

Eternal Sunshine of the Spotless Mind, Memory Erasure, and the Problem of Personal Identity

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Abstract

Michel Gondry and Charlie Kaufman's 2004 *Eternal Sunshine of the Spotless Mind*, which celebrated its fifteenth anniversary in 2019, is an extended thought experiment on the nature of memory, minds, and persons. The memory erasure thought experiment presented in the film—and its implications for personal identity—raises poignant questions for the ethicist, epistemologist, neuroscientist, metaphysician, and cognitive scientist. In this paper, I explore the rich insights the film has to offer interdisciplinary studies of memory, providing a case study in how narrative can uniquely contribute to memory research, while also maintaining philosophical rigor and fidelity to scientific discoveries about memory. Turning to the philosophical implications of memory erasure, I consider memory erasure in the context of several leading views of personal identity and proposed answers to the persistence question of personal identity, assessing the challenges and complications that the memory erasure thought experiment brought to life by *Eternal Sunshine* poses to these theories. I argue that the psychological continuity view of personal identity—in its various iterations—does not allow an individual to truly survive the memory erasure procedure. The memory erasure thought experiment presented in *Eternal Sunshine*—and its metaphysical and epistemological consequences—reveal how we establish the relationship between memories and selfhood, how to define personhood in the presence of both hypothetical and real-world memory loss, and what experiences we value in human life.

*“How happy is the blameless vestal's lot!
The world forgetting, by the world forgot.
Eternal sunshine of the spotless mind!
Each pray'r accepted, and each wish resign'd;”*

—Alexander Pope, “Eloisa to Abelard” (1717)

Imagine that you are riding a train from Montauk to Rockville Centre on the Long Island Rail Road. En route, you may exchange smiles with a stranger and strike up a conversation with her. Or perhaps you're at your bookstore job, manning the desk when a patron whom you have never met before approaches you and seems to know who you are. But the stranger on the train and the bookstore patron aren't strangers at all—they are former lovers.

During your relationship-grieving period, you utilize the services of Lacuna Inc., a firm that specializes in memory erasure. Lacuna promises a safe, effective, non-surgical technique for the targeted erasure of painful memories. After an initial session that creates a map of memories based on object associations, you take a pill that renders you unconscious, and technicians spend the night deleting the memories located on your brain map. You wake up the next morning with no recollection of undergoing the procedure and no memories of the relationship. Your friends and family receive a yellow slip of paper in the mail notifying them that you have had this individual erased from your memory and never to mention the relationship to you again. You proceed with your life as though nothing has changed. The procedure is a groundbreaking solution to heartbreak and suffering, but it also seems to alter an essential aspect of your identity. In fact, memory erasure may—metaphysically—be just as bad as ordinary death. Would you undergo the procedure knowing that there is a possibility that you would not genuinely survive it?

This scenario is unfolded in Michel Gondry and Charlie Kaufman's 2004 *Eternal Sunshine of the Spotless Mind*, which celebrated its 15th anniversary in 2019. At its core, *Eternal Sunshine* is an extended philosophical thought experiment on the nature of memory, minds, and persons. It is a philosophical goldmine of a film that raises poignant questions for the ethicist, epistemologist, neuroscientist, metaphysician, and cognitive scientist. The film is deeply committed to exploring the metaphysical question of personal identity and, in particular, the persistence question. Does Lacuna simply provide a service that reduces anguish, or are the implications graver? Does targeted memory erasure—that is, intentional brain damage—allow an individual to truly survive, or is it a fate on par with ordinary death? The answers to these questions depend upon which criteria we believe are required for an individual to persist over time. I examine memory erasure in the context of several leading views of personal identity, assessing the crucial challenges and complications that the memory erasure thought experiment brought to life by *Eternal Sunshine* poses to these theories. I argue that the psychological continuity view of personal identity—in its various iterations—does not allow an individual to truly survive the memory erasure procedure. The memory erasure thought experiment presented in *Eternal Sunshine* and its metaphysical and epistemological consequences, I contend, reveal how narrative can uniquely represent memory, how we apprehend the relationship between memories and selfhood, and what experiences we value in human life.

Narrative and Memory

In *Consciousness Reconsidered*, Owen Flanagan states, “Evidence strongly suggests that humans in all cultures come to cast their own identity in some sort of narrative form. We are inveterate storytellers” (198). Narratives in the form of novels, short stories, films, and other formats depict how memory operates in human life and also reveal how memory is narrative. Science fiction narratives have a unique cognitive value because these tales imagine possibilities and think through the consequences of conditions and situations real, plausible, and even seemingly implausible. Though there is debate about how to precisely define science fiction and whether the term “science fiction” itself is a misnomer (David Miller, for example, argues that the genre should rather be called technology fiction¹),

science fiction is a genre of speculative fiction that can be aptly understood as a “literature of ideas”—as sci-fi writer Pamela Sargent has asserted—that speculates on imagined futures driven by both scientific and technological advances. At the heart of science fiction narratives like *Eternal Sunshine* is the thought experiment, a building block in disciplines as far-reaching as biology, philosophy, chemistry, physics, computer science, mathematics, and economics. While the thought experiment is interdisciplinary, it is a deeply literary device. Most thought experiments are told as a story, and a compellingly crafted narrative is crucial to convince others of the importance of the thought experiment’s consequences or to dwell in its imagined possibilities.

