

The Value of Memory: Reflections on “Memento”

“What a great faculty memory is, how awesome a mystery! It is the mind, and this is nothing other than my very self.”

– Augustine¹

“You have to begin to lose your memory, if only in bits and pieces, to realize that memory is what makes our lives. Life without memory is no life at all, . . . Our memory is our coherence, our reason, our feeling, even our action. Without it, we are nothing.”

– Luis Buñuel²

It would be difficult to overestimate the contribution that personal memories make to the value of our lives. Difficult, but not impossible. Augustine and the Spanish film maker Luis Buñuel seem to have accomplished the feat!

As the depiction of Leonard, in *Memento*, shows, a life with a greatly diminished capacity for forming new personal memories can be fiercely purposeful. Perhaps that was enough to make Leonard’s life after his trauma at least worth living. But, one might object, Leonard had personal memories of his life before the onset of his amnesia, so he was not totally without personal memories. And, his heartfelt purpose (even had it been one that is totally noble) by itself may not have been enough to have made his life worth living.

Even so, it would seem that a life without personal memories, without even the ability to form personal memories, might still be worth living. Compared to humans, animals seem to have a greatly diminished capacity for forming personal memories, yet their lives often seem worth living. Probably we have all heard someone remark to a pet-lover that in their next life they want to come back as the pet-lover’s dog or cat. It may seem that if being reborn as a human were an option, such a wish, if it were serious, would necessarily be irrational. But would it? Since the lives of some humans seem not to be worth living and the lives of some non-human animals worth living it is hard to see why being reborn as a human whose life was not worth living *necessarily* would be better than being reborn as a non-human animal whose life was worth living.

In any case, our question is not that, but whether, and why, a human life that has a capacity for forming personal memories no greater than that of some non-human animals might be worth living. Even if it would not be, merely saying that it would not does not explain why not. It may be, as Augustine and Buñuel suggest, that a life without the ability to form personal memories would be a life without a self. Whether that’s true is debatable. But even if it were true, we still need to be told why having a self is so special.

Let's put the consideration of non-human animals to one side and, sticking just to the consideration of humans, focus on the value of a human life with a greatly diminished capacity for forming personal memories. Our question is whether such a life might be worth living. In answering, we should begin by acknowledging that consciously having personal memories, while it can greatly enrich one's life and be tremendously useful, also has a down side. Consider, for instance, the following remarks of the sixteenth century traveler, Henry Hawks, on the Philippines:

If there is paradise upon earth, it is in that country. Sitting under a tree, you shall have such sweet smells, with such great content and pleasure, that you shall remember nothing.³

Or consider the following remarks of Anais Nin:

The loss of memory was like the loss of a chain. Without memory I was immensely light, vaporous, fluid. The memory was the density which I could not transcend.⁴

It would seem that occurrent memories, however beneficial they may be most of the time, are sometimes, for some people, a burden. By contrast, "living wholly in the present," whatever exactly that means (and it seems to mean at least that when one is living wholly in the present one is not *at that time* having occurrent personal memories), is widely regarded in some circles as a great boon.

No doubt what proponents of the view that memory is everything really mean is not that *continually* experiencing personal memories is necessary to having a life that is worth living but that *having the ability* to experience personal memories and/or to form new ones is necessary to having a life that is worth living. But, in addition to personal memories, there are other things that may contribute to making a life worth living. We've mentioned having a heartfelt purpose and living wholly in the present. Another is accomplishing at least some of one's more important objectives. Another is experiencing pleasure. No doubt there are many other things as well. Admittedly people who have lost the ability to form personal memories have lost a great deal. But, since they may not have lost the other things mentioned that can contribute to making one's life worth living they have not lost everything. Might not these other things take up the slack?

Suppose, for instance, that one's life were constantly suffused with pleasure, but that one didn't have the ability to remember the pleasure for more than a few moments. Wouldn't being constantly suffused with pleasure still be a great good? It would seem so. Those who doubt this should consider analogous cases of how we judge the badness of pain. For instance, in the 1940s, curare, purified as d-tubocurarine, was used as a general anesthetic. Later it was discovered that the drug did not block, or even diminish, a patient's experience of pain, but merely blocked his or her ability to express pain. Many who had major surgery under these circumstances claimed later that they could remember experiencing the pain of surgery and that it was horrible. But since they tended to be children they were not believed. When doctors finally discovered that d-tubocurarine did not inhibit pain, they were shocked. Its use as an

anesthetic was immediately discontinued.

