

WHAT'S WRONG WITH BELIEVING IN REPRESSION? A Review for Legal Professionals

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Some courts in recent years have tarnished their credibility by willingly and blindly adopting the theory of repressed memory. Such acceptance can destroy the reputations of falsely accused individuals, and, by failing to pay due attention to scientific evidence, gives credence to pseudoscience and demeans the scientific method. This paper was written to inform judges and attorneys about the relevant evidence, which shows that: (a) the concepts of repressed and recovered memory are not generally accepted in the psychological and psychiatric community; (b) the studies cited to support these concepts reveal significant flaws; (c) much empirical evidence has been accumulated against the theory of repression; (d) the studies using the best methodology offer the least support for the repression hypothesis; and (e) there is no evidence that recovered memories accurately reveal the specifics of long-ago events. Repressed- and recovered-memory theory is not supported by science.

Many laypeople, and some mental health professionals as well, have come to believe during the past two decades or so that memories of harrowing, even brutal, childhood events—even those repeated many times over extended periods—can be *repressed*, or cast completely out of consciousness. That is, to avoid the psychic pain such memories would cause, the mind supposedly denies them access to consciousness. The result is that the person remembers nothing whatever of the events, no matter how short the time between them and no matter how frequently they are repeated (Bass & Davis, 1988; Briere, 1989; MacMartin & Yarmey, 1998; Ofshe & Singer, 1994; van der Kolk, 1994; van der Kolk & Fisler, 1995). This casting-out process is unwilling and automatic, and supposedly occurs immediately, even as the noxious event is taking place (Ofshe & Singer, 1994). Childhood sexual abuse, so the theory goes, is an especially likely—even invariable—cause of such memory failure (Bliss, 1986; Brown, Schefflin, & Hammond, 1998; Coons & Milstein, 1986; Herman, 1992). The theory holds, in addition, that the buried memories are stored, often with perfect fidelity to the original events (Bass & Davis, 1988; Terr, 1994; van der Kolk & Fisler, 1995), and that the memories' malign influence causes multiple psychiatric problems (Herman, 1992; Ofshe & Singer, 1994). Indeed, repressed-memory proponents believe that treating such problems requires “recovering” the buried memories—bringing them to consciousness—where they supposedly provide a record of those

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long-ago occurrences (Herman, 1992; Terr 1994). All these processes account for the phenomenon in which adults who initially knew nothing whatever about having been sexually victimized as children will then later claim to “recall” that they were.

What does science say about such beliefs? Are they widely accepted in the psychological and psychiatric communities? How often, and how powerfully, does repression operate? Indeed, does it exist at all? How reliable and veridical are recovered recollections?

The psychological and psychiatric communities appear to be increasingly skeptical about repressed and “recovered” memories from the distant past (Brandon, Boakes, Glaser, & Green, 1998; Crews, 1997; McNally, 2005; Paris, 1996b; Piper, Pope, & Borowiecki, 2000; Pope & Hudson, 1995; Rofé, 2008; Stocks, 1998). But, how well do attorneys and trial judges understand the reasons for this skepticism—that is, that science does not support such concepts? Because adjudicating cases involving these concepts has proven vexatious (Porter, Campbell, Birt, & Woodworth, 2003; Van Koppen & Crombag, 1999), the present paper is offered in hopes of providing attorneys and trial judges with information to ease that task. It examines the literature, especially that published since the 1999 review by Faigman, Kaye, Saks, and Sanders, which was critical of repressed and recovered memories (Faigman, Kaye, Saks, & Sanders, 1999). Has scientific knowledge about these concepts changed since then? How have courts since 1999 ruled on admitting recovered- and repressed-memory testimony?

Terminology

This paper examines only one question: does scientific evidence support the idea that people commonly become unable to remember harrowing events, and then, after a period of amnesia, “recover” the memory? The paper is not concerned with the presumptive mechanism of this hypothesized phenomenon; the mechanism is irrelevant to the question of whether evidence for the phenomenon exists. As long as there is agreement about the matter being discussed, the specific term applied to the matter should not distract attention from the question of whether it occurs. Because theorists have used many terms—traumatic amnesia, suppression, psychogenic amnesia, repression, dissociative amnesia, robust or massive repression, etc.—to describe this hypothesized occurrence, and have sometimes used them imprecisely, the reader might benefit from a brief discussion of terminology.

In discussions about highly stressful experiences that cause memory failure, the term *traumatic amnesia* is better avoided, because it risks confusion with the memory deficit produced by physical insults to the brain. *Suppression* and *repression* also cause confusion. Freud considered the two terms to be roughly equivalent (Erdelyi, 2006). However, suppression has evolved to mean an active and more or less willed “decision to defer paying attention to a conscious impulse or conflict” (Vaillant, 1990, p. 262), whereas repression as discussed here is considered to operate automatically and unconsciously (Brandon et al., 1998; McNally, 2003; Ofshe & Singer, 1994), causing “a burial of memory” (Terr, 1994, p. 85). In addition, although *psychogenic amnesia* is sometimes used as a synonym for repression, the terms should not be used interchangeably. Psycho-

genic amnesia is characterized by massive retrograde memory loss (i.e., loss of recall for an entire block of time before some given point), whereas the phenomenon discussed here involves a circumscribed failure to recall one or more traumatic event(s). Furthermore, in contradistinction to the kind of memory failure under examination here, psychogenic amnesia does not have an immediate temporal relationship to a trauma (i.e., it occurs at some variable time afterwards); is not accompanied by loss of personal identity, typically ends abruptly rather than gradually; rarely lasts more than a few weeks; and usually does not require psychotherapy for its termination (Brandon et al., 1998; McNally, 2003, p. 187).

