject’s abuse within a week of its occurrence, if another person reported having been abused by the same perpetrator who allegedly abused the subject, or if the perpetrator admitted to having abused the subject. Independent raters, blind to the subject’s group, contacted potentially corroborating informants by telephone or mail. In some cases,

the informants contacted the raters. After collecting information from informants, the raters judged whether the evidence met one of the aforementioned criteria for corroboration.

Strikingly, memories that were recovered spontaneously, outside of therapy, were corroborated at a rate (37%) statistically indistinguishable from the corroboration rate (45%) for subjects who had never forgotten their abuse.¹ No memory recovered through suggestive therapy could be corroborated. Although this 0% corroboration rate does not necessarily mean that memories surfacing during therapy are false, it does recommend caution in interpreting memories recovered in suggestive therapy.

Differing Origins of Recovered Memory Experiences

The foregoing findings suggest that recovered memories may originate in different ways for people who recollect the abuse event spontaneously versus those who recall it through suggestive therapy. We hypothesized that memories recalled through suggestive therapy may be more likely to be the product of suggestion, a possibility consistent with (but not demanded by) the lack of corroboration. People recalling memories spontaneously, by contrast, may have recalled the event previously, but may have simply forgotten the fact that they had recalled it before. To examine these possibilities, we tested people with spontaneously recovered memories, people with memories recovered through suggestive therapy, and people with continuously available memories on a simplified version of the aforementioned FIA task (Geraerts, Lindsay, et al., 2008). Strikingly, only those subjects who had recovered their memories spontaneously showed heightened forgetting of prior remembering; subjects who either recovered their memories in suggestive therapy or who had continuous memories showed no such pattern. When tested on the DRM task, however,

only people who recovered their memories in suggestive therapy showed heightened false memory propensity; neither the spontaneously recovered group nor people with continuous CSA memories showed such a pattern.

This double dissociation strongly implies that memories recovered in suggestive therapy and memories recovered spontaneously outside of therapy have different origins. As a group, people who report having recovered their memories in suggestive therapy exhibit pronounced false memory propensity on the DRM task. To the extent that this pattern indicates a deficit in monitoring the source of one's memories, one must regard their recovered CSA memories cautiously. In contrast, people who report spontaneously recovering their memory of CSA do not exhibit heightened false-memory propensity on the DRM task. Yet this group does show a pronounced tendency to forget prior occurrences of remembering when these take place in a different retrieval context. These findings suggest that this group, as a whole, may fail to recall their prior recollections of genuine CSA.

It is possible that subjects with spontaneous recovered memories may fail to notice when an abuse memory comes to mind. That is, they may have consciousness of the memory, but not meta-consciousness of the episode as a recollection (Schooler, 2002). They may fail to register the recollection as a recollection.

In a modified replication of our previous thought-suppression experiment, we found that these subjects often failed to notice when an anxiety-related target memory popped into awareness during a period of attempted thought suppression (Geraerts, McNally, Merckelbach, et al., 2008). As in our previous experiment, subjects with spontaneously recovered memories registered fewer intrusions of the to-be-suppressed anxiety-related

target memory. However, in this experiment, we had the computer randomly probe subjects, asking them whether the target thought was on their mind. Relative to the other subject groups, the group with spontaneously recovered memories had more often failed to notice when this target thought was occurring. That is, the probes “caught” them thinking the target thought before they realized that it had popped into mind. They were aware, but not meta-aware, of its intruding. Hence, these subjects might have failed to notice when thoughts about their abuse drifted into awareness during the long period of time when they thought that the memories had never come to mind.

CONCLUSIONS AND IMPLICATIONS

The “memory wars” (Crews, 1995) have been dominated by two interpretations of recovered memories of CSA. In our opinion, the repression interpretation has not withstood scientific scrutiny, whereas the false memory interpretation holds true for many cases of recovered “memories” of CSA. Our third interpretation is designed to account for instances of genuine recovered memories. One need not invoke special mechanisms, such as “massive repression” (Herman & Schatzow, 1987, p. 12), to explain the phenomenon. Not having thought about something for a long time is not the same thing as having been unable to remember to it. Our research suggests that many people who forgot their CSA did not experience the abuse as a trauma when it occurred. Others may have forgotten previous recollections of the experience, resulting in the illusion that they had forgotten their abuse for many years.

Elements of our third interpretation, especially the claim that ordinary memory mechanisms may figure in genuine instances of recovered memory, have been mentioned by

others. Indeed, this argument, as well as the false memory one, has surfaced in prominent criminal and civil cases involving alleged repressed and recovered memories of CSA (e.g., McHugh, 2008).