Daniel Dennett asks us to imagine that:

one were to add to curare a smidgin of *amnesic*, a drug that (we will hypothesize) has no effect on experience or memory during *n* hours after ingestion but thereafter wipes out all memory of those *n* hours.

Patients administered curare-cum-amnesic, Dennett imagines, will not later embarrass their physicians with recountings of agony, and will in fact be unable to tell in retrospect from their own experience that they were not administered a general anesthetic. Of course, *during* the operation they would know, but would be unable to tell us.⁵

Surely this is a horror story.

Imagine that you were to discover that curare-cum-amnesic was used as the anesthetic in major surgery that one of your children had recently undergone. Any normal parent would be understandably outraged—what we have imagined is horrible. But if extreme pain that one cannot remember would be horrible, why wouldn't extreme pleasure that one cannot remember be wonderful? Admittedly, memory matters, but how much? And, however much it matters, why should it matter so much more when it comes to pain than pleasure?

It's not necessary for what I'm suggesting that pleasure all by itself, without the ability to form personal memories, is enough to make one's life worth living, but just that it could importantly contribute to making one's life worth living. As we've seen, there are other things in addition to pleasure that even in the absence of the ability to form long lasting personal memories might also contribute to making one's life worth living.

We've talked about personal memories without ever saying what they are. It may seem that we should say what they are, at least as opposed to other sorts of memories. I agree that it may seem that way. As it happens, however, it's not so easy to say what personal memories are. Each of us is affected by the past in so many ways, to so many ends, that it's not clear which of this heterogeneous mix should be regarded as *memories*, let alone *personal* memories.⁶ It's not clear, for instance, whether something has to be consciously reexperienced to count as a personal memory. Consider, for instance, childhood traumas that are not available to conscious memory. Perhaps it is enough that something was experienced in the past and then affects one deeply in the present. Or, to take a more benign example, consider Rilke's advice to would-be poets:

[I]t is not yet enough to have [a lifetime of] memories. You must be able to forget them when they are many, . . . Only when they have changed into our very blood, into glance and gesture, and are nameless, no longer to be distinguished from ourselves only then can it happen that in some very rare hour the first word of a poem arises in their midst and goes forth from them.⁷

In light of these examples it would seem that consciously recollecting something that one previously experienced—even being able to do that—may not be required for a current result of some past experience to count now as a personal memory.

Since it's not going to be easy to say non-arbitrarily what's required for something to be a personal memory I propose that we see how far we can get by assuming that the ability to form long lasting personal memories is that sort of ability, whatever it is exactly, that Leonard, after his trauma, lacks and that people with normal memory abilities have. But what sort of ability is that?

In *Memento*, there are two interpretations of Leonard's condition that matter: his own, and Teddy's. According to Leonard's own, he has normal memory access to events prior to his head injury, but only fleeting memory access to events after, and this due to his head injury. So far as specific memories are concerned, Leonard thinks that he remembers that his wife died in the assault that led to his head injury. According to Teddy's (presumably true) interpretation, Leonard has blocked his memories of some of what happened after the assault, and this not for physiological, but for psychological reasons. In particular, Leonard has blocked his remembrances that his wife did not die in the assault, but only later, and did not die due to injuries sustained in the assault but to Leonard's own actions. Independently of Teddy's testimony, there is a suggestion toward the end of the movie that Leonard has fleeting memory access to interactions between himself and his wife after the assault, including some memory access to his giving his wife the insulin shots that may have killed her.

Whatever the truth about these rival interpretations, throughout the period covered by the movie, all of which except for flashbacks occurs after the death of Leonard's wife, Leonard, as we've noted, is a man on a mission. It would be true, but an understatement, to say that this mission is the main thing in his life. It would be closer to the truth, even if a slight overstatement, to say that it is the only thing. Normally we rely on memories to weave our lives into a coherent whole. But Leonard has memories, including personal memories. It's just that, at least for the most part after he sustained his head injury he stopped forming new personal memories that he could retain for longer than, say, five minutes or so..

