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AUTOBIOGRAPHICAL REMEMBERING AND FORGETTING: What Can Hypnosis Tell Us?  

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Abstract: Autobiographical memory can be characterized in terms of its reconstructive nature, its relationship with self-identity, and its shifting accessibility. Hypnosis research on personal memory has focused for the most part on its reconstructive nature. The authors examine selected contributions of hypnosis research to understand the nature and function of autobiographical memory and consider further ways in which hypnosis can make specific contributions to theoretical understanding and empirical inquiry into personal recollection. The authors provide some examples of research on various aspects of hypnosis and autobiographical memory and suggest particular ways for adding to the value and impact of such work. They argue that hypnosis researchers should continue to look for ways in which they can demonstrate and communicate the vigor and relevance of their work.

The articles in this issue illustrate some of the interactions between hypnosis and autobiographical memory. Such work usefully extends our understanding of the impact of hypnosis on relatively benign, laboratory-created memory to more personally significant, autobiographical memory. This increased focus on the effect of hypnosis on our recollection of personal events is consistent with the increased theoretical and empirical interest in the nature and function of autobiographical memory generally (Neisser & Fivush, 1994; Rubin, 1986, 1996). In this context of strong interest and with the articles in this issue in mind, it is timely to consider what research involving hypnosis can tell us about autobiographical remembering and forgetting. In this article, we ask how hypnosis research helps to unravel the nature and function of autobiographical memory; whether hypnosis makes a particular contribution to theoretical understanding or empirical inquiry in this area; and
what directions future research should take. We seek to summarize these issues and point to what we think hypnosis can and cannot tell us about autobiographical remembering and forgetting. The first step, however, is to consider in summary fashion what the field knows about autobiographical memory.

**CORE FEATURES OF AUTOBIOGRAPHICAL MEMORY**

Neisser (1994) defined autobiographical memory in the following way: "If the remembered event seems to have played a significant part in the life of the rememberer, it becomes an example of autobiographical memory and may form part of a life narrative" (p. 1). More specifically, Brewer (1996) defined autobiographical or "recollective" memory as:

memory for a specific episode from an individual's past. It typically appears to be a "reliving" of the individual's phenomenal experience during that earlier moment. Thus, these memories typically contain information about place, actions, persons, objects, thoughts, and affect. . . . They are accompanied by a belief that the remembered episode was personally experienced by the individual in that individual's past. (p. 61)

Tulving (1972, 1985) highlighted the distinctiveness of autobiographical memory when he argued for the existence of semantic and episodic memory systems. Semantic memory is stored without reference to personal or social context, whereas episodic memory is stored in terms of its temporal, spatial, personal, and interpersonal features. Autobiographical memory is within this latter type and, in comparison to memory research within the Ebbinghaus tradition, systematic theoretical and empirical exploration of autobiographical memory is relatively recent (Rubin, 1986, 1996).

Neimeyer and Metzler (1994) characterized autobiographical memory in terms of "its capacity to bring the past into the present, its translation of events into personal terms, and its contingency upon shifting tides of self-construction" (p. 107). Three core features of autobiographical memory are in this description: (1) its constructive and reconstructive nature; (2) its intimate relationship with the construction of self-identity; and (3) its shifting accessibility. The first feature of the constructive and reconstructive nature of autobiographical memory can be understood in terms of the basic principle that memory of an event reflects a blend of information retrieved from a specific trace of that event with information derived from other sources including knowledge, expectations, and beliefs (Bartlett, 1932; Kihlstrom & Barnhardt, 1993). Thus, as Bartlett (1932) argued, "remembering is not the re-excitation of innumerable fixed, lifeless and fragmentary traces. It is an imaginative reconstruction, or construction, built out of the relation of our attitude towards a whole active mass of organized past reactions or experiences" (p. 213). The reconstructive nature of autobiographical memory can also be
understood by recognizing that personal remembering is essentially a narrative and social act (Spence, 1982) and that the constructions of personal recollections are influenced by the conventions of narrative discourse and its social performance (Bruner, 1994; Ochs & Capps, 1996).

