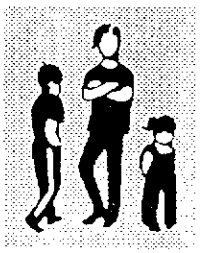
PSYCHOANALYTIC MONOGRAPH No.2

RECOVERED MEMORIES OF ABUSE

True or False?

Edited by
Joseph Sandler and Peter Fonagy

Foreword by Phil Mollon



Monograph Series of
The Psychoanalysis Unit of University College, London
and
The Anna Freud Centre, London

Series Editors: Joseph Sandler and Peter Fonagy

KARNAC BOOKS

CHAPTER TWO

Cognitive perspectives on recovered memories

John Morton

I am not a clinician; I have no friends who have recovered memories, nor do I have friends who have been accused by people who have recovered memories. I am an academic and am used to academic discourse. Even worse, or even better, I am an experimentalist and theoretician. Reading the material on recovered memories and false memories, I had something of a shock, for two reasons. The first was the nature of the material itself. Irrespective of the historical facts of the matter, I have found these stories of abuse and brutality, usually involving small children, extremely disturbing.

The second problem was that, rather than the one, flexible scientific truth that I had dealt in all my life, where outrageous hypotheses could be advanced without more than a sad smile in return, I now found myself in an area where certain hypotheses

---

Chair: Eric Rayner

Parts of this paper have appeared in Morton (1991, 1992, 1994a). I am deeply grateful to Guinevere Tufnell for her comments on the draft of this chapter.

carried with them the threat of legal proceedings and possibly imprisonment. This was an unfamiliar area of discourse, where the very nature of truth became an issue. It became apparent that there are a number of different kinds of truth involved. Firstly, there is the historical truth: what really happened. Secondly, there is a narrative truth, which results from a process of remembering and constructing a version of past events; this process could take place in a therapeutic context, in which client and therapist engage together, with the aim of enabling the client to understand something about herself or himself. These two kinds of truth can be contrasted with legal truth, which is established on the basis of evidence admissible in a court of law. Finally, there is scientific truth, which actually concerns what is possible in principle rather than what might have happened in any particular case. In the public debates on the issues, we see, repeatedly, a dangerous slide from the truth or falsity of an individual matter to the generalization and back.

In the spring of 1994, a jury in California heard a suit in which Gary Ramona, who had been accused by his daughter Holly of incest, sued the daughter's therapists, and the medical centre in which they worked, for malpractice. On 13 May 1994, the jury returned a verdict for the father, agreeing that the therapists had inappropriately used aggressive therapeutic techniques, including barbiturate drugs, to help the daughter exhume memories of incest. Before the jury of this case reached its verdict, I was asked by *The Guardian* newspaper to write on its significance. In my article (Morton, 1994b), I warned of simplistic overgeneralization and said:

> If the jury finds for the plaintiff, will we conclude that all recovered memories have been planted by psychotherapists? If the jury finds for the defendant, will we conclude that anyone accused of child sexual abuse is guilty as charged and that all reported memories are based on fact, and that the false memory syndrome organisations here and in the States are refuges for perpetrators? This is rather a heavy scientific burden to lay on a group of jurors.

I finished by saying, "Whichever way the verdict goes, we will have learned something about this case (or at least about this case in interaction with the American legal system) but nothing more.

Neither the abused nor the innocent accused will be helped by generalizations from single events." However, the verdict was seen by some journalists not only as effectively acquitting Ramona of abuse but as a success for the false memory lobby, as if there were generalizations possible to the therapeutic community in general.

In fact, the Ramona verdict has enormous implications for the practice of psychotherapy in California, for the insurance of psychotherapists, and for the employment of lawyers who prowl the fringes. The implications for the pursuit of knowledge are limited indeed. The reason for this is that the verdict is relevant to legal truth and not at all to any other. We have no idea, still, what the historical facts of the matter were in relation to the alleged abuse. All we know is what the verdict was, what the jury were reported as saying afterwards, and what we happen to believe from what we read. Of course, even if we did know for certain what had happened in relation to the alleged abuse, there would still be no valid generalizations possible.

Another example of the strange logic around this area arose in the review by Frederick Crews (1993) in the *New York Review of Books* of a number of books concerning Freud. The burden of Crews' argument seemed to be that, since Freud's motivation for a number of his actions was suspect, one had licence to reject his theoretical postulates, including the notion of repression. Since repression is the mechanism most commonly invoked to account for the forgetting and later recovery of memories, the argument is supposed to give support to anyone who believes that all recovered memories are false. Specifically, Crews says:

> . . . the modern cases . . . [of recovered memories of child sexual abuse] . . . hinge absolutely on Freud's still unsubstantiated notion that children routinely repress anxiety-producing memories—for how else could their initial denial of having been molested be so blithely set aside? [p. 66]

Crews (1994) returns to the fray in a more recent, two-part review of a number of books written about recovered/false memories. He asks: "How can one count authentic cases of repressed memory when the very concept of repression stands in doubt?" This rhetoric confuses observation and explanation (I assume that Crews uses the term "concept" in the sense that a cognitive psychologist

would use the term "mechanism") in a way that reminds one of Galileo's reported problems with convincing other people of what could be seen through his telescope. How could there be moons revolving round Jupiter, without an explanatory principle to hold them up! Crews is properly outraged by the apparent miscarriages of justice and the blatant politicization of unregulated therapy in the United States that have clustered around the issue of recovered memory. But he cannot mean that if a mechanism (not repression) for the forgetting of early trauma were discovered, he would now believe to be true all the cases of recovered memory that he now calls false. The force of the evidence in the individual cases would be decisive, as it should be in any case.