Under the same circumstances in which Leonard found himself, some real life people would have retained the ability to enhance what psychologists call their *procedural memories*, such as remembering how to play the flute or to drive a car. According to John Sutton:

Procedural memory has been sharply divided from declarative memory for a number of reasons: perhaps most important was the case of H.M., an epileptic patient who suffered terrible amnesia after brain surgery in the 1950s. H.M., who had lost his hippocampus and other brain structures now known to be central to declarative memory, was no longer able to lay down event memories, so that he would forget everything minutes after its occurrence, and lose any clear sense of time passing. Yet H.M. was still able to learn new games, and to improve his performance at new perceptual-motor skills, despite having no idea each time that he'd ever tried them before. . . . [N]either philosophers nor psychologists

have a clear grip on the various ways that personal memory and other high-level cognitive processes interact with remembered embodied skills. Competition and coordination between the different memory systems can both occur. On the one hand, skilled performers in dance or sport know that their motor habits often run best in a groove, when not consciously or verbally controlled: yet the skills involved are robust and flexible, unlike more primitive forms of procedural memory, and can sometimes be directly shaped by mood, context, verbal instruction, and conscious decision.”⁸

We do not know whether Leonard’s hippocampus is intact. His problem is pretty much that of H.M., but, as was noted, it is suggested toward the end of the movie that even after the assault Leonard retained the ability to form some new personal memories. So, it is not going to be easy to diagnose his problem. And without a diagnosis it may not be easy to make hard and fast distinctions about what counts as his memories and what not, and among his memories what counts as his personal memories and what not. Without being too clear about such distinctions, what should we say about whether Leonard’s post-trauma life is worth living?

To some it will seem that Leonard’s life is not worth living because it lacks the unity that normally would have been provided by his retaining something more like a normal ability to form new personal memories. But while it’s true that Leonard’s post-trauma life lacks *that sort* of unity, it does not lack unity altogether. He still has access to personal memories of his life prior to the assault. And even after the assault he has the ability to form new short-lived personal memories, and perhaps also the ability to form new long-lasting procedural memories. Moreover, he has a forward looking project to which he is fiercely committed. Each of these contributes importantly to unifying his post-trauma life.⁹ Yet, compared to normal people, his life after the assault is still pretty ununified. Seemingly high in importance among these sources of disunity is that he cannot generate a reasonably robust autobiographical narrative that weaves together events in his life from both before and after the assault. But how important is this inability as a determinant of whether his life after the assault is worth living?

Galen Strawson has suggested recently that such narratives may not be that important in the lives of some people. In contrast to the prevailing opinion among academics that the unity provided by autobiographical narratives is vital to one’s well-being, Strawson claims that an “eposodic” non-narrative lifestyle is a perfectly good route to human flourishing. Using himself as an example, he says:

I have a past, like any human being, and I know perfectly well that I have a past. I have a respectable amount of factual knowledge about it, and I also remember some of my past experiences “from the inside,” as philosophers say, and yet I have absolutely no sense of my life as a narrative with form. Absolutely none. Nor do I have any great or special interest in my past. Nor do I have a great deal of concern for my future . . . [I]t seems clear to me, when I am experiencing or apprehending myself as a self, that the remoter past or future in question is not my past or future, although it is certainly the past or future of GS the human

being.¹⁰

It seems that aside from the practical value of remembering what happened to GS (that is, to Galen-Strawson-the-human-being) Strawson does not regard either the remembering of his past life or the sort of unity that this remembering might contribute to his current life as a thing of much value. Of course, unlike Leonard, Strawson has an undiminished ability to form personal memories and he could, if needed, produce at will an autobiographical narrative that, without the sort of gaps that would plague Leonard's similar attempt, would link his remote past to the present. So, in spite of his apparent lack of interest in personal autobiography, when it comes to retaining memory *abilities*, there may be a line that one cannot cross and still have a life that's worth living, and Leonard, but not Strawson, may have crossed that line. But, if we take Strawson at his word, it would seem that it is possible to live closer to that line than most people seem to think and still have not only a life that's worth living, but one in which one flourishes.

To put the point in a way that may be more to the purpose of assessing Leonard's life, what Strawson's commentary suggests is that in the case of someone who is wholeheartedly committed to a single mission, the problems that having a greatly diminished capacity for forming new personal memories pose may be almost entirely practical. Of course Leonard may also have other problems brought about by a sense of disunity. But the movie does not depict him as suffering much from any such problems. If we suppose that temperamentally Leonard is like Strawson depicts himself as being, it's unclear whether Leonard need suffer from *any* additional problems of this sort.