The second feature is the intimate relationship of autobiographical memory to the development and maintenance of the self. In terms of this feature, Neimeyer and Metzler (1994) argued that autobiographical memory should be understood as a process of personal reconstruction that is embedded within the broader developmental context of the evolving self. The processes of self-construction and autobiographical remembering are inevitably linked; in other words, we remember events that are consistent with how we currently construe ourselves, and these recollections in turn both guide and constrain future self-constructions. Thus, Neimeeyer and Metzler considered that “autobiographical memories necessarily follow personal pathways; pathways constituted in the very act of self-construction” (p. 105); relatedly, Greenwald and Banaji (1989) argued that our identities and memories are two sides of the same coin. The third feature of autobiographical memory is its shifting accessibility, and this feature can be understood in terms of the basic principle of memory that items that are available in memory may not be accessible on any particular attempt at retrieval (Kihlstrom & Barnhardt, 1993; Tulving & Pearlstone, 1966), as well as in terms of the evolving nature of the self and its impact on memory (Neimeyer & Metzler, 1994). As Neimeyer and Metzler stated, “personal identity provides both structure and stricture to autobiographical memory recall, with different styles of identity development differentially enabling and disabling the recollection of memories that are central to the self” (p. 106). A shift in the accessibility of personal memory can be seen most dramatically perhaps in the clinical disorders that involve alterations in personal identity and attributions about personal events. For instance, dissociative identity disorder and functional retrograde amnesia can lead to discrepancies between explicit and implicit expressions of semantic and autobiographical memory (Bryant, 1995; Kihlstrom & Schacter, 1995; Kopelman, Christensen, Puffett, & Stanhope, 1994; Neisser & Fivush, 1994). Although we have set out these three features of autobiographical memory separately, it is important to underscore that they are interdependent and interactive in their nature and influence.

In looking over our previous work and the work of others on the interaction of hypnosis and memory and in discussing that work with those outside the field of hypnosis, we have noted that this research may have inadvertently given the impression that, as a field, we have been fixated on the first of these features—the reconstructive nature of memory (e.g., Barnier & McConkey, 1992; Bryant & Barnier, 1999 [this issue]; McConkey, 1992; McConkey, Barnier, & Sheehan, 1998), and by extension that
the contribution that work involving hypnosis has made is limited to the issue of accuracy. Although understanding the relationship among memory reports, accuracy, and other factors should remain one central goal of our work, particularly in light of recent controversies (Lynn & McConkey, 1998), we believe that a more obvious and prominent integration of the other features of autobiographical memory into our research will allow the field of hypnosis to offer much richer conceptual and methodological advances to the field of personal recollection. And because the long-term value of our work and of others in the field will be measured by how creatively and compellingly we convey these concepts and methods, we have begun to think more broadly about ways to extend hypnosis to the investigation of autobiographical memory. Accordingly, in this article we describe two new lines of research. Before doing that, however, we consider in summary fashion the research on the hypnotic interference or enhancement of memory, which is the focus of the articles in this issue, and ask what this work adds to the understanding of autobiographical remembering and forgetting.

THE IMPACT OF HYPNOSIS ON MEMORY

Systematic and rigorous research on the impact of hypnosis on memory has been occurring for at least 25 years, and the field has accumulated a great deal of important knowledge about the conditions under which hypnosis influences memory in particular ways (for reviews, see Lynn & McConkey, 1998; McConkey, 1992). The articles in this issue, which focus on autobiographical events, continue this accumulation of knowledge, and the conduct of the experiments reported in these articles can be understood in the context of work which shows that hypnosis can influence individuals to report recollections that vary in accuracy. Relatedly, this research quantifies the degree to which factors such as hypnotizability and suggestibility contribute to the phenomena of memory creation or interference (Bryant & Barnier, 1999 [this issue]; Green, 1999 [this issue]; Malinoski & Lynn, 1999 [this issue]; Marmelstein & Lynn, 1999; [this issue]).

Despite the obvious value of this work in continuing to specify the conditions under which hypnosis can influence memory, it is reasonable to ask whether those outside the field perceive that such research contributes to a broader understanding of autobiographical memory. In terms of conceptual issues, this research does address the important first feature of autobiographical memory, namely its reconstructive nature. However, we have tended to do this in isolation of the other important features of personal memory, which are its relationship to self-identity and its varying accessibility. In this sense, the impression that is typically given of the deleterious impact of hypnosis on memory is relative to the context in which this work is placed; namely, the experimental and forensic contexts. When placed in other contexts (e.g., personal, clinical),
autobiographical memory’s reconstructive nature can sometimes be seen as desirable. McConkey et al. (1998) acknowledged this paradoxical relationship between nature and function when they reviewed both the clinical and experimental literature on hypnotic pseudomemory and pointed to the different demands and goals of the settings in which autobiographical remembering is considered. Of course, this does not imply that the varying accuracy of memory reports seen in experimental and forensic work is not applicable to or important in understanding memory reports in other settings; it simply means that our laboratory research must continue its attempts to capture the complexity of the role of personal remembering in people’s lives.