In this paper, *dissociative amnesia*, defined as resulting from *repression*, will refer to the inability to remember that supposedly results from a severe psychological insult. Freyd (1996) accepts this use of “repression,” and both she and other writers consider the term to be synonymous with dissociation (Erdelyi, 1990, 2006; MacMartin & Yarmey, 1998). For example, “Repression and dissociation are sometimes used interchangeably, and even when [they are not], the differences between them are often unclear” (Bowers and Farvolden, 1996, p. 358). Moreover, recovered-memory proponents believe that both repression and dissociation perform the same function—protecting the psyches of traumatized individuals (MacMartin & Yarmey, 1998; Ofshe & Singer, 1994). Legal cases exemplifying this hypothesized phenomenon thus become *repressed-memory* cases; the once-repressed recollections are *recovered memories*.

One should remember what amnesia and repression do—and do not—mean. Amnesia means an *inability* to recall something (McNally, 2003). It “connotes a pathological condition . . . carrying with it the implication that [trauma-induced amnesia] is a condition in need of treatment” (Read & Lindsay, 2000, p. 144). The term does not refer to a person who has deliberately tried to avoid thinking about an unpleasant occurrence. Nor does it apply to a situation in which someone had simply not thought about an event for a long time, but would have been quite capable of recalling it if directly asked; one cannot speak of repression if an appropriate reminder triggers immediate recollection.

Another phenomenon is sometimes—but wrongly—considered as an example of a repressed traumatic memory. As evidence for traumatic amnesia, some theorists cite the DSM-IV PTSD criterion of “inability to recall an important aspect of the trauma.” However, there are two problems with this argument. First, repressed-memory legal cases involve claims of inability to recall, not merely *some aspect* of the traumatic event, but rather *anything at all* about it. For example, plaintiffs often claim that, for years, they had no memory whatsoever of the sexual mistreatment.

Second,

the mind does not operate like a videotape recorder, and so there is no reason to expect that every aspect of a traumatic experience will be encoded into memory in the first place. (Encoding refers to the act of forming, in neural tissue, a mental picture, or symbolic representation, of an event. It is the first step in forming a memory.) Under conditions of high arousal, most people attend to the central features of the event at the expense of the peripheral ones. Individuals robbed at gunpoint sometimes fail to encode the face of the robber, often because their attention is glued to his weapon. A failure to recall the assailant’s face would not constitute “amnesia” for an important aspect of the trauma, because the victim

never encoded the face into memory in the first place. The DSM-IV symptom is ambiguous because it fails to distinguish between [on the one hand] encoding followed by retrieval failure (i.e., amnesia) and [on the other] simple failure to encode during the event itself (McNally, 2005, p. 819).

In other words, to demonstrate repression, it must be shown that a person first actually encoded the event, but thereafter was unable to remember it.

It is important to keep in mind that the noxious events in question are *extreme*. They cause intense fear, horror, or helplessness: for example, those listed in DSM-IV-TR as causing posttraumatic stress disorder: severe automobile accidents, concentration camp internment, violent personal assaults, terrorist attacks, and the like. Some recovered-memory plaintiffs have claimed they repressed recollection of events that were undeniably trivial and caused them no distress at the time. Such claims make no sense.

Is the Repression Concept Generally Accepted by the Law?

According to *The New Wigmore: a Treatise on Evidence*, previous judicial opinions and scientific publications are two major sources used to ascertain general acceptance (Kaye, Bernstein, & Mnookin, 2004). What do these sources say about dissociative amnesia and its related concepts?

Judicial Decisions

“When other courts have evaluated the general acceptance of a form of scientific evidence, their opinions and decisions may provide useful precedent” (Kaye, Bernstein, & Mnookin, 2004, p. 176). Piper, Pope, and Borowiecki (2000) reviewed U.S. appellate-level decisions in recovered-memory cases. The authors found that before about 1999, most courts refused to recognize the validity of repression, either to justify tolling a statute of limitations, or as a scientifically validated theory that can legitimately be presented to a jury. They also found that in the great majority of appellate-level decisions, the courts refused to accept, either explicitly or implicitly, the validity of repressed and recovered memory. Moreover, when state Supreme Courts required evidentiary hearings on these concepts, *in every case* they were rejected.

Since 1999, when Faigman and colleagues reviewed the state of the law, State courts have continued to struggle with the admissibility of expert testimony on repressed and recovered memory. Some of the States grappling with this question since then are South Carolina, Indiana, Utah, Arizona, Illinois, and Indiana. As indicated by the many unpublished opinions, the “science” underpinning repressed memory is still being challenged across the nation, even in States where expert testimony on repressed memory was admitted before 1999.

The evidentiary rule that is applied by the court determines the admissibility of testimony on recovered memory. Many states have adopted the federal evidence rule and the case law surrounding the admissibility of scientific evidence. In the federal court system, the admissibility of expert testimony or scientific findings is decided on whether or not the testimony would aid the trier of fact in understanding the evidence or determining a fact in issue. *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 592, 113 S. Ct. 2786, 125 L.Ed.2d 469, 482

(1993). The level of acceptance in the scientific community is considered only as a supplementary factor. *Id* at 594. The broad standard posited by *Daubert* deviates from the previous *Frye* rule, *Frye v. United States*, 54 App. D.C. 46, 293 Fed. 1013 (1923), which requires that expert opinions be based on theories or methods generally accepted by the scientific community. *Id* at 47. Courts throughout the state and federal court levels, whether they use the *Frye* standard or the *Daubert* standard, or have developed their own standards, are divided on whether the scientific community generally accepts repressed-memory theory. The courts' decisions reflect these divisions.