So, in the case of Leonard, the problems posed for him by his having a greatly diminished capacity for forming personal memories may simply be practical, with the main one of these (dramatically depicted in the movie) being simply that in pursuit of his one goal he cannot rely on his memory to keep things straight, but instead must rely on external aides (tattoos, notes to himself, inscribed photographs). These aides can take him only so far. But far enough, he thinks, to achieve his goal.

After all, as Leonard points out, memories in general are both unreliable and interpretive. So, what's needed in order to function effectively—whether in his case or presumably in general—are not newly formed personal memories, but access to facts (that is, true information). This interesting claim would seem to be the *philosophical* heart and soul of *Memento*. Whether it's true depends on the answers to two questions: With enough access to facts could one function as well in pursuit of practical objectives without personal memories as one could have functioned with it? And, assuming that one could, then could one, without personal memories, have enough access to facts?

Both of these questions are empirical, and the answer to the second is clear. Currently people with a normally diverse range of objectives, but without normal memory abilities, cannot have enough access to facts to function as effectively as they could have functioned with those abilities. External memory aides can help some, but they cannot provide a sufficiently high level of access to facts. But what about in the future, when in

all likelihood technology will have improved dramatically? Might external aides then provide enough access to facts? *In principle* could they ever provide enough access to facts?

It is virtually certain that in the future external aides will provide better access to facts than they do now. Whether they could provide enough access for people to function as well without personal memories as they now function with them is an open question. It will depend in part on what sorts of goals people pursue. In general, peoples' goals are extraordinarily varied. Leonard, however, seems to be pursuing just one overriding goal: to avenge his wife's death. So, considering his case first, in principle could external aids do as well as personal memories in the service of Leonard's one overriding goal? If Leonard is right that what's needed in order to function effectively is not more memories, but access to facts, and if external aides could in principle be as fecund as personal memories in providing access to facts, then the answer to our question is, yes, external aides could do as well as personal memories in the service of Leonard's single objective.

In fact, it would seem that *in certain respects* at least, if not also overall, external aides could not only do as well as personal memories in providing Leonard with access to facts, they could do even better. And for this result, we don't even need the qualifier, "in principle." This should not be news. For instance, while writing this essay I wanted to type words that I had forgotten how to spell. So, I took a stab at them and let my computer spell checker either confirm that I got them right or direct me to the correct spelling. In general, when it comes to how to spell words I have more confidence in my computer spell checker than I do in my memories, whether personal, procedural, or both. Slightly more exotically, suppose that while trying to think of a way to finish this sentence I forgot who wrote, "The Five Modes of Agrippa" (in fact, I did forget it!). I knew it was a well-known ancient author, but I forgot which one. Google to the rescue: Sextus Empiricus.

In spite of such examples, it will seem to many that technological memory aides are not all that impressive compared to personal memory itself. I agree. Even the examples just given deal more with what is called *semantic* memory than with the sort of *episodic* memory deficit that plagues Leonard.¹¹ Yet, we need to remember that memory aide technology is in its infancy. Soon much more will be possible. Eventually, perhaps, unimaginably more will be possible.

Currently, for instance, in response to the growing epidemic of Alzheimers and other forms of dementia, technologists are busy trying to design eyeglasses that have pattern recognition devices built into them. The way these may someday work is that as you approach someone whose look and name have been encoded, his or her name appears, visible only to you, on the inside of your eyeglasses. In one projected elaboration of this memory aide, printed information on the inside of your eyeglasses is also provided about your most recent conversations with the person you are

approaching. “Hi Joe, how are you? Say, whatever became of that trouble you were having with the IRS?” Ignorant of your hi-tech memory aide Joe smiles back, pleased by your interest. Leonard could have put eyeglasses like these to good use.