Also, it is not clear whether this type of research has focused enough on core aspects of autobiographical memory rather than peripheral aspects. By peripheral we mean that the memories that are the focus of the typical manipulations or inquiries (e.g., early childhood birthday parties, getting lost in a shopping mall, spilling a bowl of punch at a wedding, and getting a finger caught in a mousetrap) may not be especially central to the individual’s current self-constructions or self-identity. We acknowledge that it is not an easy task to differentiate between core and peripheral aspects because the relationship between self-identity and autobiographical memory is defined poorly. For instance, perhaps a memory of a seemingly innocuous childhood event such as spilling a bowl of punch at a wedding may reflect current perceptions of oneself as awkward or clumsy. Or, perhaps, such a memory may not be consistent at all with current self-constructions. In this context, it is important for our research to look to current and developing knowledge from other fields about, for instance, the representation of trait and autobiographical knowledge and its interaction with self-narrative and identity (Klein & Loftus, 1993; Srull & Wyer, 1993).

Relatedly, because not all of our potentially available autobiographical memories are central to identity formation and self-narrative at any particular time, it would be important also for such research to focus on memories that play some role in the individual’s current identity and self-narrative so that experimental manipulations have a greater degree of personal or emotional consequence for the person. This approach may add to our understanding of some of the clinical claims associated with autobiographical remembering and forgetting. Arguably, a critically important aspect of any memory is the consequence that its reporting has for the individual in time and place. The relatively neutral consequences of the recalling and reporting that typically occurs in the laboratory context is generally acknowledged as a limitation of such research, and as researchers we need to—within ethical bounds—incorporate greater meaningful consequences into personal memory research in the laboratory. Some research has met this challenge. For instance, the work by Nash and his colleagues on age regression and memory (which
involved age regressing high hypnotizable individuals to age three, eliciting strong fear reactions in an "abandonment" scenario, and then probing for spontaneous reports of transitional objects [Nash, 1987; Nash, Drake, Wiley, & Khalsa, 1986; Nash, Johnson, & Tipton, 1979; Nash, Lynn, Stanley, Frauman, & Rhue, 1985] demonstrated the value of considering accuracy within a broader context of strong emotion and personal recollection. This work provides both a cogent example of the contribution that laboratory research can make to clinical phenomena, as well as a valuable model for future research.

In terms of methodological issues, the core methods in much research involving hypnosis and memory have included suggestive questioning, providing misinformation, and multiple interviews. However, such strategies are not specific to hypnosis and have been conducted and investigated in its absence (e.g., Belli & Loftus, 1996). Thus, it is fair to say that, in research on the interaction of hypnosis and autobiographical memory, current strategies are designed to tell us more about hypnosis than they are about autobiographical memory. In this sense, Trabasso (1997) inadvertently described much research on hypnosis and memory when he argued that:

In the study of memory, the focus is primarily on the individual person who is assumed to have or "possess" the memory. The issues and concerns, not surprisingly, are with an individuals' accuracy, suggestibility, lying, false memory, or veridicality. However, . . . two or more people are involved in a communicative transaction. It is important to keep in mind that what is communicated is a product of mutual influences and constraints of the participants on one another. (Trabasso, 1997, p. 432)

We believe that as hypnosis researchers we have not come to grips fully with this situation and that research on hypnosis and memory is not offering as broad or as prominent a path as it could for theoretical and empirical development. Thus, it is time to appreciate what the research of this type has contributed and then to move on to consider what future conceptual and methodological directions the field might take. Accordingly, we turn now to describe two lines of hypnosis research that are taking us in new directions in our exploration and understanding of personal remembering and forgetting; we acknowledge that there are other lines being pursued by other research that could as well provide examples here. The first, hypnotically created self-delusion, focuses more on autobiographical remembering, whereas the second, hypnotically created autobiographical amnesia, focuses more on autobiographical forgetting. We do not claim that this research is without limitations in attempting to address the features of autobiographical memory. Rather, our intention is to illustrate some of the ways in which the concepts and methods of hypnosis can contribute more vigorously to our understanding, and to demonstrate that hypnosis has great potential to tell us so much more about the interface of identity and memory.
HYPNOTICALLY CREATED DELUSIONS OF THE SELF

One of the core features of autobiographical memory is its role in the development of self-narratives and self-identity. In this respect, an essential function of personal memories is their contribution to the individual’s self-talk, self-perceptions, and self-beliefs (Neimeyer & Metzler, 1994; Neisser, 1994). An interesting and under-investigated conceptual link between autobiographical memory and hypnosis is that the latter can also influence self-narratives and self-identity. Specifically, hypnotic suggestion can alter the ways in which individuals talk to (either via the hypnotist or through self-hypnosis), perceive, and understand themselves (Kihlstrom, 1985a). We have been investigating this in the laboratory through the phenomenon of hypnotic sex change, which involves suggesting to the hypnotized individual that he or she is changing from a man to a woman or from a woman to a man (Burn, Barnier, & McConkey, 1999; Noble & McConkey, 1995; Sutcliffe, 1961).