There are several factors that increase the likelihood that a recovered memory of CSA is genuine. First, the victim experienced the abuse as confusing, disgusting, or scary, but not as a terrifying trauma. Second, the abuse occurred only once, or at most, a few times. Third, the victim failed to understand the experience as sexual or as abusive. Fourth, the victim successfully avoided thinking about the experience. Fifth, absent reminders fostered forgetting. Sixth, the victim forgot prior recollections of the abuse, producing the illusion that he or she had forgotten it all along. Seventh, when the person recalls the abuse during adulthood, the recollection occurs suddenly and is accompanied by shock that the person had forgotten the experience. Eighth, recollection occurs spontaneously in response to reminders outside of suggestive psychotherapy. Ninth, memories occurring spontaneously outside of psychotherapy are more likely to be corroborated than are those emerging gradually during certain forms of suggestive psychotherapy. Tenth, laboratory research indicates that those who gradually recover their memories in psychotherapy exhibit heightened false-memory propensity on the DRM task relative to those who recover their memories spontaneously outside of psychotherapy. Conversely, those who spontaneously recover their memories outside of therapy exhibit a heightened FIA effect in the laboratory relative to those who recover their memories in psychotherapy. In summary, a genuine recovered CSA memory does not require repression, trauma, or even complete forgetting.

The aforementioned criteria for distinguishing false memories from genuine recovered memories are not infallible, and several require retrospective recall. For example, some cases of false memory may develop outside of suggestive psychotherapy. Influenced by cultural folklore and media accounts regarding repressed memories of abuse, some people may interpret disturbing dreams as the gradual resurfacing of repressed memories of CSA. Conversely, patients may suddenly recall their abuse during a psychotherapy intake interview as the clinician asks about their childhood. Such recollections would be just as spontaneous as those occurring to reminders outside of the intake interview and thus differ dramatically from “memories” that surface after hypnosis and related suggestive methods.

Our third perspective on recovered memories has important implications. First, some episodes of abuse may be forgotten because they were not traumatic. Yet when the memories come to mind in response to reminders, the person may become extremely distressed after understanding the experience as sexual abuse for the first time. Second, the factors that we have identified as suggesting that a reportedly recovered memory may be genuine versus false are not infallible indicators. Nevertheless, our research encourages a “case-specific focus” (Alison, Kebbell, & Lewis, 2006, p. 419) regarding the circumstances surrounding the recovery of the memory. Finally, because our third perspective does not stipulate that adults reporting recovered memories of CSA have been unable to recall their abuse for many years, it cannot be used to support arguments for tolling the statute of limitations for recovered memories, even apparently genuine ones. Indeed, the FIA effect indicates that some individuals who believe they forgotten their abuse are mistaken.

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REFERENCES

- Alison, L., Kebbell, M., & Lewis, P. (2006). Considerations for experts in assessing the credibility of recovered memories of child sexual abuse: The importance of maintaining a case-specific focus. *Psychology, Public Policy, and Law, 12*, 419–441.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- Arnold, M.M., & Lindsay, D.S. (2002). Remembering remembering. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 28*, 521–529.
- Arnold, M.M., & Lindsay, D.S. (2005). Remembrance of remembrance past. *Memory, 13*, 533–549.
- Breuer, J., & Freud, S. (1955). On the psychological mechanism of hysterical phenomena: Preliminary communication. In J. Strachey (Ed. and Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 2, pp. 3–17). London: Hogarth Press. (Original work published 1893)
- Briere, J., & Conte, J. (1993). Self-reported amnesia for abuse in adults molested as children. *Journal of Traumatic Stress, 6*, 21–31.

- Brown, D., Schefflin, A.W., & Hammond, D.C. (1998). *Memory, trauma treatment, and the law*. New York: Norton.
- Brown, D., Schefflin, A.W., & Whitfield, C.L. (1999). Recovered memories: The current weight of evidence in science and in the courts. *Journal of Psychiatry and Law, 27*, 5–156.
- Ceci, S.J., & Loftus, E.F. (1994). “Memory work”: A royal road to false memories? *Applied Cognitive Psychology, 8*, 351–364.
- Clancy, S.A. (2005). *Abducted: How people come to believe they were kidnapped by aliens*. Cambridge, MA: Harvard University Press.
- Clancy, S.A., & McNally, R.J. (2005/2006). Who needs repression? Normal memory processes can explain “forgetting” of childhood sexual abuse. *Scientific Review of Mental Health Practice, 4*, 66–73.
- Clancy, S.A., McNally, R.J., Schacter, D.L., Lenzenweger, M.F., & Pitman, R.K. (2002). Memory distortion in people reporting abduction by aliens. *Journal of Abnormal Psychology, 111*, 455–461.
- Clancy, S.A., Schacter, D.L., McNally, R.J., & Pitman, R.K. (2000). False recognition in women reporting recovered memories of sexual abuse. *Psychological Science, 11*, 26–31.
- Courtois, C.A. (1992). The memory retrieval process in incest survivor therapy. *Journal of Child Sexual Abuse, 1*, 15–31.
- Crews, F. (1995). *The memory wars: Freud’s legacy in dispute*. New York: New York Review of Books.