With the adoption of the *Daubert* standard, federal cases involving repressed or recovered memories, dissociative identity disorder, or any other kind of psychiatric or psychological condition, no longer consider whether the mental disorder or condition is commonly accepted within the mental health community. *Borawick v. Shay*, 68 F. 3d 597 (1995); *U.S. v. Bighead*, 128 F.3d 1329 (1997); *S.V. v. R.V.*, 933 S. W.2d 1 (1996). District courts use a case-by-case or totality-of-the-circumstances evaluation and are given discretion to balance all the factors to determine both the reliability of the evidence, as well as the probative versus prejudicial effect of the testimony. *Borawick v. Shay*, 68 F.3d at 605.

A number of the cases litigated since 1999 involve suits brought years after the Statute of Limitations (a statutory time beyond which an action cannot be brought) has run. The first hurdle for recovered-memory cases involves qualifying for an exception to the Statute of Limitations. For example, *Moriarty v. Garden Sanctuary Church of God*, 341 S.C. 320, 534 S.E.2d 672 (2000), held that an individual with dissociative amnesia or a repressed memory may satisfy the statute of limitations exception under the discovery rule if he or she can "prove to the jury that a person of common knowledge and experience would not have been put on notice that she had a claim . . ." and can "establish the fact of her repressed memories by expert testimony." *Id.* at 333. The court included this common-knowledge requirement with the expert testimony to take cognizance of the fact that repressed-memory theory falls within a controversial area of psychiatry. *Id.* at 332. In addition, because the Supreme Court of South Carolina recognized the "horrific possibility of false accusations," it added the requirement that a plaintiff must present independently verifiable, objective evidence corroborating a repressed memory claim. *Id.* at 334. The court stated that:

the element of "objective verifiability" may be satisfied by corroborating evidence such as (a) an admission by the abuser; (b) a criminal conviction; (c) documented medical history of childhood sexual abuse; (d) contemporaneous records or written statements of the abuser, such as diaries or letters; (e) photographs or recordings of the abuse; (f) an objective eyewitness's account; (g) evidence the abuser had sexually abused others; or (h) proof of a chain of facts and circumstances having sufficient probative force to produce a reasonable conclusion that sexual abuse occurred. *Id.* at 336.

The Indiana Supreme Court declined to declare all repressed memories unreliable. *Doe v. Shults-Lewis Child and Family Service, Inc.*, 718 N.E.2d 738, 750-751 (1999). The court noted:

Indeed, if anything can be discerned from a review of the current horizon, it would be that there is no single trend among state courts on the question of repressed

memory in childhood sexual abuse cases. Put simply, there is enough information supporting the theory of repressed memory that this Court cannot reject it in all cases as a matter of law. *Id.* at 750.

Even in states where Daubert and the Federal ER 702 have been adopted, admissibility of repressed-memory testimony is not guaranteed. The Supreme Court of Utah, for example, found that repressed memory as a *new science* had not passed the threshold of reliability test. *Franklin v. Stevenson*, 1999 UT 61; 987 P.2d 22, 28 (1999). The basis for the decision was the court's own review of the literature:

Our research suggests that the idea of memory repression itself, let alone the methods of recovery, is a point of disagreement within the medical, psychiatric, and psychological communities. *See, e.g.*, Douglas R. Richmond, *Bad Science: Repressed and Recovered Memories of Childhood Sexual Abuse*, 44 U. Kan. L. Rev. 571, 564-65 (1996) (discussing views of the American Medical Association, the American Psychological Association, and the American Psychiatric Association); Julie M. Kosmond Murray, *Repression, Memory, and Suggestibility: a Call for Limitations on the Admissibility of Repressed Memory Testimony in Sexual Abuse Trials*, 66 U. Colo. L. Rev. 477, 498-504 (1995) (same). *Id.* at 16.

The Arizona Supreme Court affirmed the State's use of the *Frye* standard, but nevertheless, permitted testimony on repressed memory. *Logerquist v. McVey*, 196 Ariz. 470; 1 P.3d 113 (2000). The Court determined that *Frye* did not apply in a repressed memory case. It reasoned that the testimony was based on the witness having reached a conclusion by inductive reasoning derived from his or her own experience, observation, or research, as opposed to having done so by deduction from applying novel scientific principles, formulae, or procedures developed by others. In *Logerquist*, the validity of recovered-memory theory was tested by interrogating the witness; in *Frye*, it was tested by inquiring into general acceptance.

Finally, the Illinois and Louisiana courts are the most permissive of testimony on repressed memories. Illinois, taking notice of the increasingly common belief that child sexual assault victims repress their memories, allowed testimony on this topic. *Hobert v. Covenant Children's Home*, 309 Ill. App. 3d 640, 642; 723 N.E.2d 384, 386 (2000). In Louisiana (*Doe v. Archdiocese of New Orleans*, 823 So. 2d 360, 365 [2002]), the expert had developed his own methodology from available information on repressed memory, as well as from numerous clinical studies, to create a list of factors specific to the plaintiff. The expert acknowledged that memory repression varies among individuals; that patients are vulnerable to implanted suggestions that they were abused; and that because of the lack of standardization, there is no known error rate for detecting repressed memories. Despite the expert's acknowledgement of these weaknesses, the Court held that his methodology and opinions conformed to the science of repressed memory, and admitted the testimony.