Hypnotic sex change is an extremely interesting hypnotic phenomenon because it directs its influence at the level of “the person or his ego” (Sutcliffe, 1961); in this sense, it meets the criterion of focusing on core aspects that are relevant to the individual’s current self-constructions. Indeed, what could be more relevant to self-construction than memories and beliefs about biological sex? Also, it pushes hypnotic experience to the limit; typically only very talented hypnotic subjects will respond to and maintain the transient delusional experience of being a different sex than what they are. Noble and McConkey (1995) suggested a change of sex to virtuoso, high hypnotizable, and low hypnotizable participants in an application of the real-simulating paradigm. Participants’ experience of sex change was challenged through procedures of contradiction (which involved asking participants, “If a doctor came into the room now and examined you and said that he could find no reason for you to be male/female [opposite their actual sex], then what would you say to the doctor?”) and confrontation (which involved asking participants to open their eyes and look at an image of themselves on a video monitor). Noble and McConkey found that virtuosos more so than highs and simulators experienced a transient delusion about their sex and that this experience was compelling and resistant to challenge.

Such findings demonstrate that hypnotic phenomena, such as suggested sex change, offer ways to experimentally (and temporarily) shift personal perceptions and identity. This in turn offers a relatively unusual opportunity to examine the information processing that is associated with such shifts and, in particular, to manipulate the interaction between self-beliefs and autobiographical memory. For instance, in an investigation of information processing in hypnotic sex change, we (Burn et al., 1999) suggested a change of sex to virtuoso, high
hypnotizable, and low hypnotizable participants in an application of the real-simulating paradigm. After the suggestion to change sex, participants listened to a story involving a male and female character. After listening to this story, virtuosos were less likely than were highs and simulators to identify with the character consistent with the suggested sex. However, when asked to recall the story after hypnosis, virtuosos recalled more information about the character consistent with their suggested sex than did highs and simulators. These results indicated that virtuosos, who reported greater ego-involvement in the suggestion than highs and simulators, related the information about the character consistent with their suggested sex to themselves (rather than to the character itself), selected that information for more elaborate processing, and thus recalled more. These findings not only highlight the ability of a hypnotically created delusion to influence information processing, but also indicate that the interaction between self-identity and autobiographical memory would be similarly affected. It seems to us that further research involving hypnotic sex change would be one useful way of exploring both normal and abnormal processes involved in this interaction.

One example of an abnormal interaction between self-identity and autobiographical memory is schizophrenic delusions. Baddeley, Thornton, Chua, and McKenna (1996) discussed such clinical delusions and the construction of autobiographical memory. In particular, they questioned how delusions, which are demonstrably false beliefs, can be related to normal autobiographical memory. Delusional beliefs, although bizarre and inherently unlikely, are held with strong conviction and are maintained in the face of contradictory evidence or argument. More importantly, just like normal autobiographical remembering, they are narrative accounts that rely on memories, albeit ones that are possibly distorted or confabulated. This is illustrated very clearly by the Baddeley et al. (1996) case studies of individuals with schizophrenic delusions. For instance, S. D. was a 31-year-old man who believed he was a rock star and a Grand Master of chess. Although he readily acknowledged that he could not play the guitar or chess, and could discuss these beliefs quite rationally and analytically and was somewhat willing to acknowledge the lack of evidence, he nevertheless maintained a strong conviction in their truth. When asked to provide evidence for his beliefs, he described having seen himself interviewed on television as a rock star and having a friend who is a rock star. For instance, when the interviewer asked, "Can you remember being a rock star?" he replied, "No. I've had some flashback-type things, like remembering I was in this studio with these particular people" (p. 389). Similarly, E. N. was a 34-year-old woman who believed that she was related to the British royal family and that she had a (nonexistent) identical twin sister. When asked about her connection with the royal family, she explained, "I can remember when I was a little girl, this is true, I can remember, I went to Buckingham Palace and
the Queen took me to the toilet, when I was a little girl” (p. 396). Similarly, when describing her (nonexistent) sister, she commented:

E. N.: She is a bit of a nutcase. When she was 13, she wrote to Prince Charles and said would Prince Charles marry her because she’s the Princess of Wales. She’s a bit funny in the head.