Another unacceptable argument concerns the things that have been reported as recovered in therapy. Much has been made recently of extended reports of abduction and impregnation by aliens, by recovery of memories of past lives. I do not believe in intergalactic breeding programmes, and I do not believe that we have access to previous lives. For me, any such memories are *ipso facto* false as historical memories, and I am not surprised by claims that past life memories are never recovered by clients of alien-abduction therapists nor alien-abduction memories by clients of past-life therapists (though I am somewhat surprised by reports that therapists could so style themselves). Such facts would confirm that it is the *a priori* beliefs of the therapists that determine the contents of the memories, rather than the imagination of the clients. That some, and perhaps most, of these memories occur in the course of therapy and perhaps in the course of hypnotherapy can, for my logical system, lead to no generalizable conclusions on recovered memories or on the general practice of hypnotherapy. Certainly, if a patient who recovered vivid recollections of having been abducted by aliens and taken off into space also recovered memories of having been sexually abused by a parent, one might doubt the accusation of sexual abuse *in this particular case*, unless there were aspects of the reports of the two experiences that led one to treat them differently. Equally, I would assume that if there were a therapist whose clients regularly produced memories of past lives or alien species, then one would more severely question all the recovered memories of the clients of such a therapist. But it is a long way from such a position to one that involves assuming

that any therapist whose client recovers a memory of child sexual abuse must be suspect.

Normal memory

Sometimes we remember events pretty much as they happened, sometimes we remember fabrications as if they were reality, and sometimes we do a bit of both. Even when we do recount things as they happened, we are, simultaneously, likely to be remembering details incorrectly.

All memories are a mixture of reproduction and reconstruction. Factors that appear to influence the degree of reproduction or reconstruction include the personal significance of the event and the information, the consequentiality of the event, the emotive content of the event, the amount of time that elapses between the person experiencing the event and remembering it, the reasons why the person is remembering the event, and to whom the person is remembering. Events that are significant for highly personal reasons evoke deep beliefs, attitudes, and emotional reactions. As a consequence, these events will be more vulnerable to such influences when subsequently remembered, and memory will become more reconstructive. Research in autobiographical memory has demonstrated that people can dramatically misremember details and episodes of highly significant events, with these importations being regarded as "fact". This is particularly likely to happen under hypnosis.

Importantly, reconstruction can occur in recall without any conscious awareness on the part of the person. Although research conducted on reality monitoring suggests that people can usually distinguish successfully between events that happened and events that were imagined, the ability to discriminate between real and imagined events can be impaired. For example, if there is extensive rehearsal of the imagined event, the person will begin to believe that the event actually happened. The memory can become highly detailed and "vivid" to the person (Johnson, Hashtroudi, & Lindsay, 1993). Additionally, erroneous information given to the person after an event has been experienced can become assimilated

into the memory. Autobiographical memory is a constant process of selection, revision, and reinterpretation. But let us not exaggerate the reconstructive aspects. As Brewer (1988) has noted, autobiographical memories often contain a large amount of accurate and apparently irrelevant detail, which is difficult to explain if memories are simply reconstructions based on generalized schemata. However, overall I am inclined to agree with Baddeley (1990):

> Much of our autobiographical recollection of the past is reasonably free of error, provided we stick to remembering the broad outline of events. Errors begin to occur once we try to force ourselves to come up with detailed information from an inadequate base. [p. 310]

Are false memories possible?

We need to make a distinction between false memories and incorrect memories. It is clear that incorrect memories are possible in the normal course of events. The morning after the space shuttle *Challenger* disaster, Neisser and Harsch (1993) had freshman students write down what they had been doing at the time they heard the news. Three years later the students were asked again to recall the circumstances, particularly where they had been, what they had been doing, and who told them. It is not surprising that 11 out of the 44 subjects got zero correct; it is surprising that 3 of them rated themselves as absolutely certain of every aspect of their recall. When they were shown what they had written three years previously, some subjects argued that they must have been wrong twenty-four hours after the event because they were so certain that they were correct now! Sinilar findings have emerged from a study of the *Marchioness* disaster.*

*The *Marchioness*, on which a "disco" was being held, was involved in a collision with a sand dredger in the River Thames on 20August 1989. Fifty-one of the persons on board died, and the remainder were subjected to trauma through being thrown into the water and being trapped before surviving, as well as witnessing the devastation caused by the collision.

One thing that all the subjects had in common is that they recalled an event that was characterized as hearing about the disaster. None of them claimed that there was no such moment or that they could remember nothing about it. (In contrast, I can recall nothing whatsoever of the circumstances surrounding my first hearing that Kennedy had been assassinated—I am almost unique among my age group in this.) More serious would be remembering an event that had not taken place.

