
MEMORY, AUTOBIOGRAPHY, HISTORY

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Psychologists define memory as the capacity to store knowledge in the mind—storage that is somehow physically implemented in the brain. Cognitive psychologists often classify the knowledge stored in memory into three categories (Anderson 1976; Tulving 1983): *episodic memory*, or autobiographical memory for personal experiences (we had fish for dinner last Thursday); *semantic memory* for more-or-less generic, abstract world-knowledge, (fish are cold-blooded creatures with scales and fins); and *procedural memory* for mental and motor skills (how to properly hold a knife and fork).

For most of its history, psychology has been concerned with episodic memory, which, for most of that history, psychology has studied as if it were a static object. In Ebbinghaus's pioneering empirical study of memory, *Über das Gedächtnis*, memory is represented by a noun, a thing to be studied ([1885] 1964). Traditional cognitive psychology views an episodic memory as the bundle of features describing an event (Bower 1967), while in traditional neuroscience, the *engram* is the neural tissue corresponding to a particular memory (Lashley 1950).

Remembering as Retrieval and as Reconstruction

The notion of memories as things is clearly reflected in the three-stage analysis of memory. Memory traces are things to be *encoded*, *stored*, and *retrieved*, much like books in a library, and forgetting reflects a failure of *availability* or *accessibility* caused by a failure at one or more of these processing stages. A failure of availability means that a memory was never encoded or that it was encoded

but subsequently lost from storage; a failure of accessibility means that an available memory cannot be retrieved. Pursuing the notion of a memory as a thing to be encoded, stored, and retrieved has yielded a set of principles by which we can understand the causes of remembering and forgetting, yielding a kind of "owner's manual" for human memory (Kihlstrom & Barnhardt 1993). For example, according to the elaboration principle, memory is best when new information is related to other things the person already knows; and according to the principle of cue-dependent forgetting, memory is best when the environment provides richly informative retrieval cues.

Achievement of this framework is not a bad accomplishment for one hundred years of psychological research, but it is not the only way to look at memory. A big shift in perspective on memory was announced by Frederick C. Bartlett, a British psychologist, almost fifty years after Ebbinghaus, and is evident in the title of his book, *Remembering* (1932). For Bartlett, memory is not a thing, represented by a noun, but rather an activity, represented by a verb. Memories might be things that people *have*, but remembering is something people *do*. In terms of the library metaphor, then, memory is not like a book that we read, but rather like a story we tell anew each time we remember. One's memory may be based on fragmentary notes supplied by the memory trace, but remembering involves "effort after meaning" that goes beyond the information contained in the memory trace. Bartlett argued that remembering was not so much a process of in-

formation *retrieval* as it was a process of *reconstruction* in which we blend information contained in memory traces with knowledge, expectations, beliefs, and attitudes derived from other sources. For Bartlett, every memory is a blend of knowledge and inference. Remembering is problem-solving activity where the problem is to give a coherent account of some past event and the memory is the solution to that problem.

Recollective Experience

Of course, in all of this we are talking about *conscious* memory where there is the phenomenal experience of remembering the past, but there is *unconscious* memory as well (Schacter 1987). What psychologists call *explicit memory* entails conscious recollection of some past event as in recall or recognition; by contrast, *implicit memory* is reflected in *any* change in a person's experience, thought, or action that is attributable to an event. A good example of implicit memory is *priming*: if an experimental subject studies a list of words containing the item *marble*, he or she will be more likely later to complete the stem *mar__* with the word *marble* than with some other acceptable word such as *market*. While this may seem trivial, it happens that priming effects also occur in amnesic patients who cannot consciously recall or recognize the prime: in that sense, priming is an expression of *unconscious* memory.