Interviewer: Do you still see her?

E. N.: No. I haven’t seen her for 10 years. I only saw her for a week. I was sunbathing in the garden, and a car pulled up and she walked in the gate with her suitcase. She only stayed a week (p. 397).

Notably, when Baddeley et al. (1996) compared the autobiographical memory performance of these deluded schizophrenic individuals with a group of nondeluded schizophrenic patients, they found, somewhat unexpectedly, that the nondeluded patients performed more poorly when asked to recollect autobiographical events from different periods in their lives. This indicates that the delusional beliefs of schizophrenic patients “do not simply reflect the breakdown of autobiographical memory as a result of a cognitive deficit” (Baddeley et al., 1996, p. 427), but rather suggests that they may have been reinterpreting or recalling autobiographical experiences in terms of their delusional beliefs. In other words, these individuals appear to have been recruiting autobiographical memories in the service of their delusions.

Recollection in the service of beliefs brings us back to hypnosis and the value of using hypnotic sex change to investigate delusional beliefs and personal memory. Clinical delusions and hypnotic experience correspond in a number of ways. Both involve personal reference and experiences that have no basis in objective reality, both involve beliefs that are held with conviction and are maintained in the face of contradictory evidence, and both involve a tendency to process information in a way that is consistent with the delusional experience (Kihlstrom & Hoyt, 1988; Noble & McConkey, 1995; Sutcliffe, 1961). These are some of the reasons why Sutcliffe (1961) characterized the hypnotized person as deluded and commented that “the main feature of [hypnosis] is the hypnotized subject’s emotional conviction that the world is as suggested by the hypnotist” (p. 200). Taken together, this suggests that hypnosis offers a powerful, if fragile, method to create and maintain a transient delusional experience and then to examine the functional use of autobiographical memory in these experiences. Such a use of hypnosis to create delusions in the laboratory is valuable because empirical research on clinical delusions is often limited by the presence of other psychological problems, the heterogeneity of pathological delusions, and the general problems of clinical research. Thus, hypnotic sex change is one example of how hypnosis can contribute to an understanding of autobiographical remembering at both a conceptual and methodological level. We turn now to hypnotically created autobiographical amnesia as a further example of a
way in which hypnosis can contribute to understanding autobiographical forgetting.

**Posthypnotic Amnesia and the Accessibility of Memory**

Another core feature of autobiographical memory is its shifting accessibility. Memories that may be accessible at one time (or appropriate to a particular self-narrative or self-perception) may not be accessible at another time or under other conditions (Kihlstrom & Barnhardt, 1993; Tulving & Pearlstone, 1966). Thus, autobiographical memory necessarily and functionally involves shifts or alterations in awareness and availability of material. Hypnosis and hypnotic experience also can be seen to involve these aspects. A great deal of theoretical comment has focused on the notion that hypnotic experiences involve alterations in awareness (Hilgard, 1974; Kihlstrom, 1984), and a large body of empirical work has demonstrated that suggestions can be given during hypnosis that alter an individual's access to particular memories either during or after hypnosis (e.g., Bryant, Barnier, Mallard, & Tibbits, 1999; Kihlstrom, 1980, 1985b). The classic phenomenon of posthypnotic amnesia is characterized by a disruption of conscious, explicit retrieval of the target material and by a continuing influence of the material on behavior as indexed by implicit measures (Bryant et al., 1999; Kihlstrom, 1980; 1985b). Schacter and Kihlstrom (1989) labeled posthypnotic amnesia as a nonpathological functional amnesia; specifically, as "memory loss that is attributable to an instigating event or process that does not result in damage or injury to the brain, and produces more forgetting than would normally occur in the absence of the instigating event or process" (p. 209). It is referred to as nonpathological because, like other amnesias in this category (e.g., childhood amnesia, sleep and dream amnesia), it either occurs in the course of everyday living or is induced by psychological procedures in individuals without any diagnosable psychopathology (Schacter & Kihlstrom, 1989).