Eternal Sunshine is a thought experiment on memory erasure that extends to larger issues of memory and persistence. The film begins in the present day, as strangers Joel Barish and Clementine Kruczynski meet while traveling on the Long Island Rail Road from Montauk. Joel and Clementine do not realize, however, that they were previously in a relationship with each other for two years. After their breakup, Clementine utilizes Lacuna’s services to erase her memories of the relationship, and Joel, angry and hurt upon discovering that Clementine has erased him, chooses to do the same to her. The narrative then jumps back in time to Joel’s memory erasure procedure. Prior to undergoing the procedure, Dr. Mierzwiak—the founder of Lacuna—explains the effects of the procedure to Joel:

There’s an emotional core to each of our memories, and when you eradicate that core it starts its degradation process. By the time you wake up in the morning, all the memories we’ve targeted will have withered and disappeared, as in a dream upon waking.

To conduct the fictional memory erasure procedure at Lacuna, a customer is first asked to bring in all mementos of the person (or animal²) that they would like erased from their memory. These mementos include articles of clothing, diary entries, records, CDs, mugs, paintings, and any other objects belonging to, gifted by, or that otherwise remind the patient of that person. The objects are then placed in front of the patient one at a time as he is asked to focus on the object and concentrate on recalling the memory evoked by it—the best “emotional readout,” Lacuna technician Stan Fink tells Joel, is not produced by verbally explaining the memory, but by focusing one’s attention on the feeling of the memory, including emotional responses and sensory recall. From those associations, the technicians build a brain map consisting of the memories of the person to be erased.³ This map strongly resembles a functional magnetic resonance imagining (fMRI)⁴ scan that measures brain activity and shows what parts of the brain are activated in response to a given stimulus.⁵ To conduct the memory erasure procedure depicted in the film, a patient takes a pill that renders him unconscious, technicians enter his home, place a helmet device on his head, and go to work deleting the targeted memories located on his brain map. The next day, the patient wakes up with no memory of the person, and his life returns to how it was prior to meeting the person that has been erased.

Joel is semi-conscious as the memory erasure procedure is conducted on him, sedated but aware as he drifts in and out of his own memories and the conversations and

actions of the technicians in his apartment as they erase his memories. During Joel's memory erasure procedure, the viewer experiences his memories of Clementine in reverse order, beginning with Joel and Clementine's breakup and traveling backwards in time until their first encounter in Montauk that began their relationship. As Joel's memories are deleted, he is transported into the different locations and circumstances of each of the memories. These early memories flow into each other and begin where the previous one leaves off, with some elements of the memory manipulated by Joel's imagination and cinematic magical realism effects—in tandem with ambient music and soft lighting, the experience of the film is evocative of both a dream and a memory. The discontinuous, non-linear narrative also unfolds like a memory, entering and exiting memories similarly to how a memory comes into an individual's consciousness—by spontaneous emotional triggers, sounds, smells, and other experiences that activate a past memory. Thinking back to his childhood, for example, Joel imagines the sound of falling rain and is transported to splashing in muddy puddles in the rain as a young child, catching raindrops on his tongue before he runs inside his childhood home for shelter. As he dives under the table, this rain memory metamorphoses into a memory of hiding under the table as his mother prepares dinner for her friend.

Blurring reality and fantasy, true and false memory, and consciousness and unconsciousness, the majority of the film operates in a space between consciousnesses. As he travels back in time in this semi-conscious state, experiencing pleasant memories of Clementine early in their relationship, Joel realizes his love for Clementine and tries to resist her erasure from his memory. He travels with Clementine into childhood and adolescent memories that she was not originally a part of in an attempt to preserve her, as only memories of Clementine delineated on his brain map are erased during the procedure. During this journey, the viewer enters Joel's latent unconscious childhood memories and his childhood stream-of-consciousness—as he hides under the table while his mother prepares food, for example, childhood Joel remarks in frustration, "She's not paying attention to me." As Joel's mother leaves the room, he struggles with his arms in the air, thinking, "I really want her to pick me up. It's amazing how strong that desire is." This childhood desire for attention and recognition from his mother figure resurfaces in Joel's adult relationships. He thinks to himself in a diner on Long Island, "Why do I fall in love with every woman I see that shows me the least bit of attention?"—revealing, as psychoanalysis asserts, that our relationships and interactions with others are shaped by these latent childhood memories, desires, and fears that we continue to act out in new circumstances and attachments.⁶ Unable to resist erasure, Clementine urges Joel to, "Hide [me] somewhere *really* buried," which gives way to the sound of children's jeers, as a scene unfolds of a young, caped Joel surrounded by a group of boys pressuring him to decapitate a bird placed in a red wheelbarrow. Joel's most buried, latent memory is a traumatic one from his youth, the psychological lacuna lending its name to the eponymous memory erasure company.