The dissociation between explicit and implicit memory in amnesic patients has led some theorists to propose that explicit and implicit memory are mediated by separate and independent memory systems. It turns out, however, that explicit and implicit memory interact so that subjects can strategically capitalize on implicit memory to support their performance on an explicit memory task. Priming causes a kind of feeling of familiarity, and if amnesics are encouraged to strategically capitalize on those feelings, they can improve their performance on explicit memory tasks. As George Mandler (1980) put it, echoing Bartlett, recognition is a *judgment* of prior occurrence that can be based on either of two processes: *retrieval*, or conscious recollection based on recovery of episodic trace information; or *familiarity*, as when something you encounter "rings a bell," leading you to believe that you have encountered it before. Recognition by retrieval is the kind of thing that Ebbinghaus had in mind; recognition by familiarity is essentially a reconstructive, problem-solving process, in which people are trying to give the best possible account of the past, given all of the information available to them.

In fact, recent research on the phenomenal experience of remembering (Tulving 1985; Gardiner 1988) suggests that there are at least three varieties of recollective experience: in *remembering*, one gains access to a full episodic memory, including a raw description of the event in question, the spatio-temporal context in which it was situated, and some representation of the self as the agent patient, stimulus, or experiencer of the event. In *knowing*, self-reference is absent: one simply has the abstract knowledge that something happened at a particular time and place. In *feeling*, the person has an intuition about the event: something just "rings a bell," but there is no episodic context and no self-reference. Recollective experience varies, not with the strength of the underlying memory trace but with the nature of the information on which the recognition judgment is based.

Memory True and False

Memory can be highly accurate, but it can also be *inaccurate*, yielding illusions of memory, analogous to perceptual illusions, in which we "remember" things that never happened (Roediger 1996). For example, the *associative memory illusion* is induced by asking a subject to study a list of words such as *thread*, *pin*, *eye*, *sewing*, *sharp*, and *point*, which are all strong associates of an unstudied target item such as *needle*. The illusion occurs when subjects incorrectly remember having studied *needle* as well. Apparently, presentation of the list items primes the target in memory, making it more likely to be accessed during retrieval. False recognition is associated with an intuitive "feeling" of familiarity, rather than recollective experiences of "remembering" or "knowing."

The problem of false memories bears on one of the interesting features of contemporary literature: the gradual displacement of the novel by the memoir as the literary genre of our age (Atlas 1996). The memoir returns us to the first-person narratives whence the English novel began but with a kind of omniscience characteristic of the full-fledged, third-person form. But sometimes the memories aren't accurate. The poet Patricia Hampl noted this problem in her account of an experience in which her father took her for her first piano lesson (1999). Her memory was quite detailed, but on analysis almost every detail in the memory proved to be wrong or at least questionable. Hampl concludes:

My desire was to be accurate. I wished to embody the myth of memoir: to write as an act of dutiful transcription. Yet clearly the work of writing a personal narrative

caused me to do something very different from transcription. I am forced to admit that memory is not a warehouse of finished stories, not a gallery of framed pictures. I must admit that I invented. (26)

Historians confront this problem all the time especially in the “new social history,” which seeks to go beyond the documentary record and often relies on oral history—which is to say, on memory. Historian David Thelen has pointed out that “the challenge of history is to recover the past and introduce it to the present” (1989)—which, of course, is the task of memory as well. Just as psychologists began their study of memory by focusing on issues of accuracy, so historians have been concerned with whether participants in some historical event accurately remember what actually occurred. Under the influence of the reconstruction principle, psychologists have shifted their concern to the problem of *how* people remember, and Thelen notes that the new generation of social historians is similarly interested in “why historical actors constructed their memories in a particular way at a particular time.”

The problem with oral history is that sometimes it is wrong as we see in what psychologists call the “John Dean phenomenon” (Neisser 1981). Testifying at the Senate Watergate hearings, it seemed as if Dean had a verbatim memory for his conversations with President Nixon, which made him an extremely persuasive witness. But after his testimony, revelation of the White House taping system permitted a comparison of Dean’s testimony to actual transcripts of two critical conversations. When that comparison was made, Neisser found a host of inaccuracies. Dean clearly believed his own testimony, largely because his specific memories were consistent with what he knew to be true on other grounds, and other people were disposed to believe him for the same reasons. Mostly, however, he remembered only the gist of his conversations with Nixon, abstracted over many such conversations, and imported many details into his memory so that his memories were not faithful representations of any particular episodes.