We can imagine a more elaborate version of some such memory aide in which the identification of Joe and information about your recent conversations with him is conveyed not by being printed on eyeglasses, but by being implanted directly into the “memory centers” in your brain, so that with the aid of the device you remember such things not only just as well as you would have had you had excellent personal memories of them, but in the same way, at least so far as phenomenology is concerned. Extended consideration of this development would blur the issue under consideration, which is whether external aides might *supplement* a faulty memory *from the outside*, so to speak, not whether they might *repair* it *from the inside*. I shall return to this distinction.¹² For now, it’s enough to note that Leonard was at least partly right. What’s needed for many of life’s purposes that ordinarily are served by personal memories is not necessarily personal memories, but access to the facts—his name is “Joe,” he’s been having trouble with the IRS. In this respect, personal memory is like any other natural capacity—for instance, those afforded by one’s circulatory and visual systems—the exercise of which affects one’s ability to function.

We have been focusing on two of the most common ways in which personal memories provide factual information: what’s called, “memory that,” for instance, the remembrance that Joe said he has been having trouble with the IRS; and pattern recognition, for instance, one’s recognition that the person approaching is Joe. Memory-that is just a propositional version of the sort of information that Leonard writes on his body and on photographs—information such as, “This person [the one depicted in the photograph] is a liar.”

For most people, most of the time, memories, which include pattern recognition, provide easy access to a rich array of facts. Leonard is atypical. Because he has seriously deficient memory he is short on facts. But, as we have seen in the eye glasses example, in principle technology could provide Leonard with access to a much richer array of facts, delivering information about them to him externally on appropriate occasions. So, the answer to one of the central questions that the portrayal of Leonard provoked—how much of what personal memories contribute to our lives could in principle be provided by external aides—would seem to be, quite a bit.

However, Leonard not only lacks normal access to propositional memories and pattern recognition, he also lacks normal access to background information that would allow him to ensconce newly acquired information into a meaningful interpretive context. In people with normal memory abilities such background information is constantly being updated, and it plays a crucial role. For instance, in order for factual information about a prior acquaintance to have much significance in personal interactions normally it would not be enough to recognize the name of the person approaching and what you had

talked about the last time you met, one would also need accurate, continually updated background information, for instance, about the person, about people in general, about the topic of your conversation, say, the I.R.S.

Could external memory aides provide such a context? To do so they would have to be much more sophisticated than those that we have so far imagined. But if technology continues to develop throughout the twenty-first century and beyond, such aides may some day be available. Even now, in the case of much information that we receive, we have something like what would be required. For instance, in a newspaper or a novel we read about something unusual and unknown and our source suggests not only what it is, or what happened, but how to contextualize it—that is, the source suggests why and how the unusual event is, or is not, meaningful.

Of course, we mentally ensconce this sort of background information in a much broader web of background information that, as a function of memory, we carry around in our heads. One couldn't do this if one's mind were a complete blank. But if one's mind were a complete blank, one wouldn't be able to assimilate either the new information or the context in terms of which one could make sense of it. One could not even understand language. So, the case in which one's mind is a complete blank is not the interesting comparison. The point is that even without a great deal of the sort of access to facts that personal memories normally provide, external aides could take up much of the slack.

Ordinary personal memory is much more than just a mechanism for access to propositional memories, to pattern recognition, and to contextual information. It also includes memories of *having had* experiences, say, of having watched a sunrise from Uhuru Peak on Mount Kilimanjaro, the so-called "roof of Africa." Such memories include a powerful and meaningful phenomenological component—the subjective feel of what it was like to have had a remembered experience. This feature of personal memory goes a long way toward making it truly personal. Anyone with internet access can call up an image of the view from Uhuru Peak, but currently no such image can realistically capture the feel of what an actual experience of that view is like.¹³ A photograph that one took at the time from the same perspective from which one actually experienced the view in person might do better at capturing this more personal form of information, but more by stimulating personal memory than by replacing it. An Imax movie can sometimes come close to capturing a realistic sensory feel of dramatic views (at least it can scare and amaze us), so we can expect technology to continue to narrow that gap. Perhaps one day it will be able to close it.

John Sutton has aptly characterized personal memories as "the most striking manifestation of the peculiar way human beings are embedded in time."¹⁴ As such, they go a long way toward giving us a sense of our identities. They provide not only a sense of our continuing presence but also an internal impetus to identify with the person we remember ourselves to have been and imagine ourselves becoming. And, as Richard

Wollheim has stressed, memory communicates affective tone from the past to the present and imagined future, thus giving things a significance to us that they would not otherwise have.¹⁵ Together, all of these features and functions of personal memory give subjective shape to our lives and provide a phenomenological context for virtually everything that we do. Perhaps external aides could not even in principle provide such shape and context, but it's hard to be sure.