Whole memories can be implanted into a person's real-life autobiography, as is shown by Piaget's classic childhood memory of an attempted kidnapping (Piaget, 1962). The false memories were with him for at least a decade:

> . . . one of my first memories would date, if it were true, from my second year. I can still see, most clearly, the following scene, in which I believed until I was about fifteen. I was sitting in my pram, which my nurse was pushing in the Champs Elysées, when a man tried to kidnap me. I was held in by the strap fastened round me while my nurse bravely tried to stand between me and the thief. She received various scratches, and I can still see vaguely those on her face. . . . When I was about fifteen, my parent received a letter from my former nurse . . . she wanted to confess her past faults, and in particular to return the watch she had been given as a reward. . . . She had made up the whole story. . . . I, therefore, must have heard, as a child, the account of this story, which my parents believed, and projected into the past in the form of a visual memory.

In a similar vein, Loftus and Coan (1994) have shown that some people can be made to believe that, when young, they had been lost in a shopping mall. One of their examples was Bill, a 42-year-old man, who was convinced by his sister that he had been lost. To instil the memory, she gave him this description: "I remember when you were about five or six and you got lost at Sears. Mother had taken us there to get some shoes. I guess while I was trying some on, you wandered off. After mother realized you were gone, she told me to stay where I was and I had just started to look for you when we saw you being led along by an elderly man. You were crying and holding his hand. He explained that he had found you by the candy counter looking confused and crying a little."

A day after getting the description from his sister, Bill tried to remember the specific location: "I think I remember (or can imagine?) getting lost—I remember what Sears looked like in Santa Monica—or was it at J.C. Penney's? I felt panicky—where were Mom and Linda; I felt scared." The next day, Bill remembered more: "I remember going up or down the stairway at Sears. I remember the elevator bell at Sears. Now I remember—it was Sears and not J.C. Penney."

Loftus describes five individuals, ages 8 to 42, who were, with little difficulty, led to develop a false memory, or at least a partial one, for something that never happened. Such findings serve as proof of the possibility of implanting false memories (though, I must say again, they tell us nothing about the accuracy of recovered memories in general or in any particular case).

What about true recovered memories? This is a complex issue for experimental scientists, since it is clearly not possible to set up laboratory studies to examine it. The methodological problems intrinsic to the other available techniques are enormous, and I have no wish to explore the issues here. Let me, instead, mention conclusions from a couple of sources who would not be thought prejudiced against the notion of false memories. Firstly, Ceci and Loftus (1994), two psychologists who have made many experimental demonstrations of the fallibility of memory, have recently said that "we too believe that it is possible to lose contact with memories for a long time" (p. 352).

The principal stress here seems to be on the fallibility of the remembered material rather than on the memory recovery per se. Secondly, Lindsay and Read (1994), in a Herculean review of the literature, comment:

> There is little reason to fear that a few suggestive questions will lead psychotherapy clients to conjure up vivid and compelling illusory memories of childhood sexual abuse. [p. 294]

They do add:

> However, as described above, the techniques some authorities advocate for recovering repressed memories of childhood sexual abuse are vastly more powerful than the laboratory procedures, and there is good reason to be concerned about

> the possibility that they sometimes lead to the creation of illusory memories.

Such a view was shared by the Working Party of the British Psychological Society in their report (Morton et al., 1995). However, the range of belief in this area is somewhat alarming, even among academics. For example, Kihlstrom (1996) has said:

> Within this socio-cultural milieu, even a few probing questions and suggestive remarks by an authoritative figure such as a therapist may be sufficient to inculcate a belief on the part of a patient that he or she was abused, and start the patient on the road towards the "recovery" of false memories. Even a totally neutral therapist cannot prevent these cultural influences. [p. 308]

While this might seem excessive, it does appear that the thinking and practice of highly trained psychotherapists can seem very risky in the context of the present debate (Morton, 1996).

To get some idea of the prevalence of recovered memories in the practices of well-trained therapists, the Working Party of the British Psychological Society on Recovered Memories carried out a preliminary survey of BPS-accredited practitioners (Andrews et al., 1995). Of 810 Chartered Psychologists who see non-psychotic adult clients,* more than 1 in 5 had had at least one client in the last year who recovered a memory of childhood sexual abuse. When asked about longer-term experience, 31% reported having had clients recovering childhood sexual abuse memories from total amnesia prior to any therapy, and 28% reported clients recovering memories of trauma other than childhood sexual abuse. Two-thirds of our respondents thought that false memories were possible, and more than 1 in 7 believed that they had seen false memories in their own practice. (Again, I feel I must interject a cautionary note to the effect that believing in the possibility of

*Those we were interested in were defined as "adult clients (over 18) with non-psychotic disorders—i.e. excluding schizophrenic, manic-depressive or organic disorders. These clients could be using or attending mental health services or being seen for mental health reasons in primary care or private practice."

genuine recovered memories in some circumstances should logically have only little implication for the way we might view what happens under very different circumstances.)