Kihlstrom (1985b; Kihlstrom & Evans, 1979; Kihlstrom & Glisky, 1994; Schacter & Kihlstrom, 1989) argued that posthypnotic amnesia is a laboratory parallel of pathological functional amnesias, including dissociative identity disorder (DID) and functional retrograde amnesia, and that it can model the variations in awareness and accessibility of memory that are seen commonly in these disorders. For instance, a major characteristic of DID (American Psychiatric Association, 1994) is the inability of the individual to access personal memories and a major characteristic of functional retrograde amnesia is the loss of aspects of one's personal past. Moreover, as in posthypnotic amnesia, there is a dissociation between explicit and implicit memory. For example, Eich, Macaulay, Loewenstein, and Dihle (1997) explored the memory performance of nine DID patients and observed that whereas these patients showed poor explicit recall across personalities, they demonstrated significant
priming effects of material both within and between personalities. Such findings appear to place posthypnotic amnesia in a strong position as a laboratory analogue of functional disorders of autobiographical memory, and work on posthypnotic amnesia promises a significant contribution to our understanding of autobiographical forgetting.

The value of posthypnotic amnesia as a laboratory model for autobiographical forgetting depends in part on whether it can influence memories that individuals bring with them to the hypnotic setting, rather than material that they learn during hypnosis. The majority of research on posthypnotic amnesia has focused almost exclusively on information learned during hypnosis (e.g., word lists) or on events experienced during hypnosis (e.g., hypnotic suggestions). In fact, there are no published findings of which we are aware that demonstrate posthypnotic amnesia's ability to generate forgetting of personal events. Because of this, we are beginning to explore hypnotically created autobiographical amnesia. In an initial experiment, we asked 10 high and 10 low hypnotizable subjects to recall their first day of high school and their first day of university. In particular, following Kopelman, Wilson, and Baddeley's (1990) distinction in their Autobiographical Memory Interview, we asked participants to recall "personal semantic" details (viz., name of school, name of suburb, name of teacher, names of male and female friends) and to recall "autobiographical event" details (viz., the most memorable event that happened that day). During hypnosis, participants were given a suggestion for posthypnotic amnesia that focused on one of those days; they were told that they would be unable to remember being asked about the event or the answers that they gave before hypnosis. Following hypnosis, they were asked to recall both the semantic and autobiographical event details for their first day of school and their first day of university. Low hypnotizable subjects recalled virtually all of the semantic information about both days, regardless of the focus of the amnesia suggestion, and all recalled their memorable event for each day. In contrast, the recall performance of highs was influenced by the amnesia suggestion. When asked about their first day of high school, highs who had been given a suggestion of amnesia for this day recalled only 27% of the semantic details and only 1 subject recalled their memorable event from this day. In comparison, highs who had not been given a suggestion of amnesia for this day recalled 93% of the semantic details and 4 subjects recalled their memorable event. Similarly, when asked about their first day of university, highs whom had been given a suggestion of amnesia for this day recalled 47% of the semantic details and only 2 subjects recalled their memorable event. In comparison, highs who had not been given a suggestion of amnesia for this day recalled 65% of the semantic details and 3 subjects recalled their memorable event. Following a reversibility cue, all subjects recalled all of the personal semantic and autobiographical event details for both days.
Thus, posthypnotic amnesia was able to influence subjects' accessibility to certain autobiographical memories in quite specific ways. Individuals' experience of this effect was phenomenally compelling to us. For instance, one high hypnotizable subject described a memory from her first day of high school that involved running late to school and the opening assembly, running into the school hall, and finding the only seat left at the front of the hall which broke and fell to the floor when she sat on it. When describing the memory, this participant showed a great deal of affect associated with the memory and commented that it was an event that she would never forget. Following suggested amnesia for the first day of high school, she was unable to recall this event when asked about it after hypnosis. She said that she could not remember any particular event and, when pushed, guessed that it might have involved getting her timetable or perhaps her parents taking photographs of her as she left for school. Her inability to recall the experience of the collapsing chair was very real to her; she described her attempts to remember as "like a blank wall." Thus, despite relatively small numbers in this initial experiment, the findings indicated that posthypnotic amnesia can influence the autobiographical recall of high hypnotizable subjects. The other part of this picture is to demonstrate that, as in clinical disorders of autobiographical memory, implicit memory is spared. This task, however, is somewhat more difficult because most available implicit measures (e.g., word-stem completion, word fragment completion) are not appropriate for the variability that is often seen in autobiographical memories. Currently, we are developing a range of implicit measures (e.g., social judgment tasks, memory association tasks) to use in further research in this area.

