

Memory and Dimensions of Trauma

Terror May Be "All-Too-Well Remembered" and Betrayal Buried

JENNIFER J. FREYD

David A. Hoffman, a former child psychologist . . . pleaded guilty in April [1994] to gross sexual imposition. . . . Hoffman was charged with the crime after a woman remembered being sexually abused during a two-year period, beginning when she was 8 and living in Columbus with her mother. . . . The woman is now 26 and lives in Michigan. She had no recollection of the abuse until July 1992, said detective John Harris. . . . "She worked in a probation office in Grand Rapids, Mich., typing reports," Harris said. "Her first memory of the abuse came when she was typing a report regarding a sexual abuse case. Then, whenever she had to type reports involving sexual abuse, she would become very distraught."

AUTHOR'S NOTE: Some of the material in this chapter is based on an address given by the author at the 12th Annual Meeting of the International Society for Traumatic Stress Studies, San Francisco, November 9-13, 1996, and the author's book *Betrayal Trauma: The Logic of Forgetting Childhood Abuse* (1996). I am indebted to J. Q. Johnson and Jon Conte for helpful comments on an earlier version of this chapter.

Freyd, J.J. (2001). Memory and Dimensions of Trauma: Terror May be 'All-Too-Well Remembered' and Betrayal Buried. In J.R. Conte (Ed) *Critical Issues in Child Sexual Abuse: Historical, Legal, and Psychological Perspectives*. (pp 139-173) Sage Publications: Thousand Oaks, CA.

The woman sought therapy. She called Harris after her psychologist urged her to file a police report.

In 1993 . . . [Hoffman] "admitted committing the molesting offenses," Harris said. "That made this case different than most sexual abuse cases. He admitted it." (Medick, 1994)

How can someone forget an event as traumatic as sexual abuse in childhood? In *Betrayal Trauma* (Freyd, 1996), I discuss the logic of forgetting childhood abuse. Betrayal trauma theory proposes that it is adaptive to forget certain kinds of betrayal—as in childhood sexual abuse by a trusted caregiver—and that this forgetting is understandable in terms of what is known about cognitive psychology.

Amnesia for childhood abuse (or so-called memory repression) exists, not for the reduction of suffering, but because not remembering abuse by a caregiver is often necessary for survival. From a logical analysis of developmental pressures and cognitive architecture, we can expect there to be cognitive information blockage under certain conditions—such as sexual abuse by a parent. This information blockage will create various types of "betrayal blindness" and traumatic amnesia.

I began to develop betrayal trauma theory (Freyd, 1991) before I had been directly exposed to Roland Summit's theory of the child sexual abuse accommodation syndrome (CSAAS) (Summit, 1983). My background and expertise through 1991 was in cognitive psychology, at that point an area of study with essentially no overlap with child abuse or traumatic stress studies. Most likely aspects of Summit's contribution did seep through to me even then, by virtue of his having levels of consciousness about child sexual abuse and reactions to that abuse—but I did not directly know of it in 1991. However, by the time I wrote my book I had become well acquainted with the CSAAS and the astounding contribution that Summit has made through his writings, presentations, and personal influence. What has become increasingly apparent is the conceptual congruence between the CSAAS and betrayal trauma theory. I assume, too, that this is not merely coincidental but, in fact, that I had absorbed through cultural transmissions some of Summit's insights explicated in the CSAAS.

The CSAAS and betrayal trauma theory share a core emphasis on the distortion of information for the purpose of preserving a relationship. Whereas the CSAAS includes both conscious and unconscious informa-

tion distortion (the child may consciously deny abuse when he or she is aware it happened), betrayal trauma focuses on the internalized information distortion in particular (whereby knowledge of abuse is isolated from the victim's conscious memory and awareness).

This chapter summarizes some of the key components of betrayal trauma theory (Freyd, 1996), including discussion of some of my more recent thinking about the possibility that trauma has two separate dimensions and that those two separate dimensions have distinct implications for memory. But first, the controversy.

Controversy and Response

It would hardly seem proper to write about memory for abuse without acknowledging the raging controversy currently preoccupying society, and yet it is tempting to avoid this issue, because that controversy is draining and frustratingly repetitive (Herman, 1992; Olafson, Corwin, & Summit, 1993; Summit, 1988). Questions of disbelief and belief, passionate testimonials, and assertions of scientific authority saturate the conceptual landscape. Not only is this controversy intense, it is quite confusing. Societal, scientific, professional, personal, and moral issues are tangled in what seems, at times, to be a hopeless snarl. In attempting to untangle these issues and find meaning, and to find the opportunity for growth in this controversy, it is essential that we integrate a rational and scientific approach, drawing on many disciplines with a moral and compassionate stance. In this regard, those of us struggling with the recovered memory field can do no better than to look to Roland Summit's response to the controversy that has adhered to him and his CSAAS. Summit steers a clear course by correcting the errors of attribution without succumbing to ad hominem attack or exaggeration (e.g., 1992; see also Freyd, 1996, pp. 50-51, for a description of Summit's response to a 1994 *New Yorker* editorial). In such responsible actions and communications, Roland Summit offers a model of responsiveness, rationality, compassion, and dignity.

Either perspective alone—that is, a purely scientific/rational analysis or a purely humane/compassionate response—will not work as an effective or ethical way to respond to the issues of recovered memory. In-

deed, either perspective in isolation may lead to great damage. Furthermore, because the controversy involves disagreement about a complex reality, it is essential to attempt to articulate the separate questions, unknowns, and issues. If we take care to pose separate questions we can discover which ones, in fact, we know the answers to, which ones we don't know the answers to, and which ones research might eventually let us answer.

There are some questions we can answer. Although the debate sometimes appears to be about whether people can and do sometimes forget and later remember abuse, this is really a nonissue because we know they can and do forget and later remember abuse. Indeed, there is good reason to believe that both essentially false memories and essentially true memories of abuse are possible given what is known about cognitive mechanisms (see Freyd, 1996; Morton, in press; Schachter, 1996; Schooler, Bendiksen, & Ambadar, 1997). Furthermore, not only are these theoretical possibilities, but there is a large and growing body of evidence documenting the occurrence of both recovered memories and false memories (e.g., see Butler, 1996; Corwin & Olafson, 1997; Freyd, 1996; Lindsay & Briere, in press; Schefflin & Brown, 1996; Schooler et al., 1997). This means that we can answer in the affirmative the questions "Are essentially true recovered memories possible?" and "Are alleged recovered memories of abuse sometimes essentially true?" and "Are alleged recovered memories of abuse sometimes essentially false?"

Similarly, the scientific debate is not (or should not be) fundamentally about whether memory is sometimes essentially false. All viewpoints must invoke the concept of memory distortion. Whether you have a false memory of a happy childhood, or a false memory of having been sexually abused, you have a memory distortion. These memory distortions are arguably different; in one case you're emphasizing an error of omission and another an error of commission. Regardless, memory is distorted from objective reality. Most people will also have to invoke some notion of human suggestibility. We are influenced either by suggestive family members, a suggestive culture, or overzealous therapists, books, or self-help movements. In either case, false memories of abuse or false memories of a happy childhood, there are powerful suggestive influences, and humans are receptive to such influences.

Research on the disparity between memory and external events is of potential relevance to those interested in recovered memories. Thus, the large body of research showing that memory is a reconstructive process and is never or rarely perfectly accurate is clearly relevant to understanding the limits of veracity in any reported memory of trauma. Similarly, research on suggestibility is pertinent. The now-famous studies—in which whole narratives of being lost in a shopping mall are "implanted" into the minds of relatives of research assistants after an inducing sequence involving the research assistant claiming to have witnessed the "false" event (e.g., Loftus & Ketcham, 1994)—are relevant for understanding the ability of family members to distort memory, just as they are relevant for understanding the ability of therapists to distort memory.

Because both true and false memories are possible, it is very important we not reflexively assume, without additional and compelling information, that a recovered memory of sexual abuse is neither necessarily true nor necessarily false. Furthermore, it is quite likely that most memories contain both accurate and inaccurate components, that most memories, whether recovered or continuously accessible, are a perplexing mixture of true and false. Interestingly, there is evidence that recovered memories of sexual abuse are no more or less likely to be inaccurate than continuously accessible memories of sexual abuse (Pope & Brown, 1996; Schefflin & Brown, 1996). Dalenberg (1996), for instance, noted that "Memories of abuse were found to be equally accurate whether recovered or continuously remembered" (p. 229). Using a prospective method, Williams (1995) investigated the memories of women who as children, 17 years earlier, had been admitted into a hospital emergency room for sexual assault. Williams observed that "in general, the women with recovered memories had no more inconsistencies in their accounts than did the women who had always remembered" (p. 660), further commenting, "In fact, when one considers the basic elements of the abuse, their retrospective reports are remarkably consistent with what had been reported in the 1970s" (p. 662).

Not only are there limits to what we can legitimately determine about a given recovered memory (or a given denial of an accusation) without additional and compelling information, so, too, are there currently limits

about what we can determine about the probabilities or frequencies of truth and falsity in these domains. Thus, two important questions arise that we cannot answer immediately: First, given a recovered memory, what is the probability that it is essentially true (or false)? Second (and equally important to keep in mind), given a denial of accusation of sexual abuse, what is the probability that the denial is essentially true (or false)? These important questions about overall frequencies and probabilities will perhaps yield to answers with future research. Even if the probability, based on overall frequencies, that a recovered memory is true is either very high or very low overall, it will be important to remember that individual cases will require and deserve individual scrutiny.