Accounting for recovered memories

Let us now consider what some of the properties might be of a memory system that would allow for selective amnesia for abusive events and for their subsequent recovery. Much of the public debate has concentrated on "robust repression" as the mechanism for amnesia. This, as I have noted, has been linked to Freud, and the success or failure of the concept of repression has been taken as crucial. However, Freud's model of memory was very incomplete, and the concept of repression is not one that has had much of a role in cognitive theories of memory. In fact, there are a number of other mechanisms available that reveal themselves only in the context of an articulated model.

In looking at possible accounts of recovered memories, we can note that if the amnesia for the events is to recover, then we have to assume that some memory trace of the abuse was laid down at the time of its occurrence. If the memory is to be recalled later, and to the extent that it is recalled, then the amnesia cannot involve destroying this memory trace either by erasing it or by overwriting. Also, it is difficult to see how the amnesia could be due to the form in which the memory was laid down. For Neisser (1967), the recall of events was seen as largely reconstructive, and the schemata used for the reconstruction would expect to find the data in a particular format. If a memory could not be retrieved during the amnesia because of problems with the format, it would have to be unretrievable later. Two options that remain are that the memories of the abuse could not be retrieved, or that the memories were retrieved but were "screened" from awareness by some mechanism.

There exists at least one cognitive model that would enable such varieties of memory performance without the need for ad hoc changes to accommodate the data. This is the Headed Records model (Morton, Hammersley, & Bekerian, 1985).

Headed Records—a cognitive model of memory

To explain the Headed Records model we can first take the rough analogy that our memory for events is like a filing cabinet. For each event, there is a folder in which can be found a record of what happened. The point of keeping the records is so that when a similar thing happens again, we can access what happened last time and use that information to interpret what is going on around us and to help guide our actions. How do we find what we want? It would take too long to search through the contents of every folder until we find what we are looking for. Instead, it is as if every Record is given a reference number, which is written on an index card. The index card also has a Heading, which contains information relevant to the contents of the Record. The idea is that when we need to find some information, only the index cards are searched. We search memory with a set of information called a Description (Norman & Bobrow, 1979). Only the Headings are searched, and if a match is found, then the linked Record is made available for further processing and will be examined to see whether it fulfils the current task demands. If the Record that has been retrieved does not fulfil these task demands, then a new Description is formed and the search cycle is repeated (see Williams & Hollan, 1981).

The Headed Records model assumes that records are independent of one another. In this respect, the model differs from associative net models. Our stream-of-consciousness experience might lead us to believe in the existence of direct associations between the records of different events. However, in the Headed Records model the illusion of associations is due to the unconscious, automatic operation of the accompanying process of the retrieval cycle. The interrogation of memory will normally happen without our conscious intervention. Memory can also be consciously interrogated, and this is the form of memory search with which we are more familiar. Within the model, unconscious and conscious interrogation follow the same course.

Since only Headings are searched, information that is in a Record but not in any Heading will not be directly addressable. Therefore, information that is central to an event memory does not

necessarily serve as a cue for the recall of that memory. The converse of this is that information in the Heading need not be present in the linked Record. The clearest example of this is the name of someone reasonably familiar to you. If asked about such a person by name, you would be able to recall a number of things about him/her. This indicates that the name is a component of the Heading to the Record concerning this person. However, we all have the experience of being aware of everything we know about an individual (i.e. having retrieved the Record), except his/her name, and not being able to retrieve the name despite some attempts. The simple account of this in terms of Headed Records is that the name is only in the Heading and not in the Record at all. Headings have a number of components, and it is not necessary for the match between Heading and Description to be complete. It would be possible, then, for the Record to be accessed by some other cue, such as the place where the individual had last been encountered. Given that the Record had been retrieved, all the information contained within it would potentially be available. However, there is no way of retrieving the contents of the Heading, and the name would not be retrievable. For another individual, of course, the name could be in the Record, and the situation would not arise. Such variability in memory organization is as much a burden to the theorist as it is to the owner of the memory. An experimental way of determining the components of Headings is through a comparison of the relative effectiveness of variables on recognition memory compared with recall. It has been established that recall, unlike recognition memory, is sensitive to state variables, such as emotion, as well as being sensitive to the reinstatement of the original environmental context (Bower, 1981; Eich, 1980; Godden & Baddeley, 1975, 1980). This indicates that such variables are to be found in Headings (see Morton et al., 1985, for a more detailed account).

The content of Records depends on the nature of the current processing. There are two broad classes of Record, which can be classified as primary and secondary. Primary Records are those that result from the normal activity of interpretation of the perceptual world. The context—internal and external—will form a part of the heading and so will play a major role in later retrieval. Secondary Records are those that result from the retrieval of primary

Records in the course of reminiscence or the retrieval of a primary Record that is being used as the basis of a narrative. In the case of the narrative, the form of code will have been changed into a verbal one. For secondary Records, the topic of the event is thus more likely to occur as a Heading.

Can memory be modified?