Overall, our work on posthypnotic amnesia for personal events underscores that both the conceptual underpinning of posthypnotic amnesia, in terms of its ability to alter awareness and accessibility of memories, and the methodologies that are used to explore it, in terms of creating amnesia and measuring performance associated with it, offer a great deal to the field of autobiographical memory more broadly. This kind of work is relevant to both the conceptual nature of autobiographical remembering and forgetting as well as to clinical disorders in which autobiographical memory is impaired. It also provides an opportunity to explore the interrelationships between shifting accessibility, memory, and identity. For instance, it would be both challenging and interesting to take the posthypnotic autobiographical amnesia work one step further and investigate the created occurrence of both memory and identity loss.

It should be acknowledged, as with all laboratory paradigms that use hypnotic suggestions to model other phenomena, that different mechanisms may be involved in pathological delusions and amnesia and non-pathological functional delusions and amnesia (Schacter & Kihlstrom,
1989). In the case of amnesia, Schacter and Kihlstrom (1989) have argued that the fact that clinical disorders such as functional retrograde amnesia and posthypnotic amnesia are both reversible may mean that they share common processes. Further research involving, for instance, comparisons of the development and maintenance of pathological and non-pathological delusions, as well as comparisons between autobiographical amnesia associated with posthypnotic amnesia and with directed forgetting procedures will help to address these questions (Basden, Basden, Coe, Decker, & Crutcher, 1994; Geiselman, Bjork, & Fishman, 1983; Kihlstrom, 1983). Validating the use of these procedures could be a useful goal of future research. Nevertheless, these essentially empirical questions should not detract from the contribution that the investigation of hypnotic delusions and posthypnotic amnesia and their use as a research method can make to the field of autobiographical memory. With these two examples of the interaction between hypnosis and autobiographical memory in mind, we turn now to set out some further directions for hypnotic explorations of autobiographical remembering and forgetting.

**Autobiographical Memory and the Domestication of Hypnosis: Where to From Here?**

In his overview of autobiographical memory research, Rubin (1996) argued that it is one of the oldest and most complex areas of psychological inquiry, and that it requires the integration of ideas and data from diverse fields. He suggested that one might expect that because of the involvement of so many fields of research, autobiographical memory might be one of the "least tractable areas to study" (p. 1). However, he noted that it is exactly because of this diversity of viewpoints and data sources that research into autobiographical memory has made great advances in recent times, particularly in the areas of basic concepts and practical value. Hypnosis research has a great deal to offer both conceptually and methodologically; however, to fully achieve this, the field of hypnosis must become more outward-looking.

Critics of research involving hypnosis often claim that hypnosis itself is not so well understood that it can be used to model phenomena outside the hypnotic domain. However, over the past five decades, there has been a strong empirical tradition of successfully using hypnosis in this "instrumental" (as opposed to "intrinsic"; Reyher, 1962) way. This can be seen in Naruse's (1960; Naruse & Obani, 1953, 1955) work on mental imagery and hallucinations and Reyher's (1961, 1962, 1969) work on pathological symptom formation, as well as very recently in Rainville and colleagues' work on cortical activity and pain (Rainville, Duncan, Price, Carrier, & Bushnell, 1997) and Szechtman and colleagues' work on auditory hallucinations (Szechtman, Woody, Bowers, & Nahmias, 1998). Also, we should not be concerned about continuing theoretical
discussion in the field of hypnosis. Rather, we should accept what Hilgard (1971) called the “domestication of hypnosis” (i.e., the ability of hypnosis to tell us important things about phenomena outside the domain of hypnosis) and continue to provide evidence that hypnosis can make unique contributions to a range of fields. In this respect, it is important that we talk to those who do not do hypnosis research as much, if not more, than to those who do.

What needs to be done to ensure that we continue to have something to say about autobiographical memory? Conceptually, we need to consider phenomena that speak to the core features of autobiographical memory (including its reconstructive, narrative, and social nature, its involvement in self-identity, and its shifting accessibility). We need to identify and focus on memories that are at the core of the individual’s identity rather than on the periphery; that is, memories that are meaningful and have personal significance. We need to examine the impact of our procedures on these kinds of central memories, particularly in the context of claims that autobiographical remembering in other contexts may involve inaccuracies for the peripheral details, but that the core details are always correct. Methodologically, we need to be able to show how the use of hypnosis as a method of research allows us to tap into issues that we otherwise would not be able to. Relatedly, we need to be thinking of conveying the ways in which what we know about hypnosis can tell us something novel about autobiographical memory.