Currently determining the accuracy of memory (both continuously accessible and recovered) for events that are long past, private, and potentially of criminal or ethical significance is a true scientific, societal, and forensic puzzle. Yet perhaps one confusing aspect of the "memory debate" is that in many of the most charged disputes involving recovered memories, the underlying charged issue driving the dispute is often not really about memory per se. When the dispute becomes most heated, the real issue is whether the alleged abuse happened; arguments about memory are surface disputes (and often very confused surface disputes). Because the stakes are so high, there is a tremendous struggle for the authority to define reality, and the struggle in individual cases interacts dramatically with the struggle for authority in the media, scientific world, and popular culture. To argue a position about the scientific status of memory (or to claim a scientist or science supports one's own viewpoint) may give a kind of authority and legitimacy that is then used to attempt to win the underlying dispute about the abuse allegation. Although there are genuine scientific issues implicated in memory for abuse, we must be careful not to allow the science and scientific debate to be misused and corrupted.

Given the high personal and legal stakes, it is important for memory scientists to attempt to sort out the true applicability of memory research to these very heated disputes. Sometimes the pressure to make laboratory studies of memory research bear on a particular side of the contested memories leads to exaggerated claims of applicability (Freyd, 1996; Freyd & Gleaves, 1996; Gleaves, 1996; Gleaves & Freyd, 1997).

Memory researchers *can* contribute by finding the scientifically tractable questions about memory for abuse, the questions we have a hope of answering, answer these first, and then return to the retrospective problem.

Two important prospective and scientific questions can be posed immediately. First, given someone who did not experience parental sexual abuse, what is the probability (within various manipulations and contexts) that this person can be induced to falsely remember sexual abuse? This question is very difficult to answer because we have no way to know for certain if someone did not experience sexual abuse and because it is not ethical to induce a false memory of sexual abuse. Some research suggests that there is no evidence for a majority of false memories of abuse (e.g., Andrews et al., 1999) or evidence supporting the construct of a false memory *syndrome* (Hovdestad & Kristiansen, 1996), although there is general consensus that some cases of false memories of abuse have been documented and that the general research on misinformation and human suggestibility is relevant to this question (Schooler et al., 1997). The second question is one that we do know something about. Given someone who did experience parental sexual abuse, what is the probability that the memory becomes unavailable and then later available? Here we have data (see next section) and although we don't know exactly, we can estimate that it is at least .15 and probably much higher. Given this data, the next questions, and the ones that are my focus, are why and how this failure to remember abuse occurs.

The Phenomenon of Forgetting Abuse

Systematic studies indicate that a substantial minority of people who are now adults living in the United States were sexually abused in their childhood. (See Figure 5.1 for findings from four separate large community samples [Finkelhor, 1979; Kinsey, Pomeroy, Martin, & Gebhard, 1953; Russell, 1986; Timnick, 1985].)

In addition, empirical evidence—both systematic studies involving statistical tests and more detailed case reports like the opening case described by Medick (1994)—indicates that of those who were abused, forgetting the abuse is a real and relatively frequent phenomenon. But the

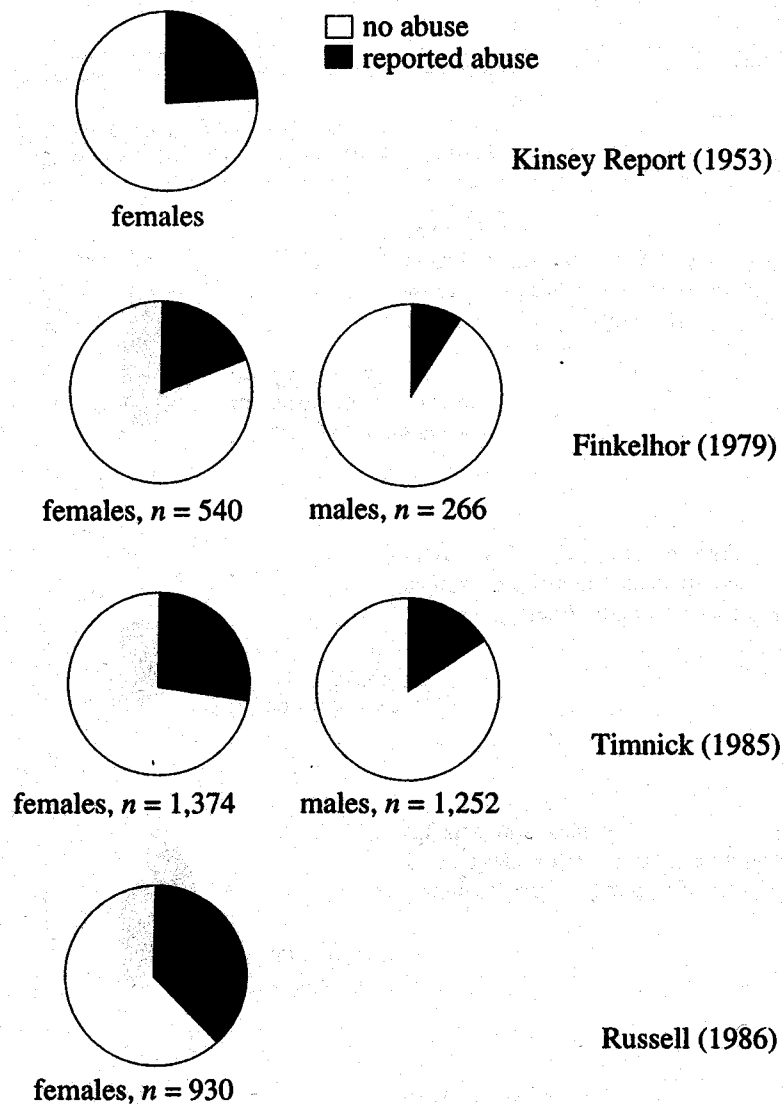


Figure 5.1. Prevalence Rates of Childhood Sexual Abuse from Four Samples

SOURCE: From *Betrayal Trauma: The Logic of Forgetting Childhood Abuse*, by J. J. Freyd, 1996, Cambridge, MA: Harvard University Press. Copyright © 1996 by Harvard University Press. Reprinted with permission.

reality of this phenomenon is apparently difficult to accept. As Ross Cheit (quoted in Freyd, 1996) said, "Long-lost memories of sexual abuse can resurface. I know, because it happened to me. But I also know that I might not have believed that this was possible if [it] hadn't occurred to me."

(See Figure 5.2 for amnesia rates estimated from four studies of adult abuse survivors [Feldman-Summers & Pope, 1994, professional psychologists who reported childhood abuse; Herman & Schatzow, 1987, women in an incest survivors group; Loftus, Polonsky, & Fullilove, 1994, low-income women in a substance abuse program who reported childhood abuse; Williams, 1994a, 1994b, 1995, women who had been admitted into an emergency room as children for treatment of sexual abuse]. These studies were chosen in part due to the diversity of populations studied.) The results from these four studies are consistent with a rapidly growing body of literature showing similar results for a wide variety of populations and methodologies (e.g., Briere & Conte, 1993; Burgess, Hartman, & Baker, 1995; Elliott & Briere, 1995; van der Kolk & Fislser, 1995). Indeed, in an important recent review by Schefflin and Brown (1996), of 25 studies assessing amnesia rates for abuse, the authors note that every study was found to reveal that some abused people had periods of forgetting the abuse. Schefflin and Brown state "A reasonable conclusion is that amnesia for childhood sexual abuse is a robust finding across studies using very different samples and methods of assessment" (1996, p. 143).

Three of the studies depicted in Figure 5.2 (and the majority of studies reviewed by Schefflin & Brown, 1996) employed a retrospective methodology; that is, adults were asked about their abuse experiences, and they were also asked about the persistence of their memory for that abuse experience. They were asked if there was ever a time when they were not conscious of the abuse they could now remember. In the fourth case portrayed in Figure 5.2, the study was conducted using a prospective methodology (for additional prospective studies on amnesia for abuse, see Burgess et al., 1995; Widom & Morris, 1997). Linda Meyer Williams began with hospital records of people who were admitted into an emergency room (ER), and found these people 17 years later and attempted to assess whether they could remember the abusive event that brought