Loftus and her co-workers (Loftus, 1975, 1979a, 19779b; Loftus, Miller, & Burns, 1978) have argued that memory can be altered by post-event information. People have recalled non-existent broken glass and taperecorders, a clean-shaven man as having a moustache, straight hair as curly, and even something as large and conspicuous as a barn in a bucolic scene that contained no buildings at all. In one study, subjects were shown slides depicting an accident. The manipulation in this case involved the detail on one of the slides. Thus, some subjects saw a scene with a STOP sign in it and were later told in a questionnaire that the sign had been a YIELD sign. In some conditions in this experiment, as many as 80% of the subjects indicated at the time of testing that they had seen a slide with the incorrect piece of information (Loftus et al., 1978, Experiment 2). Loftus says: "the new 'sign' information was apparently integrated into the subjects' memorial representation of the event, possibly altering that representation" (Loftus, 1979b, p. 368).

The Loftus et al. data is superficially convincing with respect to the modifiability of memories. However, an alternative explanation for the misleading effects of post-event information can be developed within the Headed Records position. The argument goes as follows. There is a Headed Record (or Records) that contains information about the original slide sequence. In addition there would be another Headed Record (or Records) representing the event within which the inconsistent post-event information was embedded. In the Loftus et al. experiment, this event was a questionnaire that had to be answered. Both Records would exist in memory, although only one could be retrieved at test. The accessibility of the Record for the slide sequence requires two conditions: firstly, its Heading must be unique and discriminable from

the Heading for the questionnaire Record; secondly, this unique information (or some subset) must be present at test so that it can be included in the Description used to search for the required information.

The misleading effects reported by Loftus et al. (1978) can be explained in terms of the absence of critical information at test. In the experiment, the pairs of test slides had been arranged in an order that was random with respect to the original slide sequence. With random presentation at the time of testing, sequential (or theme-related) information would be missing from the Description. Accordingly, the Heading for the more recent Record (containing the inconsistent information) would be matched, its Record made available, and misleading effects observed. However, given a sequential test order, the Description would include information allowing the Heading for the Record of the original information to be matched. No significant effects of the misleading information would then be observed.

This interpretation, which emphasizes retrieval failures, has received support in a number of studies. Bekerian and Bowers (1983) repeated the first two phases of the Loftus et al. experiment—the slide sequence and the questionnaire. The critical variation came in the final test. In one condition, the test slides were randomized as in Loftus et al. In another, the test slides were presented in the same order as in the original sequence. The misleading effects reported in Loftus et al. were replicated only when the test slides were presented in a random order. No misleading effects were found when the original sequence was followed at test. Thus, the Loftus et al. manipulation could not have changed the original memory. It merely made retrieval more difficult by creating a secondary memory that blocked retrieval of the original in some circumstances.

Let us see one way in which the nature of the Record system would apply to child sexual abuse. A common component of child sexual abuse is that abused children are told that they will be punished if they tell or that no one will believe them. The effect of such instruction would be that a child would avoid reminiscing and that no secondary Record of the event would be created. This would mean that content-based retrieval would be unlikely. Secondary Records of real events are, by their very nature, created

after the event by recycling and recoding the contents of primary Records. Because of this, there will be a tendency for a secondary Record of a particular event to be recalled rather than the primary one. We accept secondary Records as genuine for a variety of reasons: the inclusion of images, circumstantial detail, and, above all, because we know—independently of the memory—that the event being recalled took place. However, manufactured memories—created by suggestion, imagination, or reconstruction—would have the same format as normal secondary memories. Thomas Hinde, in his novel *The Day the Call Came* (1924), writes about this process:

> I was able to invent incidents in my past and elaborate them and after a few weeks become genuinely unsure whether or not I was remembering what had happened or what I had thought about so carefully that I now believed. [p. 24]

Unless one paid particular attention to the source of a Record, it would be easy to become confused.

Specialist memory-enhancement techniques, such as those used in the Cognitive Interview (Bekerian & Dennett, 1993; Fisher & Geiselman, 1988) effectively work by changing the components of the description that is being used for retrieval. Thus, witnesses may be asked to imagine themselves back at the scene of the incident or to retrace mentally their steps prior to the event in question. Such techniques serve to reinstate the set of descriptors originally used in the Heading when a Record was created, thus increasing the possibility of retrieval of the original memory. The Cognitive Interview technique very carefully avoids suggestive questioning. The memory-recovery methods castigated by Lindsay and Read (1994), on the other hand, could be characterized as encouraging the creation of new, secondary Records, with all the dangers of confusing fiction with reality.

Headings and Descriptions

Retrieval depends upon a match between the Description and the Heading. For recall, it is clear that there needs to be a process of description formation that will pick out the most likely descriptors

from the given cue. If you are asked, "Could you tell me the address of your best friend, please?", the control processes will guarantee that the variable *best friend* will be filled in before a search for the address is instituted. The reason for this is that *best friend* is not a plausible component for a Heading. Clearly, for the search process to be rational, the set of descriptors and the set of Headings should overlap. Indeed, the only reasonable state of affairs would be that the creation of Headings and Descriptions is the responsibility of the same mechanism.