In any case, the question of whether external aides to memory could take up enough of the slack to close the gap created by the loss of normal personal memory abilities to lay the groundwork for a life that would be worth living is not so much about how close we might come to a life with normal memory abilities, but about how functional we might become in pursuit of our goals. As *Memento* dramatizes effectively, there are all sorts of ways to function and all sorts of goals that people might pursue. And, if it just a question of functioning, the deficit left by a diminished access to facts can sometimes be filled in other ways.

Consider, for instance, the contribution to effectively functioning in pursuit of one's goals that is sometimes made by imagination. It is well-known that people with memory deficits tend to confabulate, to make things up. Often they even seem to believe the stories they make up. It may seem that confabulation—the invention of imaginary facts, or imaginary contexts in which to ensconce real facts—could not help someone to function in the real world. But whether it helps or not depends on one's purposes. One of the purposes that people with memory loss often have is to retain their dignity in social situations. And that's where confabulation can be handy. If one can't play a good game, at least one may be able to fool others into thinking that one can. And for the purpose of fooling others well enough to maintain one's dignity in what otherwise might be an embarrassing social situation, confabulation may be enough. For people with memory loss, every social interaction is a test. If others think that one is o.k., then for some of one's purposes at least one is o.k. This is one of those situations in which thinking—not ours, but theirs—can make it so.

There are, of course, many other things besides personal memories that we need in order to function at what in normal circumstances would count as our full potential. We need to be able to see well, have a good sense of touch, a healthy brain, and so on. In addition, there are things, such as mind-reading, that ordinarily most of us cannot do, no matter how healthy and fit we are, that it would sometimes be useful to be able to do. If, as may one day be the case, there were a pill we could take that enabled us to be able to mind-read, that might enhance our ability to achieve some of our goals—it would certainly at least be entertaining. So, in one way, at least when it comes to the question of what we need to obtain our goals, there is nothing special about memory. How well our memories function profoundly affects our ability to reach our goals. But the same is true of lots of other aspects of our bodies and minds,

Yet, admittedly there is something special about memory. For one thing, unlike some

other normal capacities, the value of normal access to personal memories is ubiquitous, or almost ubiquitous. If we have a bad leg, we may not be able to run fast, but most adults are rarely in situations where they have to run fast. So, it may not matter all that much. But it is hard to even imagine a relatively full life in which greatly diminished access to personal memories would not matter all that much. As the case of Leonard shows, even if we had only one overriding objective, a greatly diminished capacity for forming personal memories might make it all but impossible for us to achieve that objective. In principle, it seems, Leonard could have externally received enough factual information that he could have functioned very effectively in pursuit of his one objective, but in a strange way. Phenomenologically it would have always been as if the assault had just happened and he had just set out to avenge it. But most of us have many objectives, including many that have to do with the quality of our subjective experience and some that require retaining an understanding of the evolution of our experience. That external memories aides could even in principle replace personal memory in enabling us to achieve all of these normal objectives, or even all of them that contribute importantly to making our lives worth living, is extremely questionable. So, while Leonard may have been right, for his extremely impoverished life, he was wrong for a normal life. Memories do matter. Or so it would seem.

To be sure that memories matter as much as I am now suggesting, we will have to return to two issues, closely related to each other, that arose in our discussion and that I postponed. The first of these had to do with memory enhancement. Leonard's observation about the priority of facts over personal memory encourages one to think of ways of compensating for impaired personal memory. But if we're focusing on the contribution that external memory aides could make to effective functioning, it's not just a question of impairment, but also one of enhancement. As we saw, external aides can often outperform personal memory, even now. And, as was suggested, the transition from an *external* memory aide to an *internal* enhancement of memory may some day be a natural, welcome progression. Imagine, for instance, a person whose personal memory by any ordinary standard is very good. Yet, there is a pill that he can take to make it even better. After taking the pill, simple tasks, like working crossword puzzles and performing on academic examinations, become immeasurably easier. Imagine that such a pill were available, that it were free of cost, and that taking it had no bad side effects. As seems likely from the case of athletes taking steroids, probably ordinary people would be clamoring to take our imagined pill.