To summarize: as of 2008, the Law has yet to definitively determine repressed memory's acceptability as a scientifically validated theory that can legitimately come before a jury. The States' decisions have varied as their Courts continue to

examine and evaluate the general acceptance and validity of repressed-memory theory.

Is the Repression Concept Generally Accepted in the Relevant Scientific Community?

Those who support the notions of dissociative amnesia and repression have repeatedly argued that the relevant scholarly and scientific community considers these ideas scientifically valid and generally accepted, and that the courts should accept these concepts. For example, Brown, Schefflin, and Hammond (1998) assert that "repressed memory . . . or more appropriately, dissociative amnesia . . . has been recognized by most medical, psychological, and mental health professional organizations. The world literature has validated this concept for over a century" (p. 599). Moreover, according to Gleaves and associates, "dissociative . . . amnesia was studied and described extensively by Pierre Janet in the 1880s as well as by Freud in some of his early writings" (Gleaves, Smith, Butler, & Spiegel, 2004, p. 11).

These authors here make the common error of believing that the kind of repression discussed in the present paper is identical to that described by Janet and Freud in the 19th century (Ofshe & Singer, 1994). The belief misreads history. As mentioned above, this modern-day repression "allegedly permits patients to lose the ability to retrieve knowledge of major life events, extremely long series of traumatic events, and immensely complicated patterns of social behavior. [Accounts may include] up to 1,000 rapes and/or assaults stretching over years . . . or decades-long sexual and physical victimization by networks of satanic cults, and confessions of mass murder" (Ofshe & Singer, 1994, p. 395). Some theorists believe, moreover, that after being repressed, these memories are forever stored unchanged, as in a kind of deep freeze.

We have found nothing to suggest that either Janet or Freud ever wrote of such an expansive and powerful mental mechanism (Merskey, 1999; Ofshe & Singer, 1994; Ofshe & Watters, 1994; Webster, 1995). For example, Hedges (1994) observes that the notion of massive forgetting of a traumatic experience and the possibility of later video-camera-type recall is not a part of any existing psychoanalytic theory of memory. We have similarly found no evidence that any of Freud's patients developed the kind of extreme memories mentioned just above. Moreover, typical 19th-century dissociative amnesia cases showed features unheard of in today's repressed- and recovered-memory cases: brief hysterical alterations of consciousness, episodic convulsions or hysterical fits, transient loss of personal identity, sleepwalking, hysterical hallucinations, and various gait disturbances (Merskey, 1999; Nemiah, 1979). In other words, yesterday's and today's "repression" and "dissociation" differ markedly.

Rather than being a concept introduced by Janet or Freud, the repression of today was apparently never proposed until about a century after these men lived: it was only in 1985 that the notion of "massive repression" first appeared. In that year, Judith Herman delivered a speech to the American Psychiatric Association, describing this new mental mechanism (Ofshe & Singer, 1994; Pendergrast, 1995; Webster, 1995). No record exists of anyone ever having mentioned such a concept before this speech, and nothing previously published in the scientific literature on

memory had indicated that such a mechanism's existence was ever suspected. The concept of massive repression appears to have been a relatively recent discovery even for Herman herself: just 4 years before the 1985 speech, she published a book on sexual abuse—incest between fathers and daughters (Herman, 1981). In the book's 250 pages, not a single mention is made of this kind of profound memory disturbance. Again, the type of repression—called *robust repression* by Ofshe and Watters—at issue in today's courtroom cases has very little in common with that of Freud. That this kind of repression is a product of the late 20th century has significance, to be discussed below (see *What evidence has been offered against the concept of repression?*).

Scientific Publications

In 1997, two memory researchers observed that “the recovered memories debate is the most passionately contested battle [ever] waged about the nature of human memory. Professionals on [either side] of the debate [found] their competence, motives, and even integrity called into question. The debate has consistently [been] characterized by strong emotions and often by outright acrimony” (Lindsay & Read, 2001, p. 71). Even in 2006, one commentator could say, “No issue has seen such contentious and emotional brawling among psychologists as the question of repression” (Smith, 2006, pp. 534-535).

This divisiveness and acrimony extended even to high levels of the American Psychological Association. In 1993, the Association established a working group of six expert psychologists: three clinicians and three researchers. Its charge was to review the scientific literature on adults' previously unrecalled memories of childhood sex abuse, and to make recommendations to the Association to inform future discourse. Unfortunately, even after months of deliberations, the working group itself could not agree enough to be able to write a joint final report. The clinicians wrote theirs, the researchers wrote theirs, each then replied to the other, and then each wrote a rejoinder to the replies (Alpert, Brown, Ceci, Courtois, Loftus, & Ornstein, 1996).

Further evidence that scientific authorities do not generally accept repressed and recovered memory concepts is shown by position papers of several major professional societies. The American Medical Association, the American Psychiatric Association, the (British) Royal College of Psychiatrists, the Canadian Psychiatric Association, and the Australian Psychological Society have all voiced skepticism about these notions. For example,

The American Medical Association considers recovered memories of childhood sexual abuse to be of uncertain authenticity, which should be subject to external verification. The use of recovered memories is fraught with problems of potential misapplication (American Medical Association Council on Scientific Affairs, 1995, p. 117).