- Deese, J. (1959). On the prediction of occurrence of particular verbal intrusions in immediate recall. *Journal of Experimental Psychology*, *58*, 17–22.
- Geraerts, E., Arnold, M.M., Lindsay, D.S., Merckelbach, H., Jelicic, M., & Hauer, B. (2006). Forgetting of prior remembering in people reporting recovered memories of childhood sexual abuse. *Psychological Science*, *17*, 1002–1008.
- Geraerts, E., Bernstein, D.M., Merckelbach, H., Linders, C., Raymaekers, L., & Loftus, E.F. (2008). Lasting false beliefs and their behavioral consequences. *Psychological Science*, *19*, 749–753.
- Geraerts, E., Lindsay, D.S., Merckelbach, H., Jelicic, M., Raymaekers, L., & Arnold, M.M. (2008). Cognitive mechanisms underlying recovered memory experiences of childhood sexual abuse. *Psychological Science*, *20*, 92–98.
- Geraerts, E., McNally, R.J., Jelicic, M., Merckelbach, H., & Raymaekers, L. (2008). Linking thought suppression and recovered memories of childhood sexual abuse. *Memory*, *16*, 22–28.
- Geraerts, E., McNally, R.J., Merckelbach, H., van Harmelen, A.-L., Raymaekers, L., & Schooler, J.W. (2008). *Reduced meta-consciousness of intrusions as an explanation for recovered memory reports*. Manuscript submitted for publication.
- Geraerts, E., Schooler, J.W., Merckelbach, H., Jelicic, M., Hauer, B., & Ambadar, Z. (2007). The reality of recovered memories: Corroborating continuous and discontinuous memories of childhood sexual abuse. *Psychological Science*, *18*, 564–567.
- Geraerts, E., Smeets, E., Jelicic, M., van Heerden, J., & Merckelbach, H. (2005). Fantasy proneness, but not self-reported trauma is related to DRM performance of women

reporting recovered memories of childhood sexual abuse. *Consciousness and Cognition*, 14, 602–612.

Geraerts, E., Smeets, E., Jelicic, M., Merckelbach, H., & van Heerden, J. (2006). Retrieval inhibition of trauma-related words in women reporting repressed or recovered memories of childhood sexual abuse. *Behaviour Research and Therapy*, 44, 1129–1136.

Herman, J.L. (1992). *Trauma and recovery*. New York: Basic Books.

Herman, J.L., & Schatzow, E. (1987). Recovery and verification of memories of childhood sexual trauma. *Psychoanalytic Psychology*, 4, 1–14.

Joslyn, S., Carlin, L., & Loftus, E.F. (1997). Remembering and forgetting childhood sexual abuse. *Memory*, 5, 703–724.

Lanning, K.V. (1992). A law-enforcement perspective on allegations of ritual abuse. In D.K. Sakheim & S.E. Devine (Eds.), *Out of darkness: Exploring satanism and ritual abuse* (pp. 109–146). New York: Lexington Books.

McHugh, P.R. (2008). *Try to remember: Psychiatry's clash over meaning, memory, and mind*. New York: Dana Press.

McNally, R.J. (2003). *Remembering trauma*. Cambridge, MA: Belknap Press/Harvard University Press.

McNally, R.J. (2004). The science and folklore of traumatic amnesia. *Clinical Psychology: Science and Practice*, 11, 29–33.

McNally, R.J., & Clancy, S.A. (2005). Sleep paralysis, sexual abuse, and space alien abduction. *Transcultural Psychiatry*, 42, 113–122.

- McNally, R.J., Clancy, S.A., Barrett, H.M., & Parker, H.A. (2004). Inhibiting retrieval of trauma cues in adults reporting histories of childhood sexual abuse. *Cognition and Emotion, 18*, 479–493.
- McNally, R.J., Clancy, S.A., Barrett, H.M., & Parker, H.A. (2005). Reality monitoring in adults reporting repressed, recovered, or continuous memories of childhood sexual abuse. *Journal of Abnormal Psychology, 114*, 147–152.
- McNally, R.J., Clancy, S.A., & Schacter, D.L. (2001). Directed forgetting of trauma cues in adults reporting repressed or recovered memories of childhood sexual abuse. *Journal of Abnormal Psychology, 110*, 151–156.
- McNally, R.J., Lasko, N.B., Clancy, S.A., Macklin, M.L., Pitman, R.K., & Orr, S.P. (2004). Psychophysiological responding during script-driven imagery in people reporting abduction by space aliens. *Psychological Science, 15*, 493–497.
- McNally, R.J., Perlman, C.A., Ristuccia, C.S., & Clancy, S.A. (2006). Clinical characteristics of adults reporting repressed, recovered, or continuous memories of childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 74*, 237–242.
- McNally, R.J., Ristuccia, C.S., & Perlman, C.A. (2005). Forgetting of trauma cues in adults reporting continuous or recovered memories of childhood sexual abuse. *Psychological Science, 16*, 336–340.
- Melchert, T.P. (1996). Childhood memory and a history of different forms of abuse. *Professional Psychology: Research and Practice, 27*, 438–446.