It's not unrealistic to suppose that something might some day be done—perhaps sooner than one might think—to dramatically enhance personal memory. Currently the promise, and problems, of genetically engineered memory enhancement are on the minds of scientists who study memory. In March, 2006, for instance, researchers at the University of California announced their discovery of the first known case of “hyperthymestic,” the ability to perfectly and instantly recall details of one's past. AJ, the subject of their more than five year long study is a forty year old woman who reputedly can recall her personal past “with astonishing accuracy.”¹⁶ What seems to make AJ

different from others with superior personal memory who have also been studied is that AJ does not use mnemonic devices, such as rhymes or visual imagery, to help her remember. According to the researchers, AJ's "recall is instant and deeply personal, related to her own life or to other events that were of interest to her." The researchers believe that in some central respects having to do with personal memory AJ has a genetically endowed natural advantage over the rest of us. They are trying to figure out the exact source of this advantage.

Interestingly, for present purposes, the researchers studying AJ concede that there are serious limits to her memory. Apparently she has difficulty with rote memorization and with organizing and categorizing information. According to the researchers, AJ says, with a sigh, that her ongoing remembering is "a movie in her mind that never stops" (recall the quotations from Hawks and Nin). As a consequence, the researchers say, AJ "is both a warden and a prisoner of her memories, which can at times be a burden because they cannot be controlled." Nevertheless, they report, she says that if she had a choice, she would not want to give up her extraordinary ability to recall.¹⁷ However, in a more recent interview, AJ reportedly said:

that whenever she hears a date, memories from that date in previous years flood her mind like a running movie. The phenomenon, she laments, is 'nonstop, uncontrollable and totally exhausting.' 'Most have called it a gift, but I call it a burden,' she wrote. 'I run my entire life through my head every day and it drives me crazy!!!'¹⁸

Leonard, of course, is a much more pitiful prisoner of the past.

Where does this leave us? It seems to me that it leaves us with a heightened appreciation of three things. First, that, practical problems aside, it may be possible to live one's life in a way that is extremely valuable both to oneself and others even though one has a diminished capacity to form personal memories. Second, that it's possible that in the future technological memory aides may provide factual information "from the outside" that greatly diminishes these practical problems. And, finally, that such a life would be radically different and in many ways less personal than normal human lives, but still, arguably, one that is worth living. But, then, technology in the future, for lots of other reasons, promises to radically change what it is to be a human being, perhaps even to make being human obsolete. Perhaps personal memories, as we know them, will go by the boards. Yet "life" may go on. In *The Tempest* (Act V, scene 1) Shakespeare has Miranda say, "O brave new world, that hath such people in't!" He was more prophetic than he may have realized.¹⁹

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Raymond Martin/Union College/March 27, 2008.

ENDNOTES

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- 1.1. Augustine (1997), p. 213
 2. Buñuel, Luis (1983), pp. 4-5.
 3. In Hakluyt, Richard (undated), p. 292. The remarks quoted are from a manuscript written in 1512.
 4. Nin, Anais (1948), p. 217.
 5. Dennett, Daniel (1978), pp. 209-10.
 6. John Sutton: “When I am remembering, there are many different activities I may be engaged in, and the expression of my memory can take many different forms. I reminisce with old allies about shared experiences; I finally call to mind that obscure fact I've been seeking; I mindlessly cycle off down the lane, despite not having been on a bike for years; I sit alone and ruminate on one joyful or agonizing moment long ago; I gather with others to commemorate a significant occasion; I write or fashion something in memory of a person or an event; a photo, an odd memento, or a long-forgotten melody suddenly immerses me in the emotions of another time. . . . It's not easy to pinpoint just what is common across this range of activities, and some philosophers have argued that not all of them involve true memory.” Retrieved on Dec. 20, 2007, from: http://www.phil.mq.edu.au/staff/jsutton/Sutton_Memory_Encyc_Phil.rtf.
 7. Rilke, Rainer Maria (1982). Galen Strawson mentions Rilke’s remarks in his “Against Narrativity,” in Strawson, Galen (2005), p. 67.
 8. I am indebted here to John Sutton, *op. cit.*
 9. For an interesting discussion of the importance of forward-looking projects, including some discussion of the late Russian neuropsychologist A. R. Luria’s view of that importance, see Richard Sorabji (2006), pp. 175-77, 303.
 10. Galen Strawson, *op. cit.*, p. 64.