If memories of events have not been revisited and cognitively rehearsed in the interval between occurrence of the events and attention being paid to them some years later, it is not clear that such memories can endure, be accessible, or be reliable (Canadian Psychiatric Association, 1996, p. 305).

Existing scientific evidence does not allow global statements to be made about a definite relationship between trauma and memory. The available scientific and clinical evidence does not allow accurate, inaccurate, and fabricated memories to

be distinguished [from one another] in the absence of independent corroboration (Australian Psychological Society, Limited, 1994, p. 2).

In addition, many individual mental health professionals are deeply skeptical about dissociative amnesia and its allied concepts, as has been demonstrated in several surveys (Dell, 1998; Lalonde, Hudson, Gigante, & Pope, 2001; Pope, Oliva, Hudson, Bodkin, & Gruber, 1999). For example, in one investigation published in 1999, only about one-quarter of psychiatrists considered dissociative amnesia to be supported by “strong evidence of validity” (Pope et al., 1999, p. 322); the other choices were “little evidence of validity,” “partial evidence of validity,” and “no opinion.” Only about one-third believed the diagnosis of dissociative amnesia should be included without reservations in DSM-IV; the other choices available were “should not be included at all,” “should be included only with reservations,” and “no opinion.” Another survey (Dell, 1988), published even earlier (1998), revealed that over 80% of respondents had experienced “moderate to extreme” (p. 528) skepticism from others about dissociative identity (multiple personality) disorder (a condition that supposedly is related to sexual abuse and memory repression).

A paper by Erdelyi concerning repression, published in 2006, generated numerous commentaries that varied “from outright rejection of the reality of repression . . . to urgings that [its] ambit be extended” (Erdelyi, 2006, p. 535). “When the science is interpreted properly, the evidence shows that traumatic events—those experienced as overwhelmingly terrifying at the time of their occurrence—are highly memorable and seldom, if ever, forgotten” (McNally, 2005, p. 821). “Until convincing, replicable evidence is forthcoming, the concept of traumatic amnesia may be little more than psychiatric folklore” (McNally, 2004, p. 100). Harrison Pope (personal communication, March 2007) notes that “although some papers in the peer-reviewed literature purport to accept the concept of repressed memory, this acceptance does not logically permit the conclusion that the concept is *generally* accepted. General acceptance clearly means that there is a *consensus* in the literature produced by the relevant scientific community.” And finally, after reviewing the literature on repression, the author of a 2008 review concluded, “The fact remains that the Freudian notion of repression cannot be used as a scientific psychological construct” (Rofé, 2008, p. 76).

In summary, dissociative amnesia, repression, repressed and recovered memory, and their kin remain extremely controversial among psychiatrists and psychologists. Moreover, never since they first appeared in the literature have these concepts won general acceptance in the American psychological/psychiatric community.

What Flaws Exist in the Evidence Cited for Repression?

Repressed-memory theorists claim to have found much scientific support for the notion that people commonly fail to recall traumatic experiences (Brown, Schefflin, & Hammond, 1998, pp. 538-539; Dalenberg 2006, p. 279). However, the studies cited suffer from one or more of three flaws.

The first is that the studies do not show that the subjects completely failed to recall severely upsetting experiences—that is, that the subjects experienced amnesia. Rather, repressed-memory theorists point to one of three phenomena. One is partial amnesia, defined as failure to recall some details of the experiences.

Another is forgetfulness in one's daily life: a relative's anniversary, for instance, or what one went to the grocery store to buy. And deliberate attempts to avoid thinking about the unpleasant experience constitute the third. None of these phenomena constitutes dissociative amnesia. Nevertheless, advocates of repressed memory, such as Dalenberg (2006) and Brown, Schefflin, & Hammond (1998; Ch. 7), repeatedly attempt to argue that partial amnesia, day-to-day forgetfulness, and deliberate avoidance are somehow the same as having repressed the memory of the incident itself (McNally, 2003; Piper, Pope, & Borowiecki, 2000; Pope, Oliva, & Hudson, 1999).

A second flaw is that

Reports of the percentage of [mistreated people] who were partially or fully amnesic for [the mistreatment] are meaningless in the absence of baseline data for amnesia for nontraumatic events. It is clear that "amnesia" for [such] events is far from zero. Most people have gaps in their memories for childhood (McNally, 2003, pp. 198 and 227).

To obtain data bearing on these latter two points, Read and Lindsay (2000) encouraged study participants to attempt to recall childhood events that actually had occurred. (The events were presumably nontraumatic: high school graduation and attendance at summer camps.) The investigators then assessed these attempts' effect on the participants' judgments of prior memory impairment for the events. Before the memory-retrieval activities, 16% of the childhood events were characterized by prior periods of "partial amnesia," and 5% by prior periods of "complete amnesia." According to Read (1999), "These data indicate that estimates of trauma's effect on memory must be compared to an appropriate, non-zero base rate of affirmative responding to such questions. Prior research has implicitly assumed that base rate to be zero, when it clearly is not" (p. 9).

In addition, Read and Lindsay (2000) found that after the memory-retrieval exercises, the rate of partial amnesia increased from 16% to 70%. These results show that responses to retrospective questions about prior periods of poor memory can be dramatically altered through memory-retrieval activities typical of those techniques sometimes used in psychotherapy (Read & Lindsay, 2000). The results also agree with what has long been known: people do badly at judging whether or not they did, or could, remember something at some earlier time; such judgments correlate either poorly, or not at all, with actual memory performance (Read, 1999). In other words, asking about periods of having "no memory, or less memory than today" is a highly dubious exercise (Herrmann, 1982; Read, 1999).