More recently, we may have seen this phenomenon in the debate over recovered memories of trauma (Kihlstrom 1998). Some psychotherapists attribute anxiety, eating disorders, and other symptoms to the effects of trauma, especially incest and other forms of child sexual abuse, but some of their patients have no memory of such experiences. Accordingly, many therapists believe that traumatized individuals defensively invoke processes such

as repression or dissociation, which in turn result in amnesia for the traumatic events. One goal of trauma therapy is to bring these memories into consciousness so that they can be worked through. Sometimes this process occurs more or less spontaneously. On other occasions, the patient is encouraged to engage in what is known as “memory work”—techniques that are intended to stimulate the recovery of forgotten memories. While many of these techniques represent applications of established principles of remembering and forgetting, they can also promote distortions of memory, creating the conditions for *interrogative suggestibility*, which leads people to remember things that did not actually happen (Shobe & Kihlstrom 2002).

The problem is that recovered memories of trauma are rarely subject to independent corroboration, and it can happen that they are misleading or false. This possibility has generally been dismissed by the recovered-memory movement, which considers the trauma-memory argument to be valid even though there is very little evidence in favor of it (Kihlstrom 1996). The difficulty is compounded by a therapeutic stance of unconditional positive regard in which the therapist believes that it is inappropriate to question the patient’s memories. As some psychotherapists put it, “I can’t be a detective.” Of course, an effective therapist needs to be supportive of the patient, but if this support is uncritical, therapist and patient risk engaging in a *folie a deux*, and treatment will be diverted from the patient’s real problems.

Memory in Individuals and Groups

The problems of psychotherapy are matched by problems in history, especially when historians rely on memoir or oral history in the absence of written records or other forms of corroboration. Consider the case of Benjamin Wilkomirski, a Swiss musician whose memoir, *Fragments*, portrays a young Jewish child’s life in the concentration camps during the Holocaust (1996). Wilkomirski’s vivid and powerful narrative won a host of literary prizes. It was also frequently cited as an example of the fragmentary qualities of traumatic memory and as evidence for the success of recovered memory therapy. However, a Swiss journalist, Daniel Ganzfried, and others have raised strong doubts about its provenance (Gourevitch 1999; Lappin 1999; Eskin 2002). *Fragments* appears to be a work of “nonfiction fiction” in which Wilkomirski incorporated knowledge of the Holocaust gleaned from a lifetime’s obsessive reading into a “memoir” that isn’t based on personal recollection. In a striking

parallel to the views of some trauma therapists, Wilkomirski's publisher noted that "We don't have fact checkers. We are not a detective agency." Still, after commissioning an independent investigation, they withdrew the book from circulation (Mächler & Wilkomirski 2001).

Questions have also been raised about the autobiography of Nobel peace laureate Rigoberta Menchú, which chronicles her life during a period of civil war in Guatemala (1984). Although this powerful book quickly entered the canon of Latin American literature, subsequent research has revealed that many of the specific incidents in Menchú's book were exaggerated or fabricated (Stoll 1998; Canby 1999).

But it would be too simple to say that Dean, Wilkomirski, and Menchú lied, and it would be too simple to say that patients with false or implausible recovered memories lie. There may be a lot of truth in their accounts—just not autobiographical truth. Apparently, Wilkomirski believes that his story is true: according to the *New York Times*, when the veracity of his book was challenged by his German publisher, he stood up defiantly and declared "I am Benjamin Wilkomirski!" Even his severest critics think that he is sincere. Menchú, for her part, replied that her story is "my truth," "I have a right to my own memories"—though more recently she has conceded that some material represented incidents that happened to other people, not herself.