Prior to undergoing the memory erasure procedure, patients are required to have a session with Dr. Mierzwiak, detailing their relationship with the person they are erasing, the intricacies of their dynamics, and the reasons they want to erase them, which is

recorded on a cassette tape and stored in the patient's file at Lacuna. This session—reminiscent of “the talking cure” and the catharsis that it affords—is yet another way in which narrative is representative of memory. Actual events that produce memories do not necessarily coincide with the narrative one tells, which includes biased interpretations of interactions, another person's character, and embellishments, as this story is told through a single perspective. Furthermore, because this conversation with Dr. Mierzwiak occurs prior to the memory erasure procedure, the narrative is influenced by more recent, negative events (an argument with one's partner that ends a relationship, for example), and is therefore biased as a result. These negative feelings dominate one's pre-erasure narrative, but—as Joel's memory erasure procedure demonstrates—early, positive memories still buried in one's subconscious can become harder to recall the longer a relationship progresses and deteriorates.

This journey through Joel's unconscious and conscious memory and carrying over of Clementine into his past memories seems at first glance to be among the most implausible elements of the film, but it is not too far off from how some scientists currently describe the way that our memory operates. In *The Mind's Past*, neuroscientist Michael Gazzaniga states:

Nowhere is our automatic brain in more trouble than in recalling the past. The interpreter, working from noisy data, compounds the problem by embellishing on what it does recall. The story remembered on one day becomes part of the memory for the next time it is told. Soon begins a rich narrative about past events. The narrative most likely becomes less accurate and much more elaborate in its detail. (Gazzaniga 148)

In Gazzaniga's formulation, we recall our memories and relay them to others and to ourselves as a narrative, to various degrees of fidelity. Though the film includes false memories and memories altered by people and events that are not initially part of one's original memory, false memories and memory distortions are remarkably common, and therefore call into question whether any memory at all can be accurately deemed “original” or unadulterated.⁷ Before Joel's memories are erased, they are modified with the introduction of Clementine and then begin to degrade—facial features shift and are scrambled, people disappear, paint peels on an aging childhood home, a bed from a teenage bedroom ends up on a wintry beach, and a beach house in Montauk begins to fall apart as shutters come loose and ocean waves flood the interior. These decaying and altered memories represent memory in both its persistence and its susceptibility to corruption. These memory alterations and degradations are also reminiscent of dementia associated with neurodegenerative diseases. Rather than irrevocable, immediate loss, memory gradually declines in instances of dementia—certain details are forgotten, blurred, or conflated until memory loss gets more severe and entire memories and people can no longer be recognized.⁸ The film's depiction of memory and the stakes of memory loss, therefore, extend beyond Lacuna's fictional memory erasure procedure to larger questions of personal identity in instances of real-world memory loss. At what point or threshold of memory degradation will a person affected by dementia still be considered himself?

Personal Identity and the Persistence Question

Having examined the unique role of narrative in depicting memory in *Eternal Sunshine*, the philosophical crux of the film asks: what are the implications for personal identity under the hypothetical thought experiment of memory erasure? Philosopher Eric Olson provides a survey of seven main, loosely connected questions of personal identity, which include: “what properties define one’s personal identity?”; “what is it to be a person?”; and “what does it mean to persist from one time to another?”⁹ *Eternal Sunshine* primarily engages with this last question, also called “the persistence question.” Many philosophers state the persistence question as the following: “Under what possible circumstances is a person existing at one time identical with a person existing at another time?” (Olson 73). Olson argues that this question is too narrow because it only addresses what conditions would be necessary or sufficient for a person to be one person rather than two people—that is, whether two beings are numerically identical. Olson proposes a reframing of the question as follows: “Under what possible circumstances is a person who exists at one time identical with *something* that exists at another time (whether or not it is a person then)?” (Olson 74). This narrower question shifts the focus away from numerical identity toward qualitative identity, which accommodates more nuanced, complex questions with important ethical consequences (for example, a consideration of what characteristics or relations would make a fetus or an individual in a vegetative state continuous with a past or future person).