The third flaw in the evidence cited by Dalenberg (2006) and Brown and colleagues (1998) is use of *retrospective* studies. Such studies suffer from several weaknesses. The most crucial is the difficulty of looking back over years or decades to verify that the claimed abuse actually occurred. This means that the investigators conducting retrospective studies cannot know whether any given participant has actually experienced the event in question. In a retrospective study intended to determine, for example, whether people forget traumatic events, participants must be asked some variant of two questions: first, "Did some traumatic event happen to you?" And second, "Was there ever a time when you had no memory, or less memory than you do today, about that event?" In other words, study participants are asked to verify not only how well they recalled, at

some time in the past, an event that may have occurred in the even more distant past, but also that they truly had experienced the event. Compare this methodology with that of *prospective* studies (see below), where entry into the study requires verification that the trauma actually occurred.

Another weakness of retrospective studies: “asking [a person] to remember a time when [he or she] couldn’t remember something is a logical quandary. The question borders on the ridiculous, because it assumes that [a person] would have knowledge of the status of a memory during a period when that memory, by the subject’s own admission, never came into consciousness” (Ofshe & Watters, 1994, p. 308).

It is important to remember that retrospective studies form the overwhelming majority of investigations cited as proof of repression. However, because all such studies suffer from the same inherent and fatal flaws, they cannot prove the existence of repression. *Prospective* investigations are required (Piper, Pope, & Borowiecki, 2000; Pope, Oliva, & Hudson, 1999).

What form would such investigations take? The requirements for a scientifically satisfactory prospective demonstration of dissociative amnesia are actually quite simple (Pope & Hudson, 1995; Pope, Oliva, & Hudson, 1999). One would first identify a group of individuals known to have experienced a harrowing event, and then, after a suitable time, inquire about their current recall of that event.

The traumatic event should be so severe that no one would be likely to simply forget it. This severity requirement eliminates simple forgetting as a cause of recall failure. Many experiences that do not cause children physical pain but nonetheless may appear to be sex abuse (e.g., certain kinds of fondling, sleeping nude with children, or taking showers with them) would not be particularly memorable to young people (Haugaard, 2000; McNally, 2005; Nelson, 1989; Piper, 1997). Failure to recall such experiences thus indicates forgetting, not repression. Consider, for example, the often-cited study by Williams (1994), in which 129 women who, as young girls, had been examined for possible sexual mistreatment. Williams contacted them 17 years later to see whether they recalled the event that had led to the initial examination. Thirty-eight percent did not mention it. Because of this result, some commentators believe the study provides evidence for repression of memories for childhood sex abuse. However, more than two-thirds of the girls showed no signs of genital trauma on initial evaluation. This fact suggests that many of them may not have experienced penetration and in some cases had undergone nothing more memorable than fondling. Those who had had nonmemorable experiences would be likely to simply forget—not repress—the index event.

Both Loftus (1994) and Pope, Oliva, & Hudson (1999) discuss other reasons why the Williams study does not provide evidence for repression. Among these is Williams’ observation that the women failed to report some events while readily reporting others that were equally traumatic. Repression cannot account for such findings, “because it cannot explain why only some episodes are forgotten, whereas many equally horrific [events] are thoroughly remembered” (McNally, 2003; p. 213).

The trauma would have to be solidly documented. Uncorroborated accounts of abuse should be viewed with scientific skepticism, because without external

corroboration, neither psychotherapists nor scientists can determine a given account's veridicality (Brandon et al., 1998; Courtois, 1997; Paris, 1996b; McNally, 2003). There is simply no way to determine truth based either on the content of a memory or the emotional intensity with which it is expressed (Brandon et al., 1998; Courtois, 1997; Hyman & Pentland, 1996; Leichtman & Ceci, 1995).

Second, the study would exclude people who had developed amnesia for some "biological" reason, such as seizures, drug or alcohol intoxication, sleep deprivation, brain injury, nutritional deficiencies, or the well-known phenomenon of childhood amnesia, which results, at least partially, from immaturity of the young child's brain. Because of this immaturity, children are normally amnesic for most events occurring before age three or four (McNally, 2005; Usher & Neisser, 1993) and "many adults remember hardly anything from before the age of seven" (McNally, 2003, p. 44). Thus, repression should not be posited to explain nonrecall of an event that occurred when a child was younger than about 4 years of age.

Third and finally, a study must show that subjects truly developed amnesia for the trauma. To do so, one must first exclude cases in which victims simply tried to avoid thinking about the event—as mentioned above, this is suppression, not repression. Cases in which the subject chose not to disclose the abuse to the interviewer must also be excluded. Reasons for this "pseudoamnesia" include embarrassment, poor rapport with the interviewer, a wish to protect a third party, a sense of having deserved the mistreatment, or a desire to toll a statute of limitations to achieve some benefit (Femina, Yeager, & Lewis, 1990; National Center for Health Statistics, 1961; Pope & Hudson 1995; Widom & Morris, 1997). Thus, failure to report experiences must not be assumed, without further investigation, to be failure to *recall* them.