The basic criterion for applicability must be that the hypnotic phenomena that we focus on and the methods that we use to explore them have some parallels or relevance in personal memory. For instance, it would be useful to explore the interaction of self-hypnosis and autobiographical memory. Because autobiographical narratives are essentially personal constructions, it would be interesting to examine their relationship to self-suggested or guided memory phenomena in self-hypnosis. It is worth noting that whereas virtually all work on hypnosis and memory has been conducted in the context of hetero-hypnosis, the self-initiation and direction that is a major characteristic of self-hypnosis may provide a useful model of clinical constructions of memory that involve individuals operating on memory suggestions outside the direct influence of the therapist (e.g., “personal memory work”).

Another possibility would be to explore intentionality in autobiographical remembering and forgetting. Autobiographical memory is generally described (as it has been in this article) as a constructive and reconstructive process. However, it is not clear whether this reconstruction is an intentional or unintentional process. In other words, is reconstruction simply a feature of the memory system itself or is reconstruction determined by the purposes of the memory? To borrow a concept from hypnosis, remembering may involve “goal directed striving” (Spanos & Barber, 1974), with the goal being to obtain greater coherence
among memory "fragments" or to ensure that some aspects are not a part of the construction. Hypnosis is seen also as a constructed experience that involves goal-directed striving. Bowers's (1976) classic distinction between "doings" and "happenings" may be as relevant to memory as it is to hypnosis; much of memory, just like hypnosis, may be "purposeful" without being "on purpose." Relatedly, the "repressive coping style" appears to be an information processing strategy that particular individuals ("repressors") use to deal with negative information that is threatening to the self (Davis, 1990; Weinberger, 1990). In particular, repressors have difficulty in recalling negative autobiographical memories, supposedly because they inhibit the retrieval of this information (Davis, 1990). As with hypnotic behavior, it is not exactly clear whether this inhibition is strategic, unintentional, or a combination of both. At the moment, we are investigating the relationship between hypnotizability, posthypnotic amnesia, and the repressive coping style, with the possibility that some individuals may display an ability to manage their memories that cuts across a range of memory phenomena both inside and outside hypnosis. Such interactions will tell us something not only about autobiographical memory but also about hypnosis. In these and other respects, continued research involving hypnosis will tell us much about autobiographical remembering and forgetting. In these and other respects, continued research involving hypnosis will tell us much about autobiographical remembering and forgetting. In that continued research, we believe that as researchers we should not limit the design and interpretation of our experiments too much; with the best of intentions, we have perhaps been doing and hearing too much of more of the same. We believe the time is right for the field to start doing and hearing more that is different and to ensure that those outside the field of hypnosis hear it as well.

REFERENCES


## Autobiographisches Erinnern und Vergessen: Was kann Hypnose dazu sagen?

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Se souvenir ou oublier les souvenirs autobiographiques: que peut nous dire l'hypnose?

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Résumé: Le souvenir autobiographique peut être caractérisé en terme de capacite reconstructrice, sa relation avec sa propre identité et sa capacité d'augmenter son accessibilité. La recherche hypnotique sur le souvenir personnel s'est concentrée sur la plus grande partie de sa nature reconstructrice. Nous avons étudié une sélection de contributions à la recherche en hypnose pour comprendre la nature et la fonction des ces souvenirs autobiographiques et considérons les voies par lesquelles l'hypnose pourrait être une contribution spécifique à la compréhension théorique et l'étude empirique à ce regroupement personnel. Nous apportons quelques exemples de la recherche sur des aspects variés de l'hypnose et le souvenir autobiographique et suggérons plusieurs façons afin d'apporter une plus value et un impact à des tels travaux. Nous alléguons que les chercheurs en hypnose doivent pouvoir continuer à explorer ces voies dans lesquelles ils démontront et prouvent la vigueur et le niveau de leur travail.

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Recuerdo y olvido autobiográfico: ¿Qué puede aportar la hipnosis?

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Resumen: Se puede caracterizar a la memoria autobiográfica en términos de su naturaleza reconstructiva, su relación con la identidad propia, y su cambiante accesibilidad. La investigación hipnótica sobre la memoria personal se ha enfocado particularmente en su naturaleza reconstructiva. Examinamos en este artículo contribuciones selectas de la investigación en hipnosis para comprender la naturaleza y función de de la memoria autobiográfica, y consideramos otras formas en que la hipnosis puede hacer contribuciones específicas a la comprensión teórica e investigación empírica de la memoria personal. Proporcionamos algunos ejemplos de investigación sobre aspectos diversos de la hipnosis y la memoria autobiográfica, y sugerimos cómo se puede añadir valor e impacto a tal trabajo. Proponemos que los investigadores de la
hípnosis deben continuar buscando formas en que puedan demostrar y comunicar el vigor y relevancia de su trabajo.

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