How might such a system develop from infancy? As we develop, the nature of perceptual and conceptual categories will change. In particular, as we develop language a whole new set of language-based elements become available for the Headings. Consider, then, what would be happening to you as a 3-year-old. Your conceptual system is just beginning to set up useful cognitive categories, and your language system is still rudimentary. You have a particular set of Descriptions that seem to work. You create new Headed Records of your current experience. Then, suppose that right now, as an adult, you try to access one of the Records you laid down as a 3-year-old. You form a Description, but it is a Description based on your current way of conceptualizing the world. This will fail if you are trying to search for something that was set up with the organizing system you used at the age of 3.

In a recent experiment, Usher and Neisser (1993) targeted students known to have experienced the birth of a sibling, a visit to a hospital, the death of a family member, or moving house at ages from 1 to 5 years. Birth of a sibling was the best-remembered item, although three-quarters of the subjects who had experienced this at the age of 1 year remembered nothing of the event; the other quarter answered about half the questions. For other items, nothing was recalled at all from the second year of life.

The exceptions to infantile amnesia will include episodes that we have repeated to ourselves over the years or heard other people repeating at a time when our Heading–Description system was close enough to the adult form to be compatible. These would be secondary Records. We do not need repression as an explanatory concept for infantile amnesia (see also Neisser, 1967, 1988).

Within this framework, then, we can see how abuse that takes place before the age of 4 or thereabouts might not be retrievable in

adulthood. Even if a Record that had been created in the first few years were retrievable, there is an additional problem that it would not be in a form that would be interpretable. An example of this is given by Terr (1988):

> Sarah was 15 to 18 months old in the day care home. She was 5 when she entered my office jauntily. . . . I asked Sarah if she ever got scared. "I remember when we went on a boat in Disneyland . . . there were some little Indians with spears pointed at us. I was scared of that". The child fingered her upper abdomen. I asked "Did anybody ever scare you?" "Somebody scared me once," she said, "with a finger part."
>
> A few weeks later I saw the pornographic photos. Expecting to find a man's penis in or at the baby's genitals, I saw instead an erect penis [a "FINGER PART" to a 15 month old] on Sarah's upper abdomen—jabbing at the very spot she touched in my office. [pp. 100–101]

We have no reason to suppose that a very early memory intentionally recovered by an adult would be any more intelligible. It would remain fragmentary. What could happen is that the adult could get a story frame within which the fragments could be fitted, and a new Record would be created with all the imported material from the story frame. The existence of the fragments, including affect and imagery, could make the whole newly created Record seem real.

Similar phenomena have been well known in the area of amnesia for many years. The classical observation was by Claparède (1911/1951). He tells the story of a woman hospitalized at Azille de Belle-Air. She was 47 at the time of the first experiment, in 1906, her illness having started about six years earlier. According to Claparède, her old memories remained intact: she could correctly name the capitals of Europe, make mental calculations, and so on. But she did not know where she was, even though she had been at the asylum for five years. She recognized neither the doctors, whom she saw every day, nor her nurse, who had been with her six months. Of particular interest was the day when Claparède stuck her hand with a pin hidden between his fingers. He says:

> . . . the light pain was as quickly forgotten as indifferent perception; a few minutes later she no longer remembered it. But when I again reached out for her hand she pulled it back in

> reflex fashion, not knowing why. When I asked for the reason she said in a flurry, "doesn't one have a right to withdraw her hand?", and when I insisted, she said "is there perhaps a pin hidden in your hand?" [p. 69]

The resemblance between this and the girl referred to by Terr (1988) is clear. More recently, Weiskrantz and Warrington (1979) established eyelid conditioning in two amnesic patients in the apparent absence of episodic recall of the situation. After many learning trials, and clear evidence of conditioning, neither patient could say what the conditioning apparatus did.

What distinguishes one's own past

We can now turn to the application of the Headed Records model to recovered memories. Our way through to this will involve discussion of other, similar memory phenomena, and some thought about how we know what memories apply to our own history.

Our memory includes records of a number of kinds. Some of these reflect our own experience and, in effect, contain plans for action. In this respect, my records are (at least, in principle) appropriate for me to use. They reflect my age, size, weight, strength, degree of expertness, acceptable level of risk, experience, abilities, and a host of other personal factors. These records contrast not only with the records for the equivalent situation in someone else's memory—which would reflect their own particular characteristics—but also with the records in my own memory system of other people's experience. Such records could arise through my witnessing events in which others were the main characters, through witnessing events in which I was the recipient of a particular behaviour, or through hearing or reading about real or imaginary events. While on occasions one might try to incorporate someone else's behaviour into one's own routines, this is normally done with circumspection.

In Headed Records terms, one component of the Description normally indexes *self*, and this is matched by a component of the headings of appropriate records. The idea of *self* as a heading has provided the basis of a cognitive account of Multiple Personality

Disorder (Morton, 1991, 1992). Before summarizing this account, we can briefly examine a case of functional amnesia that can be accounted for in a similar way. The advantage of starting with the functional amnesia is that the case is simpler in structure. Such a non-contentious case might serve to validate the theoretical method to be used in the case of Multiple Personality Disorder.