The "further investigation" means performing a "clarification interview" (Femina, Yeager, & Lewis, 1990), as follows. Anyone who initially claimed not to recall the traumatic incident would meet with an interviewer, who would first attempt to establish a solid rapport with the interviewee. The interviewee would then be gently asked about the discrepancy between the known trauma and his or her later claim of nonrecall. In the important study by Femina and colleagues (1990), *every person* who initially denied recalling the mistreatment acknowledged remembering the mistreatment when given a clarification interview. Melchert and Parker (1997) obtained similar results. Thus, the importance of clarification interviews cannot be overestimated; they are hallmarks of good science in the search for proof of repression and dissociative amnesia (McNally, 2003).

If a substantial number of individuals continued to deny any memory for the traumatic experience, and if—importantly—they derived no apparent benefit from simply claiming amnesia, then one would have a methodologically sound study showing that dissociative amnesia for abuse experiences can actually occur (Piper, Pope, & Borowiecki, 2000; Pope, Oliva, & Hudson, 1999).

To our knowledge, as of this writing, the only study of child sexual mistreatment that satisfies all three of the above requirements is by Bonanno and colleagues (2002). In that investigation, 67 people were studied; all were documented to have experienced severe sexual abuse as children. Of note, the investigators performed a clarification interview, after which only two people failed to

disclose the abuse. The investigators strongly suspected that even these two remembered the mistreatment.

A 2003 study by Goodman and associates is perhaps the next most rigorous investigation. It satisfies two of the three requirements listed above (no clarification interview was performed). Of the 180 participants who were probably beyond the age of childhood amnesia when they were abused, only 8% failed to disclose the mistreatment. According to the authors, their results “do not support the existence of special memory mechanisms unique to traumatic events, but instead imply that normal cognitive operations underlie long-term memory for [childhood sexual abuse]” (Goodman et al., 2003, p. 117). The authors question whether forgetting childhood sexual abuse is a common experience (Goodman et al., 2003, p. 117), and state that “failure to report [childhood sexual abuse] should not necessarily be interpreted as evidence that the abuse is inaccessible to memory” (Goodman et al., 2003, p. 113).

And in another investigation, Epstein & Bottoms (2002) found that “fewer than 1% of abuse victims who reported temporary forgetting appear to have experienced a complete absence of conscious memories for events that occurred after the offset of childhood amnesia” (p. 222).

These three investigations' results agree with McNally's (2003) observation that “the better a study's methods, the less likely it is to find evidence of missing memory for trauma” (p. 209). The significance of the three studies should not be underestimated. They represent the best methodology currently available, and all of them argue against the idea that complete memory loss is a typical response to traumatic events. Thus, as of mid-2008, we are aware of no scientific studies meeting the methodological criteria specified above that provide evidence for repression (Brandon et al., 1998; Goodman et al., 2003; McNally, 2003; Pope & Hudson, 1995; Pope, Oliva, & Hudson, 1999).

What Evidence Has Been Offered Against the Concept of Repression?

In addition to the lack of evidence *for* repression, it is important to note the substantial evidence *against* this concept. For example, an exhaustive literature search focusing on more than 10,000 survivors of severe, specific, historically documented traumatic events did not find even one person who developed amnesia for the trauma (Pope, Oliva, and Hudson, 1999).

Many other investigations discredit the idea of repression. Contrary to what repression theory predicts, these studies demonstrate that adults recall central details from shocking and stressful experiences better than those from happy experiences, and better than those from everyday, mundane events (Berntsen, 2002; Berntsen & Thomsen, 2005; Christianson, 1992; Fivush, 1998; Koss, Tromp, & Tharan, 1995; Schacter, 1995). Similar results are found in children (Howe, 2000; Howe, Cicchetti, & Toth, 2006; Oates & Shrimpton, 1991; Ornstein, 1995). And studies examining children's recall of sexual mistreatment show that such experiences (if occurring after the offset of infantile amnesia) are typically recalled well (Alexander et al., 2005; Bonanno et al., 2002; Cordon, Pipe, Sayfan, Melinder, & Goodman, 2004; Fivush, 1998; Goodman et al., 2003; Widom & Morris, 1997). For example, not a single case of repression is mentioned in a review examining 3,369 sexually abused children (Kendall-Tackett,

Williams, & Finkelhor, 1993). The failure to cite even one child who repressed his or her abuse memories is particularly remarkable when it is considered that Linda Williams, one of the 1993 review's co-authors, is the same Williams whose 1994 study is often cited by repression proponents as providing some of the best evidence for repressed traumatic memory.

A belief in repression must face one very serious illogicality. If memory is thought of as an organism's ability to encode, store, and retrieve past information to serve present needs, then any organism that forgot its past would be at a grave evolutionary disadvantage. Consider an early human who one day barely escapes a saber-tooth cat's fangs—and then forgets the attack. He would clearly run a risk of failing to learn from the near miss—and winding up as dinner for the next hungry feline, with inauspicious consequences for passing along his genes—if the memory of the encounter were somehow unavailable to him. As McNally (2003) notes: “It is difficult to imagine how a repression mechanism that undermines memory for significant events could have evolved” (p. 77).

Finally, if dissociative amnesia were an actual human psychological phenomenon, one would expect to find, from the earliest writings in world literature, several clear, concrete examples of amnesia for traumatic events. But one research group (Pope, Poliakoff, Parker, Boynes, & Hudson, 2007), despite an exhaustive search, was unable to find a single case before about 1750. When this fact is considered, and when it is recalled that only in the late twentieth century did anyone discover “massive repression,” the importance of the question asked by Ofshe and Watters becomes clear:

Does it make sense that although adults and children have experienced trauma throughout the history of the human race, [ours would be] the first generation to document . . . that victims can walk away from endless brutalizing experiences with no knowledge that something bad has happened to them? (Ofshe & Watters, 1994, p. 36)

Do Repressed Memories Remain Fixed and Unchanging?