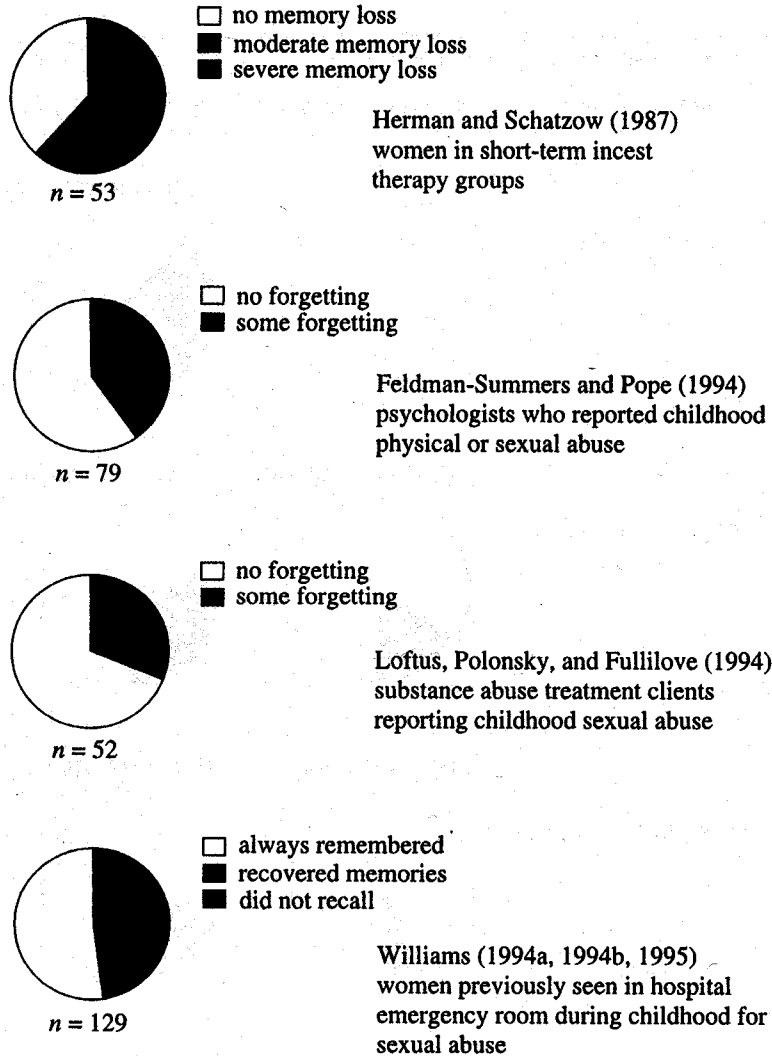


Figure 5.2. Rates of Forgetting Sexual Abuse from Three Retrospective Studies and One Prospective Study

SOURCE: From *Betrayal Trauma: The Logic of Forgetting Childhood Abuse*, by J. J. Freyd, 1996, Cambridge, MA: Harvard University Press. Copyright © 1996 by Harvard University Press. Reprinted with permission.

them into the ER. Interviewers attempted to determine if the now-adult sexual assault victims could remember either the event for which they were brought to the ER or any other abuse by that same perpetrator. Williams went to great pains to determine if they could remember but simply did not report the event. It's a difficult problem and one that cannot be entirely answered, but Williams (1994a, 1994b) noted that a large percentage—38%—did not report the abuse that had led to their hospital admission as children, nor did they report any other abuse by the same offender. Of the women who did recall the abuse that was documented in their 1970s records, approximately one in six reported some previous period when they had forgotten it. That is, approximately 10% of her total sample reported recovered memories. This suggests that close to half (48%) of the women in Williams's study—women with documented sexual abuse histories—could not remember the abuse at the time of the interview or some time before that (see Figure 5.2).

More recent and very useful articles (Bowman & Mertz, 1996; Brewin, 1996; Butler, 1996; Schefflin & Brown, 1996) summarize the strong evidence for recovered memories. Taken together, a growing number of different studies on a variety of different populations using different methodologies all propose the finding that a sizable minority of those who experienced abuse also had a period when they could not remember the abuse. Furthermore, I am not aware of any recent study of abuse and memory using sound methodology that fails to find evidence of amnesia for the abuse. Perhaps it is the power of the systematic data that is causing some of the cultural preoccupation with the issue of memory for abuse; the implications of these systematic studies are quite disturbing. If we take the two sets of prevalence depicted in Figures 5.1 and 5.2 together and extrapolate from percentage to frequency in the populations—that is, the number of people who have been abused at all, and the number of people who have forgotten—we're left with a substantial number of people who have forgotten abuse.

Two-Dimensional Model

In answering questions about what happens when somebody has been abused, and what happens to their awareness, one of the first things to

consider is why they would possibly be motivated to forget. The commonsense reason is that they forget because it's painful to remember. This answer—we forget because the memory is emotionally painful—is insufficient to account for the data and is theoretically circular.

As a first step, it is important to realize that one must distinguish between the observable phenomena of forgetting abuse (*what* we can observe), the motivations that might be going on for that forgetting (*why* it happens), and the mechanisms that might be underlying the forgetting (*how* it happens). These three types of issues—what, why, and how—are often tangled. For example, Elizabeth Loftus and Katherine Ketcham, in their 1994 book *The Myth of Repressed Memory*, wrote,

When we begin to look for memories we have lost, we enter a strange psychic realm called repression. The concept of repression presumes a certain power of the mind. Those who believe in repression have faith in the mind's ability to defend itself from emotionally overwhelming events by removing certain experiences and emotions from conscious awareness. (p. 7)

This typifies an intermixing of phenomena ("what") with presumed motivations ("why") and presumed mechanisms ("how"). In untangling these phenomena, the first thing to acknowledge is a profusion of terminology that is very confusing because the terminology doesn't map consistently onto these different issues. I prefer "knowledge isolation" (Freyd, 1996). We also have observable phenomena, that is, experiencing a significant event, the forgetting of it, and the later remembering of it. And we have proposed motivations and possible mechanisms. From this point I will treat these as separate issues. They may, in fact, interact in interesting ways, but first we need to consider them as conceptually separate (see Table 5.1).

We now focus on the motivation question: Why do children and adults sometimes fail to remember significant traumatic events? Is the motivation for forgetting simply the avoidance of pain, as common sense would seem to suggest? The most common reason given for why people forget is indeed that the forgetting is to ease pain. Daniel Goleman (1985) put it this way:

Table 5.1 Disentangling Concepts of "Memory Repression"

Terminology	Repression, dissociation, dissociative amnesia, traumatic amnesia, knowledge isolation
Observable Phenomena	Experiencing significant event, but not consciously recollecting significant aspects of it. Later recollecting the event
Proposed Motivations	Avoidance of: <ul style="list-style-type: none"> • Pain • Being overwhelmed • Threats to self-perception • Threats to assumptions of meaningful world • Information threatening a necessary attachment
Possible Mechanisms	<ul style="list-style-type: none"> • Selective attention • Inhibition of consolidation after initial encoding • State-dependent learning • Inhibition of accessing information already well-stored

Repression is the quintessential lacuna; it lessens mental pain by attenuating awareness, as does its close cousin, denial.

The defense mechanisms . . . are recipes for the ways we keep secrets from ourselves. The defenses are diversionary, activated in tandem with painful information; their function is to buffer that pain by skewing attention. (pp. 112-113)

In addition to demonstrating the confusion of phenomena motivation and mechanism, I think this also typifies the assumption that pain and avoidance of pain is the primary motivation for repression. I believe that this is not correct; the primary motivation for forgetting information in these cases is to preserve a necessary relationship (more on this follows), and that we're just not lucky enough to be designed to be able to stop feeling pain because we don't like pain (unless we take drugs).

The important thing to consider is the role of betrayal in the traumas that induce amnesia (and how the response to betrayal relates to relationship preservation). Ross Cheit, who recovered memories of sexual abuse by a camp counselor, wrote

The concept of trauma never seemed right to me, it didn't fit my story. There were no threats, I never sensed danger, I didn't fear him, he was nice to me. But the letters [sent home from camp, that Cheit read as an adult] were just devastating, because the letters were the first time that I thought about these actions in terms of what this man meant to me in my life, in terms of a relationship rather than in terms of just actions. And I read these letters, and I realized how important he was to me. I thought he was a great guy. I really admired him. I read the letters and the whole thing shifted from just "those acts" to complete betrayal. (Freyd, 1996, pp. 9, 11)

Figure 5.3 displays a two-dimensional model of trauma. Without question, some traumas that involve betrayal are terrorizing. Some terrorizing events, however, don't involve betrayal (or, at least, great amounts of betrayal), and some betrayals are not particularly terrorizing, at least at the time that it's occurring. The things that we call traumatic can be thought of as falling into four quadrants of space, created by two dimensions, as shown in Figure 5.3. (There are really more than just two dimensions here, but for now these are the two I'd like to separate from one another.) One is a dimension labeled as "terror, or fear inducing." This dimension corresponds to threats to life—things that actually can cause you bodily harm, and often do. These are terrorizing events. Another dimension is the dimension of betrayal and threats to social relationships. As depicted, some traumas are high on both these dimensions. For instance, sadistic abuse by a caregiver, the Holocaust, some combat experiences, and much childhood sexual abuse, are both terrorizing and involve a betrayal of a relationship. But some traumas that lead to forms of traumatic stress are high on one dimension but not so high on the other. From this viewpoint, some of the things we see in response to trauma—such as hyperarousal—and some of the biology of fear (including various sensory and emotional memory effects; see van der Kolk, 1994) are well captured by the events that are high in terror, but that amnesia is especially likely to occur for the events that are high in betrayal.