"Lumberjack"—The role of self in recall

P.N. was a patient who was studied by Schacter et al. (1982). He was 21 at the time of the investigation, having left school five years earlier. He had approached a policeman in downtown Toronto complaining of excruciating back pains. When questioned at the hospital, P.N. could not remember his name, address, or scarcely anything else personal apart from a nickname, "Lumberjack", and that he had worked for a courier service in town a year earlier. The courier service later confirmed that the patient had worked for them and had been given the nickname "Lumberjack" by his fellow workers. P.N. knew the city he was in and could name many downtown streets as well as the names of the local baseball and ice hockey teams. He knew the name of the prime minister of Canada and "possessed some information about recent political events".

The amnesia cleared shortly afterwards while P.N. was watching an elaborate cremation and funeral in the final episode of the television series *Shogun*. P.N. reported that as he watched the scene, an image of his grandfather gradually appeared in his mind. He then remembered his grandfather's death, as well as the funeral that followed. No further clinical diagnosis is reported.

A number of experimental tests were given both during the amnesic episode and subsequently. One of these was the Famous Faces test, where the subject is asked to provide names to faces from the present and the past. In this test, there was no difference in P.N.'s performance during the amnesic episode and after it. A more revealing test was that of Episode Cuing. In this task, the subject is given a word and requested to retrieve a specific personal memory associated with it. Retrieval is either constrained or not: in the constrained conditions, the instructions are to recall something

from before the onset of amnesia; in the unconstrained condition, there are no restrictions. In the constrained condition, P.N. failed to retrieve anything to 7 of the 24 cues. In addition, the median response time was 40 seconds, more than twice the unconstrained mean. Most of these memories were drawn from the relatively intact "island" of episodic memories from the "Lumberjack" period. The median unconstrained age of the memories was 1.5 days for P.N. compared with 5 months for a control; after recovery, the figure went up to 60 months.

The period of his life that P.N. managed to recall during the amnesic episode was characterized by the nickname "Lumberjack", which was specific to that period, and by his reports, both during and after the amnesia, that this period was a very happy one. In Headed Records terms, P.N., in his amnesic state, can be characterized as lacking one element of his set of possible Descriptions. This is the Descriptor *self*, corresponding to his normal personality—the self *PN*, as it were. The result of the Descriptor *PN* being missing is that Records with *PN* in the Headings could not be retrieved since the Headings could not be matched. Such Records would contain personal memories. The fact that he could recall episodes from the time when he was known as "Lumberjack" would lead us to suppose that, during this time, personal Records were headed with a *lumberjack* feature and that *lumberjack* was available as a Descriptor at the time of testing. In contrast, the retrieval of non-personal Records, which contain general knowledge, would be completely unaffected since, for such retrieval, usually from secondary Records, there would be no requirement to specify the *self* component.

Multiple personality—multiple self

According to DSM-III–R (American Psychiatric Association, 1987), the Multiple Personality Disorder is characterized by "the existence within the person of two or more distinct personalities or personality states", where "At least two of these personalities or personality states recurrently take full control of the person's behaviour" (p. 272). There are many differences between such cases

and that of P.N., described above, but the existence of amnesia associated with different personalities might encourage us to look for parallels based on the notion of *self* markers. That is, we could imagine each personality having its own set of records, headed by individual *self* markers.

One of the few cases of MPD to be studied experimentally, and a case that seems immune from suspicion of influence by the therapist, was reported by Ludwig et al. (1972) and Brandsma and Ludwig (1974). The patient was a 27-year-old man called Jonah. When he was first admitted to hospital, he had a long history of episodes in which he had lost his memory. During one such incident he had attacked his wife with a butcher's knife, chasing both her and their daughter out of the house. At such times, his wife had informed him, he referred to himself as Usoffa Abdulla, Son of Omega. While in hospital he experienced variable periods of memory lapse during which he would undergo a personality change. Three additional personalities were identified, each with separate identities and different names. Communication with these personalities was facilitated by means of hypnosis, although they did all emerge spontaneously for varying periods.

A variety of tests were administered to the four alter personalities. On three intelligence scales, all four came within the low normal range. Apparently the four gave exactly the same answers to content questions (equivalent to a context-free "semantic" memory). Experiments were carried out to test transfer of learning between personalities. The experiment involved paired associate learning. One of the personalities was presented with a list of ten words, each paired with a response word. The list was learned to the criterion of three successive perfect trials. Then the other three personalities were called in turn and were required to respond to each stimulus word with "the one word that goes best with it". This procedure was repeated for all four personalities. The data showed that the other personalities appear to know something about Jonah's list. Apart from that there is no transfer. So it seems that each personality can have experiences that are unretrievable unless searched for by that personality.

In another cued-recall experiment, a list of ten paired associates was presented to one personality. After it had been learned, the same list was then presented for learning to the other personalities

in turn. In contrast with the very poor transfer in the memory task, there were massive savings in learning in spite of each personality claiming not to remember engaging in the task previously.