Olson groups responses to the persistence question under three major categories:

1. **The Psychological Approach:** The theory that some psychological relation determines survival over time (e.g. memories, preferences, thoughts, etc.).
2. **The Somatic Approach:** The idea that identity through time consists of physical relation. The body—rather than psychological facts—determines survival.
3. **Anticriterialism:** Unlike psychological and somatic approaches, the idea that there is no type of continuity that is necessary or sufficient for survival. (Olson 75-76)

I provide a brief overview of the somatic and psychological categories that respond to the persistence question, but primarily focus on the psychological approach because it is the approach taken up by the memory erasure thought experiment unfolded in *Eternal Sunshine*. Unlike the psychological and somatic approaches, anticriterialism (the third category of responses to the persistence question) denies that some continuity relation is even required for persistence, but the theory is poorly defined and understood, and does not offer productive ways of talking about persistence.¹⁰ For these reasons, I do not take up anticriterialism in this paper.

The Somatic Approach

The somatic view argues that persons persist by some sort of physical continuity. Though there are variations to the specific physical properties that determine continuity, the theory is generally formulated to assert that persistence is determined by our material bodies or the identity of our bodies, completely independent of psychological factors and

mental properties like memories, beliefs, personality traits, and preferences. According to the somatic theory, a person who undergoes memory erasure will continue to be the same person in terms of identity, but the theory has trouble adequately holding up against various objections levied against it and does not play a prominent role in the memory erasure thought experiment explored in the film, which instead hones in on psychological factors of continuity. The somatic view has its virtues because it addresses cases and conditions that the psychological continuity theory has difficulty responding to—the psychological continuity theory, for example, does not determine what makes us continuous with a very early version of ourselves. The somatic theory, rather, addresses the way humans grow, develop, and establish continuity with beings that may not resemble us in terms of memory or other psychological connection—the body or physical substance of the person is what determines his continuity, even in the case of psychological shifts or memory loss. The somatic approach addresses survival and death in terms that we are familiar with—it seems logical and in accordance with common sense to say that bodily death means that an individual does not survive or persist.

Several objections, however, have been levied against the somatic approach. It seems logical to incorporate some element of psychological continuity into a theory of personal identity, as it is difficult to accept a purely somatic view of persistence. One thought experiment that demonstrates the pitfalls of a purely somatic approach—and a common one advanced by somatic theorists, as well as their critics—is the hypothetical brain transplant.¹¹ A somatic theorist who believes that the physical body determines identity would argue that the person left behind in the original body would survive should one's brain be transplanted into another body, which violates intuitions about what makes us persons.¹² The somatic approach also runs into some of the same objections and counterexamples posed to physicalism.¹³ Both the somatic theory and physicalism lack a clear definition of a contrasting class to the physical. Physicalists like Barbara Montero assert that we do not necessarily need to define a contrasting class in order to understand the physical, but because physicalists exclude fundamental mental phenomena from their ontology, the physical is typically understood as the “non-mental.”¹⁴ The physicalist does not necessarily deny psychological continuity theories, as mental phenomena can be a product of the physical. If we consider mental phenomena to supervene on the physical, then one can argue that the memory erasure patient would not effectively survive memory erasure under the somatic theory as initially believed, as thoughts and memories are the result of physical properties that are therefore altered in the instance of extensive memory erasure.

To argue that some brute physicality determines continuity also depends upon a precise delineation of what the somatic theorist's ontological scheme looks like—does somatic relation occur on the level of cells, or the body as a whole? Gradual physical replacement cases are among the most glaring objections to the somatic approach. It is commonly stated that the body gradually replaces many of its cells every few years, but it would be a troubling conclusion to state that a person is no longer herself because of physical changes in one's body over time—is there a certain threshold of replacement that determines one's identity? This question evokes and remediates the Ship of Theseus

thought experiment, roughly described as follows. Theseus was an ancient hero who defeated the Minotaur and rescued Athenian captives from Crete, safely sailing them back to Athens. The Athenians preserved the ship and sailed it around each year on parade in Theseus's honor. Over the years, several parts of the ship require repair. Worn pieces of the ship are gradually replaced with identical replacement parts. With these alterations, is the final result still the Ship of Theseus? Somatic theories claiming physicality as a source of continuity would have to address this issue of natural, biological physical replacement. Though the question of natural physical replacement is relevant to the film because the characters in *Eternal Sunshine* are aging and evolving like all humans, the film notably does not reflect upon the somatic approach, instead choosing to take up mental properties as establishing persistence and leaving the characters otherwise physically unchanged. The memory erasure procedure depicted in the film crucially cannot result in any noticeable physical changes—we can recall, for example, Dr. Mierzwiak's promise that everything will feel the same to a patient following the procedure "as in a dream upon waking." The brain damage produced by the procedure—Dr. Mierzwiak assures Joel—is "on a par with a night of heavy drinking. Nothing you'll miss." The success of the procedure depends upon patients being unable to register any physical (or mental) changes in themselves in the aftermath of the procedure.