It is important to realize that although sexual abuse is arguably the kind of trauma most highly likely to be replete with betrayal (both betrayal by the perpetrator and betrayal by the bystanders), other sorts of trauma can and do involve betrayal and thus can and do create amnesia. Betrayal trauma theory leads to specific predictions about the factors related to betrayal and social interactions (i.e., the vertical dimension of

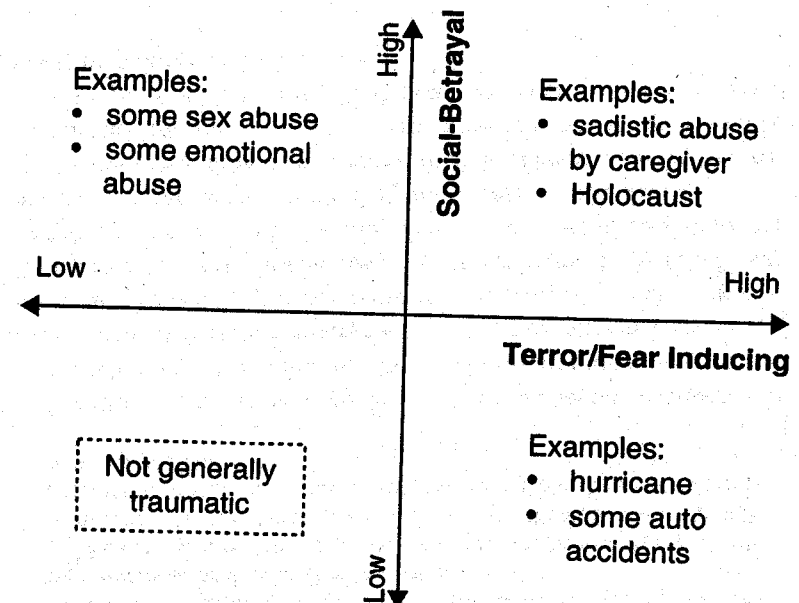


Figure 5.3. The Two-Dimensional Model of Trauma
SOURCE: Copyright © 1996, Jennifer J. Freyd.

trauma depicted in Figure 5.3) that will make amnesia most probable. Table 5.2 presents seven of these factors that emerge from betrayal trauma theory.

The first factor is the most directly relevant to the nature of the relationship and betrayal. The remaining six factors have to do with the impact of social environment and communication on the cognitive feasibility of amnesia (some of this will be taken up in the section below on the cognitive model, but for more detail see Freyd, 1996). It is important to stress two caveats. First, these factors are predicted to be statistically and significantly related to the probability of amnesia with all other factors held constant, but they are not presented as an exhaustive set of necessary and sufficient conditions for amnesia. Other factors, in fact, determine the probability of amnesia, including genetically determined potentialities that vary from person to person and including coping habits developed due to past experience with trauma. Additional factors are

Table 5.2 Factors Predicted to Be Related to Amnesia Rates*Betrayal Trauma Theory Predicts Amnesia Greatest When*

1. Abuse by parent or important caregiver (betrayal)
2. Explicit threats demanding silence
3. Abuse context different from non-abuse context
4. Isolation during abuse
5. Young at age of abuse
6. Alternative reality defining statements by offender
7. Lack of discussion of abuse

SOURCE: From *Betrayal Trauma: The Logic of Forgetting Childhood Abuse*, by J. J. Freyd, 1996, Cambridge, MA: Harvard University Press. Copyright © 1996 by Harvard University Press. Reprinted with permission.

also relevant for predicting amnesia that stems from other dimensions of external trauma, such as possible effects of fear on memory consolidation due to changes in brain chemistry or structure (e.g., see Bremner et al., 1995; van der Kolk, 1994). Presumably, multiple motivations and mechanisms for forgetting traumatic events exist. The list of factors in Table 5.2 is thus considered neither exhaustive nor completely determinant, but instead is presented as those factors predicted to relate to amnesia that emerge from betrayal trauma theory for testing. Ultimately, it would be beneficial to compare each of these factors with other factors on the list and off the list for their potency in predicting amnesia.

It is not difficult to see from Table 5.2 that childhood sexual abuse perpetrated in secret by a parent is apt to be highly loaded on all seven factors and, therefore, an example of a kind of trauma that would have a relatively high probability of being forgotten. However, other traumas are also potentially highly loaded on at least some of these seven factors, and it follows that amnesia would be predicted to occur with some frequency for these other traumas. Patience H. C. Mason, editor of the newsletter *The Post-Traumatic Gazette*, sent me a description of a war trauma resulting in amnesia that fits this perspective (Mason, personal communication, February 6, 1997).

Many veterans have repressed memories, have forgotten whole periods of their tours, usually the most traumatic. My husband, who was a helicopter pilot and wrote a book about his experiences (*Chickenhawk*) [Mason, 1983], has seen a photograph of himself in front of an area strewn with body parts of enemy soldiers who had tried to overrun Plei Me and still cannot re-

member being there or seeing them. One of the official symptoms of PTSD is forgetting all or part of a trauma. Some of us also believe betrayal is a major component in PTSD in veterans. Jonathan Shay, MD, discusses its importance in *Achilles in Vietnam* [Shay, 1994]. At a conference on My Lai's 25th Anniversary at Tulane University . . . Hugh Thompson (the helicopter pilot who landed at My Lai and tried to stop the killing) revealed that he forgot about My Lai for two years. He would probably still not remember it if *The New York Times* and other papers hadn't broken the story. I may have been the only person in the audience who realized the incredible significance of that moment. . . . I later interviewed Mr. Thompson for my newsletter, *The Post-Traumatic Gazette*. This is the part of my article on his experiences:

History doesn't lie. Perhaps the most impressive example of a repressed memory is that of Hugh Thompson. Mr. Thompson was a helicopter pilot in Vietnam. On March 16th, 1968, he was flying his scout helicopter around a town called Pinkville. He kept seeing dead civilians. Whenever he called in that a wounded civilian needed help, he would see them dead when next he flew over. He didn't understand what was going on. He became angry and desperate. Finally he landed and called in help for one group, having his crew chief and gunner aim their weapons at the Americans to stop them. Later his crew chief waded into a ditch full of bodies and pulled a small wounded child out. They flew the child to a local hospital. The kid was the age of Hugh Thompson's own son at home. The whole experience was extremely traumatic for him. Two years later, when the Army investigators came to interview him about what he was doing on March 16, 1968, they got really angry at him and thought he was "giving them the run-around," as he put it in a recent phone interview with me. At that time he remembered nothing. He knew he had been in Vietnam on that date, that was all. "They said they had my flight records. Finally they asked me if I remembered hitting a tree with my helicopter. 'Oh, yeah. I remember that.' I said. Then things started coming back." He had a vague memory of pulling a gun on an American officer and thought he was in trouble for that. He had forgotten the whole My Lai Massacre. All of his heroic actions are documented in the US Army's report on My Lai. Over the course of several days of questioning by Army investigators it all came back to him, the horror, the dead women, children and old people, the fact that none of the authorities would listen or investigate. He had repressed the memory. He still does not remember all the details. The helplessness and horror he felt at what he saw were clear in his voice as he spoke about it last year at Tulane University at a conference on My Lai. When Hugh tried to get someone to listen to him about the massacre, no one would. Even the US Army and the Nixon Administration never used the "no such thing as repressed memories" defense when they were trying to cover up My Lai.

Unfortunately not all repressed memories have such a body of hard historical evidence to back them up.

Hugh Thompson's case fits all of the criteria for betrayal trauma set forth in Jennifer Freyd's book: 1. The betrayal was by his caregivers, the high ranking officers who were responsible for his life in Vietnam. 2. He was threatened. He was told to forget it by people who could control whether he lived or died just by the missions they sent him on. 3. It happened in a different context: My Lai was away from the base where he lived. 4. Isolation: He was the only one who tried to stop the massacre or even reported My Lai. 5. Youth: He was a relatively inexperienced WO-1, the lowest ranking pilot. 6. Alternative reality defining statements by the higher ups: They kept saying it hadn't happened. 7. Lack of discussion: No one talked about what had happened. There was no one he could talk to about it. (Mason, 1997)

The more the victim is dependent on the perpetrator, the more power the perpetrator has over the victim in a trusted and intimate relationship, the more the crime is one of betrayal. Betrayal trauma theory proposes that betrayal by a trusted caregiver is the core factor in determining amnesia for a trauma. In addition, the social nature of this dimension also affects how people respond to a trauma: If you're not allowed to talk about the trauma and you're treated in a certain way, a terrorizing trauma can become high in the social betrayal dimension, depending on how people respond to you after you've had that trauma (thus affecting many of the factors listed in Table 5.2).

Why are betrayals at the core in producing amnesia? Consider three conceptual issues and then put them together. The first is the role of "psychic" pain. Although it seems commonsensical that we can eliminate pain because we don't like pain, if you stop and consider what pain must be doing for us in a design sense, this doesn't make sense. Why do we experience pain (whether so-called physical or psychic pain) at all? Let's consider physical pain first. Presumably, we're designed to experience pain because it motivates changes in behavior: If we're very hungry we're motivated to go eat; if we're very tired, to go sleep; if we're in pain because of an inflamed injury, we're motivated to stop using that part of the body and to rest. Similarly, if we feel psychological pain in response to relationship events, we're motivated to leave the relationship or insist on change. Sometimes, however, we don't experience pain we would normally experience. Why would that happen? This happens when the

normal response to pain would actually be a threat or risk to survival. We're motivated to block pain when that normal response is going to get us into trouble; when does that happen? In the animal world, that can happen when a creature, under attack by a predator but injured, must fight or escape, but can't stop and heal its wounds. In fact, humans and other animals have a natural analgesic system, called the stress response, that will block pain under certain circumstances (Kelly, 1985). This is also the case with psychological or "psychic" pain—that humans can block it under the right circumstances—but perhaps it's just a little harder to figure out when that's going to happen.