To account for these data I assume that Jonah's event Records are headed differently for the four personalities. These Headings will differentiate the four specifications of *self*. Briefly, the task specification in the cued-recall task would demand *self* verification. For the learning task, this would not be the case, and the contents of the Records from personality *A* could be transferred to another Record labelled as *B*. In general, we would predict that transfer will be possible where the personality being tested is irrelevant to the task. This fits with other data reported by Ludwig et al. (1972). Thus, transfer was also reported on the blocks sub-test of the WAIS. However, transfer was not observed in a Galvanic Skin Response test for emotionally laden words that had strong personal significance for only one of the personalities. The simple assumption is that the information leading to an emotional response is found in a Record that is headed by the word and by the particular *self* component. Such Records would not be accessible to the other personalities.

The mechanism of setting up the multiple *self* markers characteristic of MPD remains to be established. The detail of this would depend on what account we accepted for the normal development of *self*. The assumption would be that the process of consolidation of *self* and its use in the organization and retrieval of event memory would have been disrupted by the severe early abuse that seems characteristic of MPD.

Another case from which relevant data have been obtained was studied by Nissen et al. (1988). This was a 45-year-old woman, five times divorced, with a number of mutually amnesic personalities. She had been hospitalized on five occasions in three years, though at the time of testing was an outpatient. She satisfied DSM-III criteria for Multiple Personality Disorder.

A word is in order here as to this patient's history. In terms of its interest to psychologists studying memory, the aetiology of the disorder is irrelevant. In terms of the degree of its relevance to the more political aspects of the discussion on recovered memories, it is perhaps important to establish the early onset of the disorder.

Nissen and her colleagues made enquiries of family members who were unaware of the current diagnosis. According to them, the patient's behaviour had been quiet and compliant prior to the age of 5 years. The family noted the onset of episodic aggressive and violent behaviour at the age of 5 or 6. They recalled that the patient would refer to herself by different names when such deviant behaviour occurred. We were told that one of these alternative personalities reported that she was beaten as a child. No therapeutic history was given.

This patient showed no transfer between personalities in tests that required explicit learning. One task was story recall. Stories were read to five of the personalities in turn, and each was requested to recall it immediately. There was no increase in recall with successive attempts, and there was little tendency for one personality to recall the segments that the others recalled, beyond what one would expect from chance. Other tests showing no transfer between personalities included recognition memory for words and the interpretation of ambiguous texts. On the other hand, the patient did show repetition priming of perceptual identification of words, biases in a four-alternative forced-choice task involving faces, and learning across personalities in a serial reaction time experiment. These results would have been expected from the position I have been putting forward, which is also entirely consistent with data from amnesics.

MPD and recovered memories

The Headed Records account given here of MPD is that retrieval of event Records is restricted by the specification of *self* in the Descriptions. This is a mechanism resembling "dissociation" or "splitting", in some usages of those terms. Invariably, for MPD patients, this means that memory for abuse is blocked from the "core" personality. An alternative mechanism of forgetting within the Headed Records model is one where a Record is retrieved but is not available to consciousness. The mechanism of this is a normal one, that of *task evaluation*. Whenever a Record is retrieved, it is

subjected to task evaluation to check that it contains information relevant to current goals. It would be a small change to have as a resident goal the requirement to prevent conscious access to information of a particular kind. The blocking out of abusive memories by such a device would resemble in some respects the classical Freudian notion of "repression". It is possible that the affective component of such Records would disturb normal information-processing.

One point should be made about the analysis of MPD patients made by Putnam et al. (1986). There was a wide variety of psychiatric symptoms noted by or reported to clinicians during their first contact with these patients. Among these symptoms, nearly 90% showed depression, 70% suicidality, over 50% sexual disfunction, conversion symptoms, and panic attacks, and just less than that substance abuse. There was a mean of 18.5 psychiatric symptoms per patient. A total of 95% of the patients had received one or more psychiatric and/or neurologic diagnoses prior to the diagnosis of MPD (mean = 3.6 diagnoses). If it is the case, then, that there can be severe child sexual abuse with dense amnesia without severe symptomatology prior to diagnosis and without the more florid components associated with MPD, then it would have to be accounted for in other ways. It is certainly different from anything described before.

Over the past few years, diagnosis of MPD has become increasingly criticized. Currently, there are accusations that the multiple personality condition, as with memories of child sexual abuse, can be created through suggestion on the part of therapists. It may become established that such accusations are true in some cases. However, if they are, it should not influence our assessment of the additional possibility of MPD produced in early childhood by extreme child sexual and physical abuse. Indeed, we may come to distinguish between developmental MPD on the one hand (created by sexual abuse in childhood) and acquired or functional MPD on the other (created in adulthood), each with their distinctive characteristics. It is possible that dense amnesia for events between the personalities might be a defining feature of true developmental MPD.

Conclusions

I have formed an opinion that some recovered memories are false but that some are likely to be genuine. This means accepting both that false memories can be created and that memories for real events can be forgotten and then recovered. I have tried to indicate how the Headed Records model can give a structured account of such phenomena. Of course, the existence of the model does not guarantee the existence of all the phenomena that it could explain, but it is at least not possible to claim that some form of repression and the subsequent recovery of memories are impossible according to all current information-processing theories. Alas, if we decide that the phenomena are real, that will not guarantee the correctness of the model. But these are the kinds of insecurity by which we academics live.