Errors and distortions are natural consequences of the reconstructive process: individual experiences will be confused, vicarious experiences will be remembered as personal, and the stories of many individuals will be conflated into the story of one person. Former President Ronald Reagan was famous for this (Korda 1999). He sometimes talked of being among the troops who liberated the concentration camps at the end of World War II when in fact he was in Hollywood at the time and only viewed documentary film footage of their liberation. Reagan once brought an audience of Medal of Honor winners to tears with the story of a bomber pilot ordering his crew to bail out but staying behind to comfort his tail-gunner, who is trapped and can't escape: "Don't worry, son, we'll ride down together." Nobody bothered to ask how anyone ever found out about this episode—and in fact, it's the climax of *A Wing and a Prayer*, one of the most successful propaganda films of World War II. It is perhaps poetic justice that Reagan's official biography takes the form of a memoir by a fictional character (Morris 1999).

These incidents remind us that memories are not just representations of the past stored in the mind and the brain; memories are also things we *do* in the process of reconstructing the past. As such, memories serve personal and social purposes. On the personal side, our memories appear to be reconstructed in accordance with theories of the self: our views of who we are and how we got that way. Each autobiographical memory then is part of a personal narrative, which reflects our views of ourselves (McAdams et al. 2001). Long ago, Alfred Adler made this point about our earliest recollections: that they represent the current "life style" of the individual and serve to remind the person of who he or she is (1937; Ansbacher 1973). Adler thus reversed the Freudian view of causation: childhood memories don't determine adult personality; rather adult personality determines what will be remembered from childhood. More recently, Michael Ross has argued that people construct their personal histories around tacit theories of the self and revise these histories as their self-concepts change (1989). Wilkomirski's and Menchú's memoirs reflect a *personal* truth, a *personal* history remembered from a particular point of view. They are subjectively compelling—even if inaccurate or false outright.

But more than that, memories serve social purposes. Menchú says that her book represents her truth, but she also says that "It's also the testimony of my people" and that her autobiography is "part of the historical memory and patrimony of Guatemala." Thus, individual memories are also constructed around tacit theories of society: personal narratives are part of social narratives, and vice-versa. Interestingly, this was also Bartlett's insight, as reflected in the full title of his book: *Remembering: A Study in Experimental and Social Psychology* (my emphasis). In the latter part of the book, the part hardly ever read by psychologists, Bartlett writes that "Social organization gives a persistent framework into which all detailed recall must fit, and it very powerfully influences both the manner and the matter of recall." For Bartlett, remembering is an act of communication as well as of information retrieval. Our memories of the past are shaped by the interpersonal context in which they are encoded and retrieved.

Psychologists don't study the social aspects of memory much, but historians and sociologists have taken up the problem. The French sociologist Maurice Halbwachs, who was a student of both the psychologist Bergson and the sociologist Durkheim,

drew our attention to *collective memories* shared within groups and institutions. In fact, he argued that because "We are never alone," all individual memories are collective—the only exception being memory for dreams, which of course become collective as soon as they are told to someone else. As Halbwachs argued:

The individual calls recollections to mind by relying on the frameworks of social memory....But, on the other hand, society can live only if there is sufficient unity of outlooks among the individuals and groups comprising it....This is why society tends to erase from its memory all that might separate individuals, or that might distance groups from each other. It is also why society, in each period, rearranges its recollections in such a way as to adjust them to the variable conditions of its equilibrium. (1992, 182–183)

As an example of "the social frameworks of memory," Halbwachs noted that there are events shared only by family members and events known only to family members. Perhaps families are bound together by their shared memories at least as much as they are bound together by their shared genes. When you enter a family, to the extent that you enter a family, you acquire its memories; and when you leave a family, to the extent that you leave it, you begin to forget. Memories probably play a critical role in the cohesion of other natural groups as well.