The key to blocking psychic pain, according to betrayal trauma theory, is when the experience of pain may pose a survival hazard. Furthermore, often not only is the psychic pain itself blocked, but the information that leads to the pain reaction is isolated from other mental operations such as consciousness. The survival hazard has to do with the simultaneous need to remain attached to a caregiver (or, psychologically, this may be better understood to be the need to remain connected to an important attachment figure), and the conflicting "normal" response to betrayal. That normal response includes (potentially extreme) psychological pain and resulting behavioral changes affecting the relationship. Thus, three critical constructs develop: (a) the relationship between pain and changes in behavior (and related to that the relationship between blocking pain in order to thwart the normal changes in behavior), (b) the overwhelming importance of attachment (and very real dependence) to humans, and (c) the "normal" or, at least potential, exquisite sensitivity we have to betrayal and the resulting behavioral outcomes of that sensitivity.

Strong evidence suggests that humans—creatures born physically immature and vulnerable and forever social—arrive in this world both physically and psychologically dependent on others, and, in fact, psychologically (and sometimes physically) remain dependent on others throughout the life span (although the degree of dependence ideally decreases with maturity). The early extreme physical dependence of human infants and children on their caregivers is presumably part of what has driven the evolution of innate attachment mechanisms that operate in humans of all ages, especially newborns. These attachment mecha-

nisms result in powerful affective responses (love) and a whole cascade of behaviors that ensure relationship stability. That we remain a social species throughout the life span, and that our dependence on others never dissipates completely, may combine with or even interact powerfully with our physical vulnerability.

To some extent, we share aspects of this vulnerability, social propensity, and attachment system with some of our primate relatives. In 1959, Harlow published his classic study "Love in Infant Monkeys." Harlow separated newborn monkeys from their mothers and put them into cages containing artificial mothers. In one experiment, the infant had a choice of mothers: one mother was made of wire with a rubber nipple that provided milk for the infant, the other mother had no nipple but was made of soft cloth. The infants chose to spend their time with the cloth mother, indicating that attachments are not primarily based on food and that the infant had a drive to meet its attachment needs. When the infants were frightened, they chose the cloth monkey and clung to it. Harlow also studied the effects of this social deprivation on the infants' development. He found that the infants who were deprived of social contact during their first year of life did not develop into psychologically healthy monkeys; they were generally stressed and depressed and exposure to another monkey caused them to withdraw into a corner and rock and show other signs of distress. The good news is that researchers have found that these deprived monkeys may recover with time if they are allowed to live with normally raised monkeys (sometimes referred to as "monkey therapists"). When those previously deprived monkeys who apparently had recovered were later stressed, however, they easily regressed, showing signs of the harm that was done to them as infants. They also were not able to become suitable parents: They tended to neglect their infants if they were forced into pregnancy, and even abuse and kill their infants.

This similarity between human response and monkey response to early social deprivation indicates that much of the attachment system is probably innately programmed. It's now widely recognized that the physical and mental survival of human infants and children depends on a successful attachment between the child and caregiver (Bowlby, 1969, 1988). Under healthy conditions during the first year of a human's life,

the caregiver and the infant are responding to one another, developing a deep, affectionate, intimate, and enduring relationship. Because attachment is of so much significance to the human, there is a complex system of emotional, cognitive, and behavioral processes that ensure that under normal conditions attachment develops. It is important to keep in mind that this is a reciprocal relationship. The infant is not a passive recipient; rather, the infant is actually doing things to be lovable, and in being lovable the infant is ensuring the attachment and dedication of the caregiver. An infant who is unable to respond in a lovable way risks not being cared for, and although very mature parents will presumably, ideally, still care for their infant, many parents will likely pull away and not be as good parents, simply because the infant is not responding in the normal, lovable, adorable way. The fundamental importance of attachment to human psychological well being has been demonstrated for infants, children, and adults (e.g., Ainsworth, 1982; Kobak & Sceery, 1988; Main, Kaplan, & Cassidy, 1985).

What happens when a human child—charged by life with the duty to become attached to and elicit attachment from his or her caregiver—is betrayed by that very caregiver? Why are amnesia and unawareness adaptive in these cases? This takes us to the last piece of the puzzle that must be added to the understanding of pain and attachment. We are exquisite detectors of betrayal under many situations. Cosmides (1989), an evolutionary psychologist, has postulated that humans have a naturally evolved mental mechanism devoted specifically to detecting cheaters. Her argument is that our evolution took place in a social context and that we had to become very good at determining whether or not people were sticking to their social contract. So, we are adept and quick at detecting cheating. Evidence marshaled for this viewpoint comes from laboratory studies conducted using reasoning tasks. Cosmides has found that people can do well on laboratory reasoning tasks if the situation involves detecting a violation of a social contract (cheating) but significantly less well for logically identical problems not involving the detection of cheating.

Whether one agrees with the evolutionary perspective or not, a fair amount of evidence indicates that we are very motivated to detect cheating and betrayal under some conditions. If the choice exists, it would be completely logical for you to stop interacting with somebody who is

cheating you. And, as adults, often we do have that choice. When we're very aware that we have been cheated—for instance, when we've been billed incorrectly—it can make us very angry to feel that we've been deceived.

We are frequently sensitive to cheating when we have the choice, and we know we have the choice to avoid the cheater. But what if we don't have the choice? The sensitivity to betrayal brings pain, and the pain of betrayal can be extraordinarily great. When the betrayer is someone we're dependent on, the very mechanisms that normally protect us—sensitivity to cheating and the pain that motivates us to change things so that we will no longer be in danger—become problematic. An infant or child who is responding to cheating in the “normal” way would pull back from that relationship, become less lovable and less likely to inspire the very nurturing he or she is dependent on. Child abuse is especially likely to produce a social conflict of betrayal for the victim. If a child processes the betrayal in the usual way, he or she will be motivated to stop interacting with the betrayer. Essentially, the child needs to ignore the betrayal to preserve the attachment. Thus, for a child dependent on a caregiver, the trauma of abuse, by the very nature of it, demands that information about the abuse be blocked from mental mechanisms that control attachment and attachment behavior. How is a child to manage this on a long-term, and sometimes nearly daily, basis? How is the child to succeed at maintaining this necessary relationship when a natural response is to withdraw from the source of the pain? It is just this dilemma that is captured by betrayal trauma and, therefore, the child blocks the pain of the abuse and betrayal by isolating knowledge of the abuse/betrayal from awareness and memory. Various avenues for achieving this isolation develop, one being conscious memories without affect, and another the isolation of knowledge of the event itself from awareness.

The How Question: Many Kinds of Memory

Thus far a theory has been suggested about *why* abuse is forgotten; now we move to the *how* question. How could a child experience repeated in-

stances of abuse, fail to remember the events, and yet eventually be able to recover the memories? For this to happen, there must be a disruption of the sort of processing that leads to consciously accessible memory, and still maintain the continuation of other sorts of processing that lead to some kinds of memory for the events. We can understand the phenomenon of forgetting and remembering abuse using concepts from cognitive science. There's nothing necessarily mysterious about forgetting abusive events, considering what we already know about cognitive architecture.

Here, I consider a number of concepts from cognitive science—parallel processing, selective attention and memory, different kinds of memory, different mental codes, shareability (which is a theory about how knowledge sharing changes the nature of the knowledge), the fact that processing complex events takes time, and laboratory studies on memory inhibition.

Memory psychologists tend to divide memory into the three very general processes depicted in Figure 5.4: (a) the processes of encoding information or putting material into memory, (b) the processes of storing information, and (c) the processes of retrieval or recovering information from memory. We know that there can be breakdowns in any one of these three overall components of the memory process. We also know that there is often a relationship between the nature of encoding and the nature of retrieval. Thus, depending on how something has been encoded, it may be easier or harder to retrieve it.

The model presented in Figure 5.4 implies serial processing: Things go in, they're stored, and they come out. In real life, when we're interacting with the complex world, we are, in fact, encountering multiple events that are happening at once and we're processing them in parallel. That is, not only are there multiple events, but we're processing each event in a number of different ways simultaneously and in parallel.

Another aspect of memory that we know well from cognitive science is the extent to which all aspects of information processing—from perception, attention, problem solving, and memory—are very active and very selective. As actors in a complex world, we are confronted with far too much information to absorb, process, and comprehend all of it, and we therefore need to select the information we're going to perceive, pro-

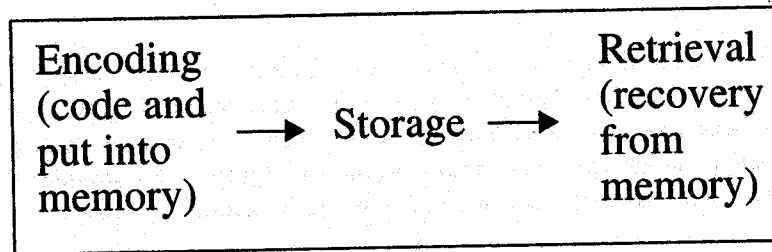


Figure 5.4. Traditional Model of Memory
 SOURCE: From *Betrayal Trauma: The Logic of Forgetting Childhood Abuse*, by J. J. Freyd, 1996, Cambridge, MA: Harvard University Press. Copyright © 1996 by Harvard University Press. Reprinted with permission.

cess, and remember. William James (1890) pointed out, "If we remembered everything we should on most occasions be as ill off as if we remembered nothing" (p. 68). Certainly this is true for perception as well.