11. I am indebted to John Barresi for drawing this to my attention.

12. For an imaginative variation on this theme, consider the following hypothetical experiment, proposed by Nova Spivak: "Show a person a set of photographs, and while they are observing each photo use functional brain imaging to record their brainstate. Later, show them the same photos several more times and make additional recordings of their brainstate, in order to generate a database of brainstates that correspond to their perception of each photo. Next, select a photo secretly (without telling the human subject) and lookup its corresponding recorded brainstates in the database. Then, guide the human subject to generate a brainstate that corresponds to the secretly chosen photo using biofeedback that is tied to their real-time brainstate. For example, provide the human subject with a sound or a computer image that corresponds to their real-time brainstate, and which provides them with positive or negative feedback based on the "distance" from their present brainstate to the desired target brainstate, enabling them to guide their brainstate the correct configuration. After the subject becomes accustomed to using the biofeedback system, apply it to guide them to generate a brainstate that matches or is closely within range of the desired brainstates for the selected photo. Then ask the subject to report which photo they are thinking of. We can measure how well the method works by the accuracy by which the subject reports thinking of the photo we selected originally.

If this process works it could be used someday as a new kind of memory aid. For example, suppose that someday functional brain imaging gets small and portable, or even wearable or implantable, so that everyone has access to their real-time brainstate data. When they want to "remember" something they simply hit the "record" button on their personal brainstate recorder and it measures their brainstate while they are thinking of and/or perceiving what they want to recall. Then they simply give this dataset a label or filename in their personal memory database. Later when they want to recall a specific thing, they just select the label and the system uses biofeedback to guide them back to generating that brainstate, at which point they can then recall whatever it is they were trying to remember." Retrieved January 7, 2008, from:
http://novaspivack.typepad.com/nova_spivacks_weblog/2005/12/a_new_kind_of_m.html

13. For the view, go to:

http://www.allposters.com/-sp/View-from-the-Top-Kiliimanjaro-Posters_i1983079_.htm

14. John Sutton, op. cit.

15. Wollheim, Richard, (1984).

16. "Researchers Identify New Form Of Superior Memory Syndrome," *Science Daily*, University of California - Irvine (2006, March 14). Retrieved December 19, 2007, from <http://www.sciencedaily.com/-releases/2006/03/060314085102.htm>

17.17. *Ibid*. Recently it has come to light that AJ is not alone. According to the

Associated Press, radio news anchor Brad Williams, of LaCrosse, Wisconsin, is believed to have autobiographical memory abilities comparable to those of AJ. It is also reported that since Williams began to talk more about his memory abilities on the air fifty people who have heard his broadcasts have called in to claim that they have similar memory abilities (see footnote 18)! In Jorge Luis Borges' story, "Funes, the Memorious," an accident causes a man to have perfect memory, so that he forgets nothing that he's seen or heard, no matter how minor, but his blessing that turns out to be a curse. I am indebted to Felmon Davis for reminding me of the Borges' story and to Lynn Gray for bringing the Associated Press report to my attention

18. Retrieved on February 27, 2008, from:

<http://www.cnn.com/2008/HEALTH/02/22/memory.man.ap/index.html>

19. Thanks to Emily Brunelle and Bruce Connolly for assistance with references, and to John Barresi, Felmon Davis, and Marya Schechtman for helpful comments on an earlier draft.

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Martin, Raymond, and John Barresi (2006) *The Rise and Fall of Soul and Self: An Intellectual History of Personal Identity*, New York: Columbia University Press (includes discussion of the role of memory in Western theories of the self).

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BIOGRAPHICAL NOTE

Raymond Martin (Ph.D. Rochester, 1968) is Dwane W. Crichton Professor of Philosophy and Chair of the Department, Union College, Schenectady, New York. He is also Professor and Distinguished Scholar Teacher Emeritus, University of Maryland College Park. His books include: *The Rise and Fall of Soul and Self* (co-authored), Columbia University Press, 2006; *Personal Identity* (co-edited), Blackwell, 2003; *Naturalization of the Soul* (co-authored), Routledge, 2000; *Self and Identity* (co-edited), Macmillan, 1991; *Self-Concern*, Cambridge University Press, 1998; and *The Past Within Us*, Princeton University Press, 1989.