More recently, Halbwachs's views have been championed by a new generation of cognitive sociologists, who view memory as a social construction of the past shaped by the concerns of the present. Eviatar Zerubavel points out that individual remembering does not take place in a social vacuum and that there are social rules that determine what we are to remember and what we are to forget (1997). As he puts it, "there are no mnemonic Robinson Crusoes." Through a process of *mnemonic socialization*, we acquire new memories when we enter social environments; our communities are communities of *thought*, comprising a fund of social knowledge and a body of social memory. As members of mnemonic communities, we remember things we never experienced and come to identify, as group members, with a collective past.

Zerubavel also points out that many social conflicts are best viewed as "mnemonic battles" over what is to be remembered and how. We see this clearly in the literature of the Holocaust, which is dominated by the theme of memory and the injunction never to forget (Young 2000). We also see a struggle over memory in the controversies

that surround such museum exhibitions as *Harlem on My Mind*, *The West as America*, and the Smithsonian's aborted attempt to commemorate the 50th anniversary of the end of World War II (Dubin 1999).

Connecting Memory Up and Down

For almost a century since Ebbinghaus, most of the advances in our understanding of memory were made by analyses of individual human performance without reference to biology (Tulving & Craik 2000). Beginning with the study of H. M. and other amnesic patients in the 1950s (Hilts 1995) and fostered by advances in brain imaging and in molecular and cellular biology, cognitive neuroscientists have begun to understand the biological basis of memory as well (Squire & Kandel 1999). But it is not enough. We also need to connect the individual's memories, and acts of remembering, to what is going on in the world outside the individual mind. In other words, we need to connect the study of memory *up* as well as *down*—to the other social sciences and to the humanities (McConkey 1996) as well as to the other biological sciences. Memory is simultaneously a biological fact, a faculty of mind, and a social construction. Accordingly, understanding memory requires going beyond individuals and their brains. Memory is no longer the sole province of cognitive psychology, let alone neuroscience. Within psychology, cognitive psychologists need to ally themselves with personality and social psychologists, who have expertise in such areas as persuasive communication, identity formation and the self-concept, causal attribution, and impression management. But psychologists must also reach out to the other social sciences and the humanities in order to understand the social purposes that memories serve; the impact of social structures and organizations on what Bartlett called the "manner and matter" of remembering; and memory as a form of rhetoric and literature—a mode of speaking and writing about oneself and one's society.