The Psychological Approach

The psychological continuity approach to persistence asserts that something besides the physical body—some kind of psychological relation—determines continuity. This "something else" has been formulated as the soul, the ego, and/or consciousness, depending upon the specific theory presented. The psychological approach to persistence is most aligned with our intuitions regarding selfhood and the ways in which we think psychological factors establish personal identity and continuity. While a number of mental features and psychological factors can be taken into account—for example, preferences and beliefs—the most common psychological criterion assessed in this view is memory because memory is vital to our experiences, relationships, and a diachronic understanding of ourselves over the course of a lifetime. It seems logical to determine identity and continuity over time based on memory—a past or future being might be *you* only if you can remember an experience that she had then, or if she can remember an experience that you have had (Olson 74). The memory criterion, however, is inadequate as a stand-alone theory of personal identity and faces various objections. Suppose I receive a bicycle for my birthday as a young child. As a thirty-something schoolteacher, I remember receiving the bicycle. As an older woman, I remember my years as a schoolteacher, but have forgotten the bicycle gift and much of my childhood. The memory criterion would hold that the young child is the schoolteacher, the schoolteacher is the old woman, but the old woman is not the young child. But this formulation arrives at an impossible conclusion because it violates the transitivity of identity.¹⁵

As Olson points out, the memory criterion can be modified in order to produce a more desirable outcome by switching from direct to indirect memory connections. We can then say that the old woman is the young girl because she can remember experiences that

the schoolteacher had when the schoolteacher remembered the young girl's experiences, which switches from direct memory to quasi-memory associations. There are still instances, however, where both memory and quasi-memory are absent, like when one is asleep. As Olson rightfully points out, "The Memory Criterion has the absurd implication that I have never existed at any time when I was completely unconscious. The man sleeping in my bed last night was someone else" (Olson 77). Olson then details a better response to the first problem posed by the memory criterion by discussing causal dependence in terms of psychological connectedness and psychological continuity:

A being is *psychologically connected*, at some future time, with me as I am now just if he is in the psychological states I am in now. Having a current memory (or quasi-memory) of an earlier experience is one sort of psychological connection—the experience causes the memory of it—but there are others. Importantly, one's current mental states can be caused in part by mental states one was in at a time when one was unconscious: for example, most of my current beliefs are the same ones I had while I slept last night. We can then define the second notion thus: I am now *psychologically continuous* with a past or future being just if my current mental states relate to those he is in then by a chain of psychological connections. This enables us to avoid the most obvious objections to the Memory Criterion by saying that a person who exists at one time is identical with something existing at another time if and only if the first is, at the first time, psychologically continuous with the second as she is at the second time. (Olson 78)

Even with revisions to the memory criterion, the memory erasure thought experiment poses some complications. If a number of my memories are wiped, my future self would not be psychologically connected or continuous with me because my psychological states would differ considerably and no longer be linked by a chain of psychological connections. Olson states, "most of my current beliefs are the same ones I had while I slept last night" (Olson 78). Can we say that this individual is psychologically continuous with her former self if her mental states do not relate to one another by a chain of psychological connections? The whole memory erasure procedure depicted in *Eternal Sunshine* is *dependent* upon waking up in the morning psychologically discontinuous with one's former mental and emotional states. Therefore, under the memory criterion of psychological continuity theory, memory erasure patients would not survive if the erasure is significant. Olson's revised formulation of the psychological continuity theory poses complications beyond the fictional memory erasure procedure depicted in *Eternal Sunshine*. Neurodegenerative conditions that result in dementia, like Alzheimer's disease, cause memory loss and other forms of cognitive decline, including apraxia and agnosia. It is a slippery slope to extend Olson's theory of psychological continuity that adapts the memory criterion to these real or imagined forms of memory loss, which would put into question the identity of individuals afflicted by memory loss. A more capacious understanding of personal identity is therefore necessary to avoid these troubling consequences.

The Patternist Approach to the Mind

Having examined memory erasure in the context of two major approaches to personal identity and determining that survival is not possible under the memory criterion approach to the theory, I now examine whether the patternist approach to the mind—an adaptation of the psychological continuity theory—would effectively allow someone to survive the memory erasure procedure as the same person one was before. The computational theory of the mind asserts that the mind is a “program” run by the hardware of the brain. The theory has various iterations, but patternism is a prominent interpretation upheld by theorists like Ray Kurzweil. In outlining his patternist view, Kurzweil states:

The specific set of particles that my body and brain comprise are in fact completely different from the atoms and molecules that I comprised only a short while ago. We know that most of our cells are turned over in a matter of weeks, and even our neurons, which persist as distinct cells for a relatively long time, nonetheless change all of their constituent molecules within a month...I am rather like the pattern that water makes in a stream as it rushes past the rocks in its path. The actual molecules of water change every millisecond, but the pattern persists for hours or even years. (Kurzweil 100)

Kurzweil’s description outlines patternism as a psychological continuity view—he points to some underlying pattern that persists and transcends the constant physical turnover of atoms and molecules. Kurzweil’s patternist account remediates the Ship of Theseus thought experiment in the sense of gradual physical replacement discussed above in relation to the somatic theory, but also in terms of the alteration of mental properties. Applying this theory to personal identity and persistence, Kurzweil’s view suggests that the turnover and change of some physical and mental properties would not alter one’s overall “pattern” and therefore one’s underlying self.

Although patternism is a promising adaptation to the psychological continuity theory, patternists need to be more explicit in describing precisely what constitutes an individual’s pattern. Furthermore, patternists need to respond to cases where one’s pattern may be altered and discuss the resulting implications for survival. *Eternal Sunshine* presents a unique challenge to the patternist view. The patternist would view extensive memory erasure or amnesia as too disruptive of one’s pattern to guarantee persistence, but would not view minor memory erasure cases as problematic or disruptive of psychological continuity. A gray area for the patternist is targeted memory erasure that falls somewhere in between these two extremes. Erasing several months or years of experiences would alter one’s pattern to the extent that a person may no longer be continuous with herself, but precisely where does the patternist draw this line, at what threshold does an individual cease to be herself, and how do we determine what that threshold is? At one point in the film, Joel lies in between states of consciousness as technicians work to delete the memories on his map. At what point between his first and last memory being erased can we determine that Joel is no longer identified with himself, and to what extent of memory erasure is one’s overall “pattern” disrupted? The patternist approach provides an important revision to other psychological responses to the persistence question because it

reveals that it is not so much the memories themselves that determine identity, but rather how the experiences that form memories shape one's personality and identity. Extending Kurzweil's river metaphor, it is not small disruptions that alter the course of the river—that is, one's overall "pattern" and personality—but larger alterations can potentially make the river divert into a different direction—that is, result in different personality traits altogether. The film proposes that there are some "critical" memories without which I cannot still be myself—for example, Joel's childhood memories that are the origin and locus of his future relationship dynamics are crucial to his personality and behavior. The characters in *Eternal Sunshine* reveal in their pre-erasure tapes that their romantic relationships have changed them, for better or for worse—made them angrier, or less happy, or otherwise different compared with who they were at the start of the relationship. Though Lacuna claims that everything returns to normal for their patients as it was prior to the given relationship, patternism—despite its flexibility to reframe or withstand some psychological and somatic alterations to identity—ultimately leaves ambiguous the extent to which one's pattern can be disrupted without altering fundamental personality traits and behaviors (and therefore personal identity) as a result.

Memory Erasure and Experience

I have contextualized the memory erasure thought experiment presented in *Eternal Sunshine* in relation to Olson's categorization of leading views of personal identity and some adaptations of these theories, like the patternist approach to the persistence question.¹⁶ Memory erasure poses significant challenges to many of these theories of personal identity, which calls attention to the thought experiments and counterexamples that reveal the shortcomings of each approach, and therefore the consequences that proponents of these views must address more explicitly. In closing, I address the import of memory erasure in framing how we situate memory in relation to human experience, which also bears on questions of personal identity. A parallel story arc to the romantic relationship between Joel and Clementine in *Eternal Sunshine* involves Lacuna Inc. receptionist Mary Svevo, who has an affair with Dr. Mierzwiak, founder of Lacuna. When Dr. Mierzwiak's wife discovers the affair, Mary has the relationship erased from her memory. (As her audio recording suggests, she is likely coerced into the procedure.) Mary only becomes aware that she has undergone the procedure when Mierzwiak's wife informs her of it in the present day after Mary falls for Dr. Mierzwiak for a second time. As mentioned previously, each patient records a tape detailing his reasons for having a relationship erased prior to the procedure, which is subsequently filed away in company records. Devastated by the discovery of the affair and its erasure from her memory, Mary quits her job, steals the company records, and sends the tapes out to all Lacuna patients to make them aware of the fact that they have had their memories of a given relationship erased. Coming to this realization—now understanding and experiencing the heartbreak and tragedy of the memory erasure procedure firsthand—Mary decides to expose the consequences of the procedure to those who undergo it.