Two profoundly relevant aspects of selective attention exist to understand memory for trauma. One is that you can select information to attend to, and the other is that the selection process is not perfect; it is not all or none. As an example, if you are watching a television show with a noisy family around you, you may be able to partially ignore the noisy family, selecting the television as your primary focus (even if it is not as loud as the events around you). However, if that noisy family includes your teenage son announcing his plans to erase the hard drive on your computer, you are likely to suddenly disengage from the television set and select your son's speech stream as your primary focus. Taken further, from the perspective of the child who is motivated to isolate from consciousness information about an abusive event by a caregiver (a betrayal trauma), these facts about selective attention mean that the child can instead select other information simultaneously available for focus concentration, and at the same time the child cannot completely avoid some processing of the abusive event. In other words, the simultaneous reality of the sound of a radio in the room next door, the visual details of the wallpaper in the current room, the feel of an insect crawling on a part of the body not involved in the abusive event—all of these may be events that can be focused on instead of the abusive event. This selective attention toward alternative events and away from the abusive event will certainly make it more likely the abusive event is unavailable to conscious

memory, and yet, the selection of information is unlikely to be only partially effective, in that some of the physical reality of the event that is affecting the nervous system will be registered.

Distinctions in memory are very important for understanding memory for trauma, and psychologists make many distinctions based on behavioral and on neurophysiological data, especially based on people with brain lesions who have various amnesias. Three important distinctions are depicted in Figure 5.5: (a) a distinction in how material is learned (intentional versus incidental), (b) a distinction about the kind of material it is (declarative knowledge you can state versus knowledge you cannot state such as skills learned), and (c) a distinction in how material is retrieved from memory (explicitly versus implicitly). Most learning that occurs is incidental, not intentional. Humans learn, not just because we plan to learn, but because we're learning machines—we cannot stop learning. The distinction in knowledge is extremely important. Declarative knowledge is the knowledge you have that you know you know. It tends to be the material you can verbalize. Within declarative knowledge there are various distinctions, including semantic knowledge, such as the meanings of words and all the things you generally know you know, versus episodic knowledge, such as your memory for events. Semantic and episodic knowledge are things you can declare in some way, but most of our knowledge is nondeclarative.

Nondeclarative knowledge represents all the skills you have, all the conditioning you've been subjected to, which means a great deal of the socializing you've absorbed, perceptual learning, and many other kinds of behavioral knowledge. Indeed, arguably most knowledge is nondeclarative. You know it (how to ride a bicycle, how to sing "Happy Birthday"), but you can't declare the specifics of that knowledge. This distinction (see Squire, 1992) is related to, but not exactly the same as, a distinction in how you retrieve information from memory (see Roediger, 1990). Here the issue is whether you explicitly are trying to recall something, or you implicitly are demonstrating your memory. Most of the time, we are using implicit memory; we're not trying to remember but our memory is guiding our behavior. Most nondeclarative knowledge can be accessed only implicitly, but, in fact, you can have explicit retrieval of both nondeclarative and declarative knowledge and implicit retrieval of both.

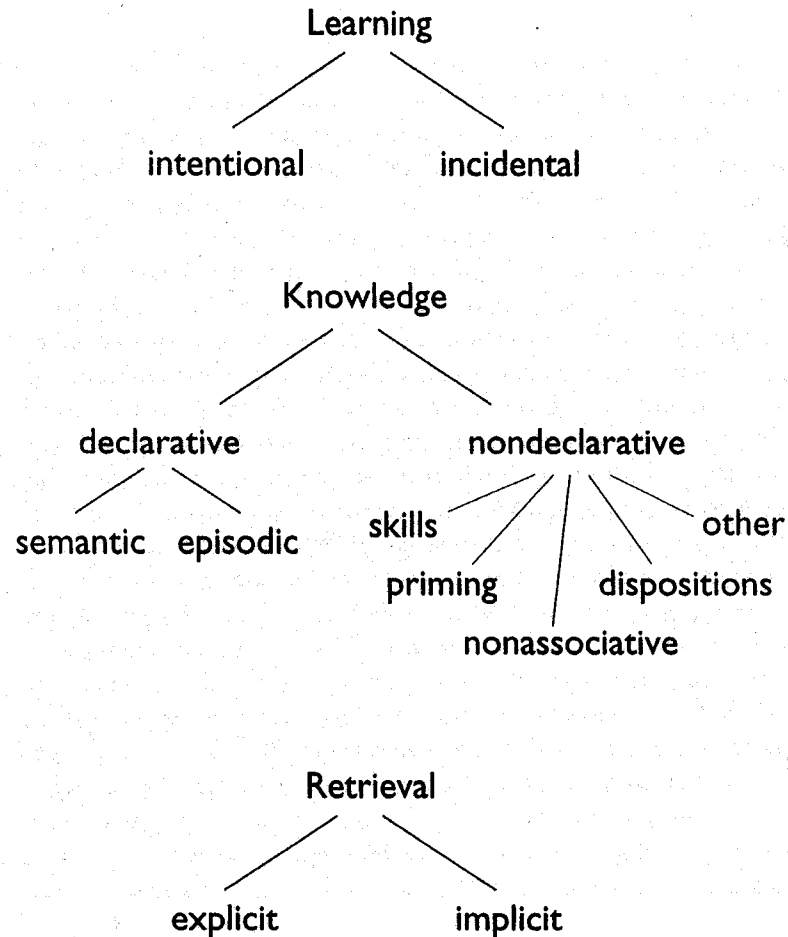


Figure 5.5. Three Distinctions in Memory
 SOURCE: Copyright © 1996, Jennifer J. Freyd.

Figure 5.6 illustrates what I call the iceberg model of kinds of memory. It represents graphically that we have many kinds of memory. It also demonstrates that declarative, explicit memories are just the tip of the iceberg. They are the ones we're really conscious of, the ones we might think of when we first hear the word *memory*, the category in which au-

tobiographical memories fall. These are the things we can say we know. But most of memory is not above the conscious line and instead, it involves all the shifts in judgment that have occurred, all the effects of socialization, all the learning that has occurred at the level of skills and motor behaviors. Most of memory is below this line.

Going back to the notion of parallel processing, if you consider the possibility that you've got a blockage in processing, you can imagine that you've got a blockage that's going to lead to explicit and declarative memories, but you also have fully functioning processing that's going to lead to procedural and implicit memories. For the abused child, this means that an event can be experienced and processed in ways that allow some information to enter those processing mechanisms that learn behaviors and habits and perceptual associations while simultaneously being blocked from those mechanisms that support consciously accessible episodic event memories. This means an abused child may have sensory memories of abuse that are dissociated from a conscious understanding of their source, and that an abused child may also learn a range of behaviors from the abuse (including behaviors eventually expressed during parenting), yet all the while not having access to a clear narrative account of the abusive events.

Shareability theory is a hypothesis developed (Freyd, 1983, 1990) not for traumatic memories, but because information that is shared tends to become more discrete and categorical. The theory says that through knowledge sharing, internal material becomes more categorical and is the spontaneous property of two people, or a group of people, communicating. Categorical information can have stability across space and time, and shareability theory presumes that the sharing of information spontaneously causes this emergent property of categorization. However, if a traumatic experience was never coded into shareable format, it's likely to be stored in mental codes that are continuous, sensory, and dynamic. Memory for perceptual experiences that have not been encoded in a declarative way is stored using mental coding that's quite different from the kind of declarative coding that we use. And sharing the information allows an integration of information between these different mental codes that might not otherwise be occurring. This means private knowledge may be structurally different from shared or public

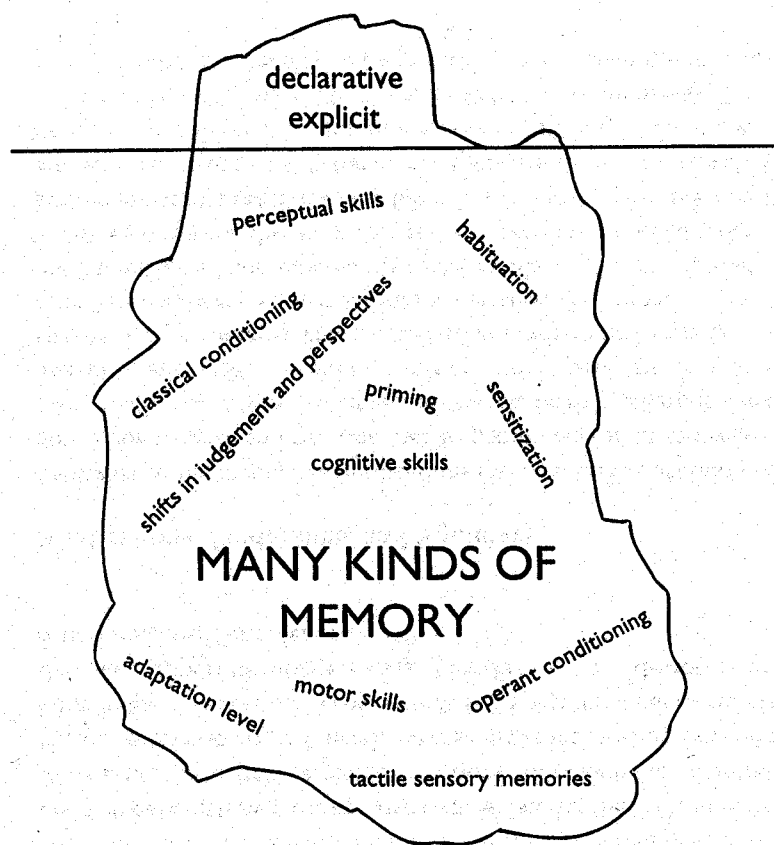


Figure 5.6. The Iceberg Model of Different Kinds of Memory
 SOURCE: Copyright © 1996, Jennifer J. Freyd.

knowledge. Consider that child abuse experiences are likely to have never been discussed for years, maybe never. If a child never speaks of the trauma, we would expect from shareability theory that the memory for that trauma would be qualitatively different from memories that have been socially shared.