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WORKS CITED

- Adler, A. 1937. "The Significance of Early Recollections." *International Journal of Individual Psychology* 3: 283–287.
- Anderson, J. R. 1976. *Language, Memory, and Thought*. Hillsdale NJ: Lawrence Erlbaum.
- Ansbacher, H. L. 1973. "Adler's Interpretation of Early Recollections: Historical Account." *Journal of Individual Psychology* 29: 135–145.
- Atlas, J. 1996. "Confessing for Voyeurs: The Age of the Literary Memoir Is Now." *New York Times Magazine* (12 May).
- Bartlett, F. C. 1932. *Remembering: A Study in Experimental and Social Psychology*. Cambridge: Cambridge UP.
- Bower, G. H. 1967. "A Multicomponent Theory of the Memory Trace." In *The Psychology of Learning and Motivation*. Ed. K. W. Spence & J. T. Spence, 1:230–327. New York: Academic.
- Canby, P. 1999. "The Truth about Rigoberta Menchú." *New York Review of Books* (9 April): 28ff.
- Dubin, S. C. 1999. *Displays of Power: Memory and Amnesia in the American Museum*. New York: New York UP.
- Ebbinghaus, H. [1885] 1964. *Memory: A Contribution to Experimental Psychology*. New York: Dover.
- Eskin, B. 2002. *A Life in Pieces: The Making and Unmaking of Benjamin Wilkomirski*. New York: Norton.
- Gardiner, J. M. 1988. "Functional Aspects of Recollective Experience." *Memory & Cognition* 16: 309–313.
- Gourevitch, P. 1999. "The Memory Thief." *The New Yorker*: 48–68.
- Halbwachs, M. 1992. *On Collective Memory*. Chicago: Univ. of Chicago Press.
- Hampl, P., ed. 1999. *I Could Tell You Stories: Sojourns in the Land of Memory*. New York: Norton.
- Hilts, P. J. 1995. *Memory's Ghost: The Strange Tale of Mr. M and the Nature of Memory*. New York: Simon & Schuster.
- Kihlstrom, J. F. 1996. "The Trauma-Memory Argument and Recovered Memory Therapy." In *The Recovered Memory/False Memory Debate*. Ed. K. Pezdek & W. Banks, 297–311. San Diego: Academic Press, Inc.
- . 1998. "Exhumed Memory." In *Truth in Memory*. Ed. S. J. Lynn & K. M. McConkey, 3–31. New York: The Guilford Press.
- Kihlstrom, J. F., and T. M. Barnhardt. 1993. "The Self-Regulation of Memory: For Better and for Worse, with and without Hypnosis." In *Handbook of Mental Control*. Ed. D. Wegner & J. Pennebaker, 88–125. Englewood Cliffs NJ: Prentice-Hall, Inc.
- Korda, M. 1999. *Another Life: A Memoir of Other People*. New York: Random House.
- Lappin, E. 1999. "The Man with Two Heads." *Granta*: 7–66.
- Lashley, K. S. 1950. "In Search of the Engram." *Symposia of the Society for Experimental Biology* 4: 454–482.
- Mächler, S., and B. Wilkomirski. 2001. *The Wilkomirski Affair: A Study in Biographical Truth*. New York: Schocken Books.
- Mandler, G. 1980. "Recognizing: The Judgment of Previous Occurrence." *Psychological Review* 87 (3): 252–271.
- McAdams, D. P., R. Josselson, et al., eds. 2001. *Turns in the Road: Narrative Studies of Lives in Transition*. Washington DC: American Psychological Association.
- McConkey, J., ed. 1996. *The Anatomy of Memory: An Anthology*. New York: Oxford UP.
- Menchú, R. 1984. *I, Rigoberta Menchú: an Indian Woman in Guatemala*. London: Verso.
- Morris, E. 1999. *Dutch: A Memoir of Ronald Reagan*. New York: Random House.
- Neisser, U. 1981. "John Dean's Memory: A Case Study." *Cognition* 9: 1–22.
- Roediger, H. L. 1996. "Memory Illusions." *Journal of Memory & Language* 35: 76–100.
- Ross, M. 1989. "Relation of Implicit Theories to the Construction of Personal Histories." *Psychological Review* 96: 341–357.
- Schacter, D. L. 1987. "Implicit Memory: History and Current Status." *Journal of Experimental Psychology: Learning, Memory, and Cognition* 13: 501–518.
- Shobe, K. K., and J. F. Kihlstrom. 2002. "Interrogative Suggestibility and 'Memory Work.'" In *Memory and Suggestibility in the Forensic Interview*. Ed. M. L. Eisen, J. Quas, & G. S. Goodman, 309–327. Mahwah NJ: Erlbaum.
- Squire, L. R., and E. R. Kandel. 1999. *Memory: from Mind to Molecules*. New York: Scientific American Library.
- Stoll, D. 1998. *Rigoberta Menchú and the Story of all Poor Guatemalans*. Boulder CO: Westview Press.
- Thelen, D. 1989. "Memory in American History." *Journal of American History* 75 (4 March).
- Tulving, E. 1983. *Elements of Episodic Memory*. Oxford: Oxford UP.
- . 1985. "Memory and Consciousness." *Canadian Psychology* 26 (1): 1–12.
- Tulving, E., and F. I. M. Craik, eds. 2000. *The Oxford Handbook of Memory*. New York: Oxford UP.
- Wilkomirski, B. 1996. *Fragments: Memories of a Wartime Childhood*. New York: Schocken Books.
- Young, J. E. 2000. *At Memory's Edge: After-images of the Holocaust in Contemporary Art and Architecture*. New Haven: Yale UP.
- Zerubavel, E. 1997. *Social Mindscapes: An Invitation to Cognitive Sociology*. Cambridge: Harvard UP.