Many thought experiments—including the memory erasure thought experiment unfolded in *Eternal Sunshine*—consider what we value in human life and experiences and

allow us to contemplate the consequences of a scenario that deviates from our perception of reality. Thinking with the thought experiment depicted in the film, what is the existential magnitude of discovering that one's memories have been erased? The memory erasure thought experiment engages with Robert Nozick's "experience machine" thought experiment, which Nozick describes as follows:

Suppose there was an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life experiences...Of course, while in the tank you won't know that you're there; you'll think that it's all actually happening...Would you plug in? (Nozick 644)

Eternal Sunshine is a reversal of Nozick's experience machine—rather than false experiences, the memory erasure procedure takes away real ones. Is it better to have knowledge of our past experiences, however painful, or to live a life of minimized suffering that is comprised of false impressions? The film suggests that true experience is more valuable than the illusory scenario of memory erasure. The psychotherapeutic component of the film that delves into the emotional core of memories (especially traumatic memories) as part of the healing process prior to memory erasure, rather than suppressing them through other means, strongly suggests that even traumatic memories are intrinsically valuable to our lives and identities. There is also a lingering question of whether Lacuna patients suffer real harm upon undergoing the memory erasure procedure. Joel and Clementine, for example, seem to experience a lingering feeling of loss after their respective memory erasure procedures, even though they do not remember what they have lost. Joel and Clementine choosing to begin their relationship again—even with the knowledge that it may once again end in pain and suffering—could be interpreted as a reflection on how we continue to choose relationships with others because creating memories, no matter how painful, allows us to construct meaningful narratives about our lives and our place in the world. Our memories may just be a story we tell ourselves—one prone to embellishment, degradation, and corruption—and defining persistence on the criterion of memory alone has troubling consequences that require further inquiry, but this science fiction tale nonetheless allows a glimpse into the complexities of human memory and our attempts to define what it means to persist over the course of a lifetime. In its prescient and unique treatment of fictional memory erasure, *Eternal Sunshine* encourages its viewer to reflect upon the real-world consequences of memory erasure, memory loss, and personal identity, all the while pondering whether the spotless mind is, in fact, characterized by eternal sunshine and therefore most desirable, or if—as the film suggests—the vicissitudes of our memories, preferences, complex attachments, and relationships are incomparably valuable.

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Appendix

Figure 1: Joel's Brain Map from *Eternal Sunshine of the Spotless Mind*

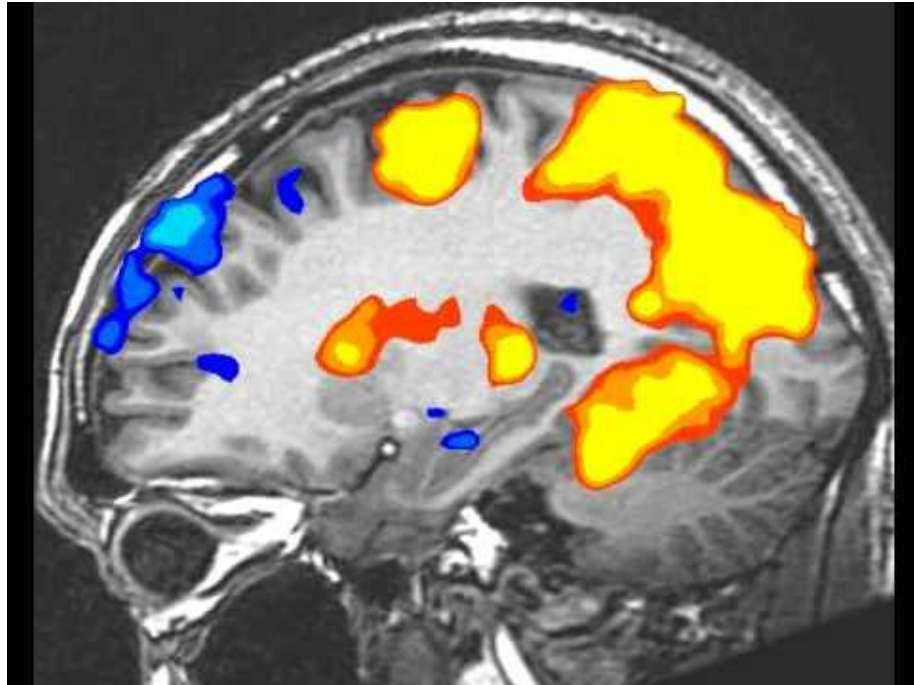
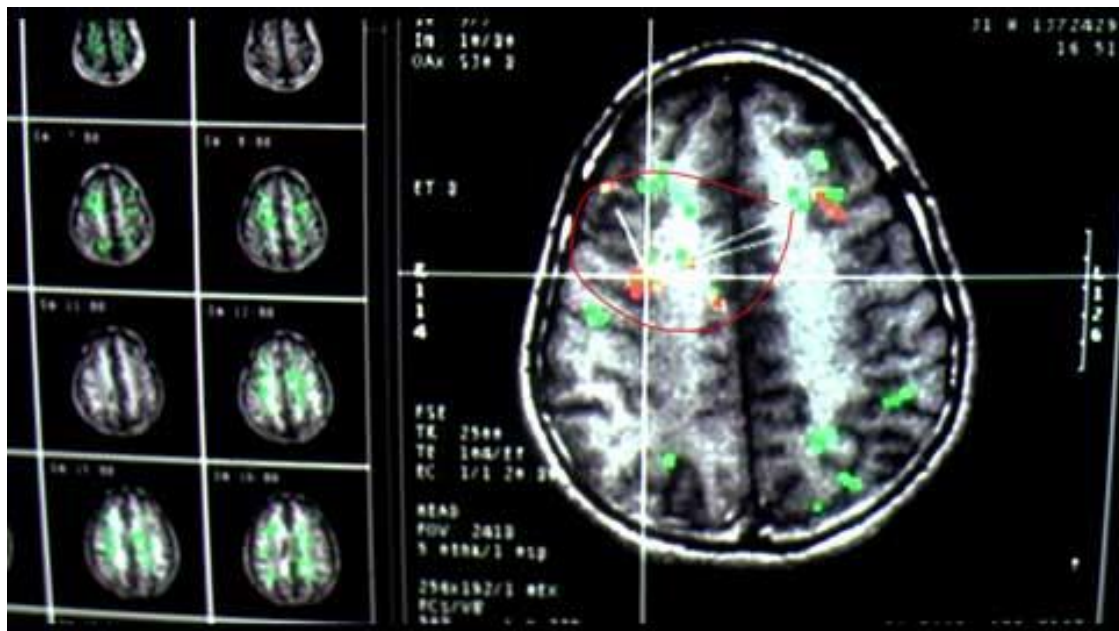