Processing complex events takes time, and because it takes time means that one way we can disrupt the storage of memories into normal

full memory is by blocking the repeated processing of information via feedback loops that support mental rehearsal and consolidation of information (Browne, 1990). When I say it takes time, I mean lots of time—Consider a time when you first learned of distressing news, news that would largely impact your life. You can probably also recall that you were very actively processing this significant information for hours, days, maybe even weeks. In this processing time, consolidation is occurring. If you stop this processing time, you leave traces for the event that have a very fragmented, unfinished feel to them because you haven't continued the normal consolidation. For example, if you learn that someone you care about is moving far away, you may process that information over the next few days. Consider what occurs when you inhibit that normal processing.

Finally, we know from laboratory studies on memory inhibition that it's possible for people to go through the processing of a memory and lay down a very good memory and still not be able to remember it. This occurs when a block is created to the retrieval cues. Under the right laboratory conditions, this can be induced; typically, these experiments are done for very neutral stimuli, like words on a list. But that block can also be released under the right conditions. We know that it's cognitively possible to have not only the blockage of information in the encoding stage, but even the blockage of information after encoding that's affecting retrieval (Anderson & Bjork, 1994; Anderson & Spellman, 1995). If these laboratory results can be generalized to event memory (and that is yet to be tested empirically), then we would expect that the abused child could, in fact, later inhibit an already formed memory of the abuse. Until further experimentation on the generalizability of these laboratory findings on memory inhibition is performed, we can say that there are known cognitive mechanisms discovered in laboratory experiments for inhibiting and later recovering memories.

Putting this all together, we can answer the question of how it is cognitively plausible to forget and remember abusive events. Rather than saying there's one way to forget and one way to remember abuse, we can recognize that there are many ways information can be forgotten and later remembered. We have multiple mental mechanisms processing information in parallel. Attention is selective, and different kinds of memory are tied to different mental processes using different mental

codes. In normal memories, these codes are associated with one another, but in traumatic memories, because of those blockages, they may not be. But the sharing of information, either at the time of the event or much later, as in a therapeutic relationship, may facilitate integration between different codes. That processing complex events takes time implies that knowledge can be isolated by interrupting the extended processing of complex events. The finding that even well-formed memories can be inhibited and later recovered suggests, but does not prove, that this may be true for abuse memories, too.

In sum, there are multiple ways for the abused child to disrupt knowledge integration and awareness of the abuse and yet still facilitate the important and crucial relationship. This cognitive perspective also suggests that there are multiple ways for the adult survivor of childhood abuse to recover these memories, and that these different ways will depend, in part, on how the memories were isolated in the first place. At the same time, this cognitive plausibility does not negate the potential for false memories to occur. Indeed, the cognitive mechanisms that support knowledge isolation and recovery may be in part the same mechanisms that may support memory errors (see also Freyd, 1996; Morton, in press; Schachter, 1996; Schooler et al., 1997).

Implications, Predictions, and Summary

Betrayal trauma theory has implications for the sequelae of child sexual abuse, for societal and personal healing, and also for an awareness of everyday betrayal (things that are less traumatic than childhood sexual abuse) (Freyd, 1996). Adulthood and everyday betrayals—a boss who speaks in a patronizing voice, a spouse who flirts with a friend—also often leave little marks on conscious awareness. The human response of not knowing—of not remembering—betrayals may be ubiquitous.

Betrayal trauma theory makes testable predictions about when forgetting abuse is most likely (see Table 5.2). For instance, it predicts that amnesia will be more likely the more dependent the victim is on the perpetrator. Reanalyses of extant data (Cameron, 1993; Feldman-Summers & Pope, 1994; Williams, 1994a, 1995), in which information was gathered about both the relationship of perpetrator to victim and the persistence

of memory, are consistent with this prediction (Freyd, 1996). Only one study claims to find that persistence of memory is unrelated to whether the abuse was incestuous (Loftus, Polonsky, & Fullilove, 1994). However, reanalysis of the data collected for that study indicated that the "highest amnesia rates are among those woman abused by a parent and that family relatedness per se does not predict amnesia" so that the data are "equivocal on the relationship between betrayal and amnesia" (Freyd, 1996, p. 156). In addition, two oft-cited studies (Briere & Conte, 1993; Herman & Schatzow, 1987) reporting very high rates of amnesia for abuse (62% and 59.3%, respectively) both also have very high rates of incestuous abuse in their samples (100% and 89.8%, respectively).

In summary, betrayal trauma theory provides a logic to amnesia for childhood abuse. Betrayal is a violation of trust; if you can choose whom to interact with, it's best to be very aware of betrayal. Where escape is not a viable option, however, the ability humans have to detect betrayal may need to be stifled. When a child distrusts a parent, the child risks alienating that parent further and that, in turn, results in more abuse and less love and care. Amnesia for the abuse can be adaptive, allowing a dependent child to remain attached to the abusive caregiver, thus eliciting some degree of life-sustaining nurturing and protection. And various degrees of amnesia—from partial to robust, with various onsets from the time of the event to afterward—and various consequences can be understood in terms of what cognitive science currently informs us about memory and attention.

The psychological effects of trauma can be understood to depend on at least two separate dimensions of trauma: immediate bodily threat that may be only too well remembered, and betrayal that may be forgotten in order to preserve a relationship (Freyd, 1996), as much as a child may deny, delay, or even retract an allegation of abuse to preserve his or her world (Summit, 1983).

References

- Ainsworth, M. D. (1982). Attachment: Retrospect and prospect. In C. M. Parkes & J. Stevenson-Hinde (Eds.), *The place of attachment in human behavior* (pp. 3-30). New York: Basic Books.
- Anderson, M. C., & Bjork, R. A. (1994). Mechanisms of inhibition in long-term memory: A new taxonomy. In D. Dagenbach & T. Carr (Eds.), *Inhibitory processes in attention, memory and language* (pp. 265-325). San Diego: Academic Press.

- Anderson, M. C., & Spellman, B. A. (1995). On the status of inhibitory mechanisms in cognition: Memory retrieval as a model case. *Psychological Review*, 102, 68-100.
- Andrews, B., Brewin, C. R., Ochera, J., Morton, J., Bekerian, D., Davies, G. M., & Mollon, P. (1999). Characteristics, context and consequences of memory recovery among adults in therapy. *British Journal of Psychiatry*, 175, 141-146.
- Bowlby, J. (1969). *Attachment and loss*. New York: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.
- Bowman, C. G., & Mertz, E. (1996). What should the courts do about memories of sexual abuse? Towards a balanced approach. *Judge's Journal*, 35(4), 7-17.
- Bremner, J. D., Randall, P., Scott, T. M., Bronen, R. A., Seibyl, J. P., Southwick, S. M., Delaney, R. C., McCarthy, G., Charney, D. S., & Innis, R. B. (1995). MRI-based measurement of hippocampal volume in patients with combat-related posttraumatic stress disorder. *American Journal of Psychiatry*, 152, 973-981.
- Brewin, C. R. (1996). Clinical and experimental approaches to understanding repression. In J. D. Read & D. S. Lindsay (Eds.), *Recollections of trauma: Scientific research and clinical practice*. New York: Plenum.
- Briere, J., & Conte, J. (1993). Self-reported amnesia for abuse in adults molested as children. *Journal of Traumatic Stress*, 6(1), 21-29.
- Brown, D., Schefflin, A. W., & Hammond, D. C. (1997). *Memory, trauma treatment, and the law*. New York: Norton.
- Browne, I. (1990). Psychological trauma, or unexperienced experience. *ReVision*, 12(4), 21-34.
- Burgess, A. W., Hartman, C. R., & Baker, T. (1995). Memory presentations of childhood sexual abuse. *Journal of Psychosocial Nursing*, 33(9), 9-16.
- Butler, K. (1996). The latest on recovered memory. *Family Therapy Networker*, 20(6), 36-37.
- Cameron, C. (1993, April). Recovering memories of childhood sexual abuse: A longitudinal report. Paper presented at the Western Psychological Association Convention, Phoenix, AZ.
- Corwin, D. L., & Olafson, E. (1997). Videotaped discovery of a reportedly unrecalable memory of child sexual abuse: Comparison with a childhood interview videotaped 11 years before. *Child Maltreatment*, 2(2), 91-112.
- Cosmides, L. (1989). The logic of social exchange: Has natural selection shaped how humans reason? Studies with the Wason Selection Task. *Cognition*, 31, 187-276.
- Dalenberg, C. J. (1996). Accuracy, timing and circumstances of disclosure in therapy of recovered and continuous memories of abuse. *Journal of Psychiatry and Law*, 24(2), 229-275.
- Elliott, E., & Briere, J. (1995). Posttraumatic stress associated with delayed recall of sexual abuse: A general population study. *Journal of Traumatic Stress*, 8(4), 629-647.
- Feldman-Summers, S., & Pope, K. S. (1994). The experience of "forgetting" childhood abuse: A national survey of psychologists. *Journal of Consulting and Clinical Psychology*, 62, 636-639.
- Finkelhor, D. (1979). *Sexually victimized children*. New York: Free Press.
- Freyd, J. J. (1983). Shareability: The social psychology of epistemology. *Cognitive Science*, 7, 191-210.
- Freyd, J. J. (1990). Natural selection or shareability? *Behavioral and Brain Sciences*, 13, 732-734.
- Freyd, J. J. (1991, August). Memory repression, dissociative states, and other cognitive control processes involved in adult sequelae of childhood trauma. Paper presented at the Second Annual Conference on Psychodynamics—Cognitive Science Interface, Langley Porter Psychiatric Institute, University of California, San Francisco.