Merckelbach, H., Smeets, T., Geraerts, E., Jelicic, M., Bouwen, A., & Smeets, E. (2006). I

haven't thought about this for years! Dating recent recalls of vivid memories.

Applied Cognitive Psychology, 20, 33–42.

Meyersburg, C.A., Bogdan, R., Gallo, D.A., & McNally, R.J. (in press). False memory

propensity in people reporting recovered memories of past lives. *Journal of*

Abnormal Psychology.

Olio, K.A. (1989). Memory retrieval in the treatment of adult survivors of sexual abuse.

Transactional Analysis Journal, 19, 93–100.

Ost, J., Costall, A., & Bull, R. (2002). A perfect symmetry? A study of retractors'

experiences of making and then repudiating claims of early sexual abuse.

Psychology, Crime and Law, 8, 155–181.

Pendergrast, M. (1996). *Victims of memory: Incest accusations and shattered lives* (rev. ed.).

London: HarperCollins.

Peters, M.J.V., Horselenberg, R., Jelicic, M., & Merckelbach, H. (2007). The false fame

illusion in people with memories about a previous life. *Consciousness and*

Cognition, 16, 162–169.

Piper, A., Jr., Pope, H.G., Jr., & Borowiecki, J.J., III. (2000). Custer's last stand: Brown,

Schefflin, and Whitfield's latest attempt to salvage "dissociative amnesia." *Journal of*

Psychiatry and Law, 28, 149–213.

Pope, H.G., Jr., Oliva, P.S., & Hudson, J.I. (1999). Repressed memories: The scientific

status. In D.L. Faigman, D.H. Kaye, M.J. Saks, & J. Sanders (Eds.), *Modern*

scientific testimony: The law and science of expert testimony (Vol. 1, pp. 115–155).

St. Paul, MN: West Publishing.

Porter, S., Yuille, J.C., & Lehman, D.R. (1999). The nature of real, implanted, and fabricated memories for emotional childhood events: Implications for the recovered memory debate. *Law and Human Behavior*, *23*, 517–537.

Roediger, H.L., III, & McDermott, K.B. (1995). Creating false memories: Remembering words not presented in lists. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *21*, 803–814.

Schooler, J.W. (2002). Re-representing consciousness: Dissociations between experience and meta-consciousness. *Trends in Cognitive Sciences*, *6*, 339–344.

Schooler, J.W., Bendiksen, M., & Ambadar, Z. (1997). Taking the middle line: Can we accommodate both fabricated and recovered memories of sexual abuse? In M.A. Conway (Ed.), *Recovered memories and false memories* (pp. 251–292). Oxford, United Kingdom: Oxford University Press.

Spiegel, D. (1997). Foreword. In D. Spiegel (Ed.), *Repressed memories* (pp. 5–11). Washington, DC: American Psychiatric Press.

Victor, J. (1993). *Satanic panic: The creation of a contemporary legend*. Chicago, IL: Open Court.

Wegner, D.M. (1994). Ironic processes of mental control. *Psychological Review*, *101*, 34–52.

¹The corroboration rates for both the continuous memory group (45%) and the spontaneously recovered memory group (37%) are higher than those found for the continuous memory (22%) and recovered memory (3%) groups in a previous study (McNally, Perlman, Ristuccia, & Clancy, 2006). There are plausible reasons for this. First, McNally et al. (2006) used different criteria for classifying a case as corroborated; another person who reported being abused by the alleged perpetrator was not deemed corroboration for the subject's memory. When we eliminated cases corroborated in this way, the corroboration rate dropped from 45% to 21% for the continuous memory group and from 37% to 15% for the spontaneous recovered memory group. Second, in the McNally et al. (2006) study, there was no distinction between the two types of recovered memory subject, and many subjects in the continuous as well as the recovered memory group said that they had never told anyone about the abuse before, making corroboration especially difficult. Third, in a new wave of subjects in Maastricht, The Netherlands, the corroboration rates replicated: 73% in the continuous memory group, 63% in the spontaneously recovered group, and 0% in the group whose memories were recovered in suggestive therapy.