Figure 2: Functional Magnetic Resonance Imaging (fMRI) Scan



Notes

¹ In “Putting Science to Work,” Miller argues, “When we read in a newspaper that scientists have made an advance, for example in the treatment of cancer, we may be sure that the discovery is in reality a technological invention. The same confusion is evident in the phrase ‘science fiction’. There can be no doubt that this literary genre ought to be called technology fiction. In the public mind it is only mass production that is recognized as technology” (Miller 12).

² One woman in the film sits in the Lacuna office in tears holding mementos that we must presume belonged to her late dog.

³ See appendix, figure one.

⁴ fMRI scans provide a snapshot of brain activity associated with a range of cognitive, motor, and sensory tasks by measuring changes in blood flow.

⁵ See appendix, figure two.

⁶ Originating with Sigmund Freud, psychoanalysis focuses on how humans possess, repress, and transfer unconscious processes, thoughts, and experiences (particularly childhood experiences) that affect our present. John Bowlby and Mary Ainsworth’s foundational work on attachment theory, which explores the short and long-term dynamics of human interpersonal relationships, is also invested in how our earliest relationships with our primary caregivers influence our attachment patterns throughout our lives. Melanie Klein and D.W. Winnicott’s work on object relations theory—the childhood process of developing a psyche in relation to others—examines the early origins of our interpersonal relationships and the ongoing influence of past relationships on current relationship dynamics.

⁷ As Daniel Schacter states, “It is now widely recognized that human memory is not an exact reproduction of past experiences but is instead an imperfect process that is prone to various kinds of errors and distortions” (Schacter et al. 2011).

⁸ The Global Deterioration Scale (GDS), also known as the Reisberg Scale (after founder Dr. Barry Reisberg) provides an overview of the seven stages of cognitive function and decline associated with dementia. See Reisberg et al. (1988).

⁹ See Olson, “Personal Identity” (2009). See also Olson’s “Personal Identity” in the Stanford Encyclopedia of Philosophy (2002; revised 2019).

¹⁰ See Olson for more information on the key proponents of anticriterialism and the works in which they advocate this view, including Merricks (1998) and Lowe (1996).

¹¹ See Olson (p. 80) for more information about proponents of the somatic approach and their critics (like Unger 1990) who point out the undesirable consequences of the somatic approach and how it inadequately holds up against thought experiments like the brain transplant.

¹² The somatic approach to the brain transplant can be contrasted against the psychological approach to the same thought experiment, which would argue that if one’s brain were transplanted into another person’s body, the resulting person would think he is you because the brain carries with it your memories and other mental features. This view has origins in Locke’s “prince and the cobbler” thought experiment.

¹³ Physicalism is the thesis that “everything, or at least some significant subset of everything, is physical” (Montero 173).

¹⁴ See Montero, “What is the Physical?” (2005).

¹⁵ This example is an adaptation of Olson's transitivity example of the young student, middle-aged lawyer, and older woman (Olson 77).

¹⁶ There are other views of personal identity, of course, that fall outside the scope of this paper. See, for example, work by Derek Parfit and Paul Ricœur, among others.