As everyday experience teaches, and research confirms, memories weaken and change over time. However, against these well-established facts, some repressed-memory theorists have adopted beliefs that have very significant consequences for the legal treatment of childhood sexual abuse cases. Such theorists believe trauma memories that have become repressed thereby become indelible and fixed for years or decades, impervious to any later experience, as if entombed in amber (Bliss, 1986; Clark, 1993; Fredrickson, 1992). These writers further believe that psychotherapists can lift or release the repression and unearth the buried memories, which then supposedly paint a substantially accurate picture of the original traumatic event (Bass & Davis, 1988; Clark, 1993; Fredrickson, 1992; Herman, 1992). And at least one recovered-memory proponent considers repressed trauma memories, once unearthed in this manner, to be *more* accurate than ordinary, continuous memories (Terr, 1994).

Such beliefs, if true, would give psychological and psychiatric professionals a window into the past, allowing them to see with certainty what traumatized the individual and triggered his or her repression. These professionals could then

provide testimony that might help fact finders decide whether, for example, to toll limitations periods that would otherwise bar the causes of action.

But memory researchers debunk these theorists' notions, which "stand in stark contrast to the empirical facts" (Howe, Cicchetti, & Toth, 2006, p. 761). For example, the claim of a repressed and recovered memory's literal correspondence to the original trauma is refuted by the recognition that "[the human] mind retains information in a fairly literal state for at most two seconds" (Einstein & McDaniel, 2004, p. 35). What is stored in memory is not a literal copy of an event, but rather a constructed representation of that event. As the representation is being formed, it is affected by our preexisting knowledge of the world, our biases, and any inferences that we might make at the time of the experience (Loftus, 1996; Porter, Birt, Yuille, & Lehman, 2000). "These are called *constructive* processes, reflecting the idea that we construct a representation, rather than copy information directly into memory" (Einstein & McDaniel, 2004, p. 40).

Moreover, the available research repeatedly demonstrates that memories of traumatic events appear to follow the same laws as do those of more mundane events. In both kinds of memories, details fade as time passes; both kinds of memories are subject to interference from later experiences; and both can be systematically distorted over time (Ceci, 1995; Ceci & Loftus, 1994; Neisser & Harsch, 1992; Schacter, 1995, 1999; Zola, 1998). Simply put, the belief that trauma memories are indelible and unchanging ignores one of the most important and widely accepted discoveries about the nature of memory: that it is not *reproductive* and *static*, but rather *reconstructive* and *dynamic*.

To illustrate: books and videotapes, as reproductive storage devices, always reproduce the same information when accessed; the retrieved information faithfully represents what was originally written or recorded. However, one does not read memories as from a book, or play them back as from a videotape. Laboratory research shows that "neural representations of events are continually . . . modified and reorganized [over] time" (Zola, 1998, p. 924), meaning that what people remember is dynamic and fluid; constantly erased, distorted, biased, and otherwise altered by events occurring before and after the memory was originally encoded (Beahrs, Cannell, & Gutheil, 1996; Kihlstrom, 1994; Schacter, 1995, 1999; Usher & Neisser, 1993).

Memory works by storing bits and pieces of the original event in different brain regions, where "ensembles of neurons . . . each represent a little bit of the memory" (Zola, 1998, p. 924). When a person attempts to recall an event, the brain assembles and binds these distributed components. They are then combined with components from other experiences, some of which had been acquired before the event and some after, to reconstruct that recollection. These processes governing memories of ordinary events seem to govern memories of trauma as well—which means, again, that there is little reason to suppose these latter memories are any less susceptible to distortion than ordinary memories (Paris, 1996b; Neisser & Harsch, 1992; Schacter, 1995; Shobe & Kihlstrom, 1997; Zola, 1998). Thus, memory is not so much like *reading* a book as it is like *writing* it from fragmentary notes—and revising it over and over as we do so (Kihlstrom, 1994; Zola, 1998).

This analysis has an important implication for legal cases: psychological research gives no reason to believe that the productions called recovered mem-

ories necessarily or invariably represent accurate descriptions of childhood experiences (Ceci & Loftus, 1994; Laney & Loftus, 2005; Paris, 1996a; Rofé, 2008). A recovered memory has no special claim to truth.

One final point is worth recalling. Recovered-memory theorists sometimes claim that “body memories” or “emotional memories” can provide a window into the truth of long-past events (van der Kolk, 1994; van der Kolk & Fisler, 1995). In other words, the claim implies that factual content can be discerned through these nonverbal routes. The claim is erroneous (McNally, 2003). Only language-mediated, or “*declarative*, memory for factual content is relevant to questions of truth or falsity” (Beahrs, Cannell, & Gutheil, 1996, p. 48).

Conclusion

In 1999, Faigman and colleagues, quoting the *Hungerford* decision (697 A.2d 916 [N.H. 1997] at 929) said the day had not yet arrived when repressed and recovered memories could be perceived as reliable. Nine years later, that day has still not dawned. The present review shows that in 2008, science still fails to provide evidence for belief in repression and recovered memories, and that the Law continues to wrestle with these concepts.

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