- Freyd, J. J. (1996). *Betrayal trauma: The logic of forgetting childhood abuse*. Cambridge, MA: Harvard University Press.
- Freyd, J. J., & Gleaves, D. H. (1996). "Remembering" words not presented in lists: Relevance to the current recovered/false memory controversy. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 22(3), 811-813.
- Freyd, J. J., DePrince, A. P., & Zurbriggen, E. L. (in press). Self-reported memory for abuse depends upon victim-perpetrator relationship. *Journal of Trauma & Dissociation*, 2(3).
- Freyd, J. J., & Quina, K. (2000). Feminist ethics in the practice of science: The contested memory controversy as an example. In M. Brabeck (Ed.), *Practicing feminist ethics in psychology* (pp. 101-124). Washington, DC: American Psychological Association.
- Gleaves, D. H. (1996). The evidence for "repression": An examination of Holmes (1990) and the implications for the recovered memory controversy. *Journal of Child Sexual Abuse*, 5(1), 1-19.
- Gleaves, D. H., & Freyd, J. J. (1997). Questioning additional claims about the "false memory syndrome" epidemic. *American Psychologist*, 52, 993-994.
- Goleman, D. (1985). *Vital lies, simple truths: The psychology of self-deception*. New York: Simon & Schuster.
- Harlow, H. F. (1959). "Love in infant monkeys." *Scientific American*, 200, 68-74.
- 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), 1-14.
- Hovdestad, W. E., & Kristiansen, C. M. (1996). A field study of "false memory syndrome": Construct validity and incidence. *Journal of Psychiatry and Law*, 24(2), 299-338.
- James, W. (1890). *Principles of psychology*. New York: Holt.
- Kelly, D. D. (1985). Central representations of pain and analgesia. In E. R. Kandel & J. H. Schwartz (Eds.), *Principles of Neural Science* (pp. 331-343). New York: Elsevier.
- Kinsey, A. C., Pomeroy, W. B., Martin, C. E., & Gebhard, P. H. (1953). *Sexual behavior in the human female*. Philadelphia: W. B. Saunders.
- Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and perception of self and others. *Child Development*, 59, 135-146.
- Lindsay, D. S., & Briere, J. (in press). The controversy regarding recovered memories of childhood sexual abuse: Pitfalls, bridges and future directions. *Journal of Interpersonal Violence*.
- Loftus, E. F., & Ketcham, K. (1994). *The myth of repressed memory: False memories and allegations of sexual abuse*. New York: St. Martin's.
- Loftus, E. F., Polonsky, S., & Fullilove, M. T. (1994). Memories of childhood sexual abuse: Remembering and repressing. *Psychology of Women Quarterly*, 18, 67-84.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development*, 50(1-2), 66-104.
- Mason, P. H. C. (1997). False memory syndrome vs. lying perpetrator syndrome. *Post-Traumatic Gazette*, 1(4), p. 4.
- Mason, R. (1983). *Chickenhawk*. New York: Viking.
- Medick, E. (1994, June 16). Women's repressed memory of abuse leads to conviction. *Columbus Dispatch*, p. 1A.
- Morton, J. (in press). Cognitive perspectives on recovered memories. In J. Sandler (Ed.), *Recovered memories of abuse: True or false*. London: Karnac Books.

- Olafson, E., Corwin, D. L., & Summit, R. C. (1993). Modern history of child sexual abuse awareness: Cycles of discovery and suppression. *Child Abuse & Neglect*, 17, 7-24.
- Pope, K. S., & Brown, L. S. (1996). *Recovered memories of abuse: Assessment, therapy, forensics*. Washington, DC: American Psychological Association.
- Roediger H. L., III. (1990). Implicit memory: Retention without remembering. *American Psychologist*, 45(9), 1043-1056.
- Russell, D. E. H. (1986). *The secret trauma: Incest in the lives of girls and women*. New York: Basic Books.
- Schachter, D. L. (1996). *Searching for memory: The brain, the mind, and the past*. New York: Basic Books.
- Schefflin, A. W., & Brown, D. (1996). Repressed memory or dissociative amnesia: What the science says. *Journal of Psychiatry & Law*, 24, 143-188.
- Schooler, J. W., Bendixen, 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*. Oxford: Oxford University Press.
- Shay, J. (1994). *Achilles in Vietnam: Combat trauma and the undoing of character*. New York: Atheneum.
- Squire, L. R. (1992). Memory and the hippocampus: A synthesis from findings with rats, monkeys, and humans. *Psychological Review*, 99(2), 195-231.
- Summit, R. C. (1983). The child sexual abuse accommodation syndrome. *Child Abuse & Neglect*, 7, 177-193.
- Summit, R. C. (1988). Hidden victims, hidden pain: Societal avoidance of child sexual abuse. In G. E. Wyatt & G. J. Powell (Eds.), *Lasting effects of child sexual abuse* (pp. 39-60). Newbury Park, CA: Sage.
- Summit, R. C. (1992). Abuse of the child sexual abuse accommodation syndrome (Case conference: Mental health/social service issues and case studies). *Journal of Child Sexual Abuse*, 1(4), 153-163.
- Timnick, L. (1985, August 25). 22% in survey were child abuse victims. *Los Angeles Times*, pp. 1, 34.
- van der Kolk, B. A. (1994). The body keeps the score: Memory and the evolving psychobiology of posttraumatic stress. *Harvard Review of Psychiatry*, 1(5), 253-265.
- van der Kolk, B. A., & Fislis, R. (1995). Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. *Journal of Traumatic Stress*, 8, 505-525.
- Widom, C. S., & Morris, S. (1997). Accuracy of adult recollections of childhood victimization: II. Childhood sexual abuse. *Psychological Assessment*, 9(1), 34-46.
- Williams, L. M. (1994a). Recall of childhood trauma: A prospective study of women's memories of child sexual abuse. *Journal of Consulting and Clinical Psychology*, 62(6), 1167-1176.
- Williams, L. M. (1994b). What does it mean to forget child sexual abuse? A reply to Loftus, Garry, and Feldman (1994). *Journal of Consulting and Clinical Psychology*, 62(6), 1182-1186.
- Williams, L. M. (1995). Recovered memories of abuse in women with documented child sexual victimization histories. *Journal of Traumatic Stress*, 8, 649-674.

AUTHOR'S POSTSCRIPT: This chapter was completed in 1997. In the interim, the in-press version of the paper inspired a number of new empirical studies and theoretical developments, including the following:

- DePrince, A. P., & Freyd, J. J. (in press). Memory and dissociative tendencies: The roles of attentional context and word meaning in a directed forgetting task. *Journal of Trauma & Dissociation*, 2,(2).
- DePrince, A. P., & Freyd, J. J. (in press). The intersection of gender and betrayal in traumatic exposure and trauma sequelae. In R. Kimerling, P. C. Oumette, & J. Wolfe (Eds.), *Gender and posttraumatic stress disorder: Clinical, research, and program-level applications*. New York: Guilford.
- DePrince, A. P., & Freyd, J. J. (in press). The harm of trauma: Pathological fear, shattered assumptions, or betrayal? In J. Kauffman (Ed.), *Loss of the assumptive world*. Philadelphia: Taylor & Francis.
- DePrince, A. P. (2001). Trauma and posttraumatic responses: an examination of fear and betrayal. Doctoral dissertation, University of Oregon, 2001.
- DePrince, A. P., & Freyd, J. J. (1999). Dissociative tendencies, attention, and memory. *Psychological Science*, 10, 449-452.
- Freyd, J. J. (1998). Science in the memory debate. *Ethics & Behavior*, 8, 101-113.
- Freyd, J. J. (1999). Blind to betrayal: New perspectives on memory for trauma. *The Harvard Mental Health Letter*, 15(12), 4-6.
- Freyd, J. J., & DePrince, A. P. (2001). Perspectives on memory for trauma and cognitive processes associated with dissociative tendencies. *Journal of Aggression, Maltreatment, & Trauma*, 4, 137-163.
- Freyd, J. J., DePrince, A. P., & Zurbriggen, E. L. (in press). Self-reported memory for abuse depends upon victim-perpetrator relationship. *Journal of Trauma & Dissociation*, 2,(3).
- Freyd, J. J., & Quina, K. (2000). Feminist ethics in the practice of science: The contested memory controversy as an example. In M. Brabeck (Ed.), *Practicing feminist ethics in psychology* (pp. 101-124). Washington, DC: American Psychological Association.
- Stoler, L., Quina, K., DePrince, A. P., & Freyd, J. J. (in press). Repressed memories. In J. Worrell (Ed.), *Encyclopedia of Gender*. San Diego: Academic.
- Veldhuis, C. B., & Freyd, J. J. (1999). Groomed for silence, groomed for betrayal. In M. Rivera (Ed.), *Fragment by fragment: Feminist perspectives on memory and child sexual abuse* (pp. 253-282). Charlottetown, PEI Canada: Gynergy Books.