

## INTRODUCTION

Salvador Dali claimed to have no interest in the new scientific theories of modern physics when he created *The Persistence of Memory*. His classic work, which went on to define surrealism for the general public, was instead inspired by a piece of cheese. Dali called it “nothing more than the soft, extravagant, solitary, paranoic-critical Camembert cheese of space and time”. Despite these innocuous beginnings, *The Persistence of Memory*’s melting watches became the most iconic symbol for the post-Einstein, modernist conception of time (Salcman). Dali was interested in what he called the paranoic-critical, which applies a critical lens to the free-associative nature of paranoia. He states of film: “Some might consider rigorously objective documentary and Surrealist to be antagonistic. However, these two activities are both explored with the same passion by the *new sensibility*. In effect, documentary and the Surrealist text coincide from the outset in their essentially anti-artistic and more particularly anti-literary process... . . . The documentary notes things said of the objective world anti-literarily. In parallel fashion, the Surrealist text transcribes with the same rigor and as anti-literarily as documentary, the REAL free functioning of thought, of events which occur in reality in our mind, thanks to psychic automatism and to other passive states (inspiration).” (Dali 93) This essay examines representation of trauma, memory, science, and time in films and literature, and contextualizes the puzzle film in a media environment based on new principles of motion.

*Memento* is a film by Christopher Nolan, and it is the story of a man whose wife is raped and murdered, after which he loses the ability to create new memories. It is based on a short story Nolan’s brother wrote, called “Memento Mori”. The film deals with grief, trauma, identity, and memory. *Eternal Sunshine of the Spotless Mind* acts as a mirror for *Memento*. Directed by

Michael Gondry, it is the story of a man and a woman who fall out of love, and decide to have a fictional memory erasure procedure done on their brain. For years, Science Fiction writers have been using scientific theories as a basis for thematic structure. H.G. Wells used Darwinian evolution in *The Island of Doctor Moreau* to ask what it is that makes us human, and what it is that separates us from animals or beasts. Charlie Kaufman, Screenwriter for *Eternal Sunshine*, used evolution as a theme in his script *Adaptation* as a metaphor for mimesis, artistic adaptation, and transcendence. Julian Jaynes' controversial theories of the bicameral mind and the emergence of consciousness as a social adaptation are the basis for the works of writers William Burroughs and Alan Moore. The inspiration for Frank Herbert's *Dune* came when he found out that sand dunes follow the same properties of motion as water. Fluid dynamics are incorporated into the book's structure, and the plot can be described as an ebb and flow of dramatic tension. In each case, knowledge of the scientific background of the story is essential to thematic understanding and comprehension. The works described in this essay use the physiological and psychological properties of Memory as central thematic content in this fashion.

The Short Story *Memento Mori* by Jonathan Nolan is the inspiration for his brother's film, *Memento*. In it, a character named Earl wakes up with no idea who he is, and begins following the instructions on the post-it notes in his room. Earl tapes a picture of his MRI scans to a wall, and labels them 'YOUR BRAIN'. Nolan tells the story of one of what must be thousands of times Earl wakes up and discovers his condition. Over and over, Earl finds himself in the same plight, and he attempts to construct a narrative that consists of beginning, middle, and end, so that he can define himself. *Memento Mori* is based on the true story of Patient HM, a patient who underwent surgical lesions on his hippocampus and amygdala. Just as the short story

sheds light on the full length film *Memento*, a careful examination of the literature surrounding Patient HM sheds light on the characters in both *Memento* and *Memento Mori*.

Recent decades have seen the advent of the puzzle film. These films are not necessarily more complex than the works of Chaplin, Hitchcock, Kubrick, or Lucas, but the unique feature that many of them share is the fracturing of narrative. Films such as *The Sixth Sense*, *Mulholland Drive*, *The Usual Suspects*, and *The Limey* utilize twist endings and repeated viewings to add a second layer of meaning to all the facets of the film. *The Sixth Sense* features an ending that completely redefines the plot of the film. *Mulholland Drive* exists in a dream state (it was originally a television pilot), and after the TV show was canceled, David Lynch filmed what can best be described as a legend for figuring out the first 3/4ths of the film. *The Usual Suspects* reveals the protagonist as the antagonist at the end of the film, and *The Limey* uses scenes presented in a fractured chronological order to create a kind of objective narrative. The fractured chronological nature of these films portrays a postmodern distrust of temporal continuity.

To reiterate, these films are by no means “better” films than masterpieces by earlier directors. Whether or not a narrative is fractured is irrelevant. What makes these films interesting is that they are incomprehensible without an audience that is willing to participate and work in order to figure out a narrative. Frank Herbert, author of *Dune*, commented on the frosty reception to the David Lynch version of his film: “In Europe you did not find critics bragging (as did one closet aristocrat on CBS): “I don't like movies that make me think.” (He wants to feed you “bread and circuses” and keep you docile.)” (Herbert) Not so subtle references to oligarchy aside, this resistance to engagement with film is symptomatic of a broad problem with a mass media democracy. I will return to this point after some analysis. Christopher Nolan’s *Inception* is the

best example of this type of film to date: The film explains nearly every plot twist to viewers, but leaves the ending open to interpretation in order to stir up criticism and arguments. Creating a dialogue around the movie is the primary purpose of this kind of film.

In her book *John F. Kennedy and the Artful Collaboration of Film and Politics*, Melissa Geraci discusses the Kennedys' use of film, documentary and propaganda in his elections for senate and for president. She argues convincingly that Kennedy's films, especially *The New Frontier*, mark the moment we enter the modern age: "A detailed look at strategic planning and production techniques common to cinema pinpoints John F. Kennedy's presidential campaign film, *The New Frontier*, as the symbolic representation of a critical convergence point of politics and entertainment in presidential campaigning during the latter half of the twentieth century. The result has been a paradigm shift." (Geraci 123) The twentieth century has thus far been the age of YouTube and Twitter, and critical evaluation of modern media is essential now more than ever.

Memento is the story of Leonard Shelby, an anterograde amnesic who has lost the ability to form new thoughts and commit explicit knowledge to memory. The film is told backwards in 5 minute segments, which are intercut with black and white segments that take place at the chronological beginning of the film, and progress forward conventionally. Leonard supposedly lost his memory when his wife was raped and murdered. Leonard is determined to seek revenge, but is forced to do so through a series of tattoos and photographs. At the *chronological* beginning of the film, he is tricked by a corrupt cop named Teddy into killing a drug dealer named Jimmy. He finds this out, and while he can still maintain awareness he makes the decision to kill Teddy. Leonard meets Natalie, Jimmy's girlfriend, who is initially furious when he walks in wearing

Jimmy's clothes, but then realizes the nature of Leonard's consciousness. When she realizes what Leonard is, she begins plotting to have him kill Teddy, and tricks him into beating up an enemy of hers, named Dodd. Leonard takes Teddy out to kill him. Teddy reveals that Leonard has killed multiple times before, and that his wife had not in fact been raped and murdered, but rather died when Leonard overdosed her with Insulin. Leonard then kills Teddy. The story of *Memento* is fairly simple, in the tradition of many Hollywood noir films, but the plot is convoluted and incredibly dense. The structure of the film is systematic and complex. The film begins with Teddy's murder, with a polaroid picture developing in reverse. The film is then cross-cut between black and white and color sequences. In the color sequences, the film is presented in 5 minute segments that run backwards chronologically. In the black and white sequences (which starts at the chronological beginning of the film), we see Leonard talking to Teddy on the phone about Sammy Jankis, a former client of the insurance company that Leonard works for. The viewer is left with two interpretations: either Teddy has lied to Leonard, or somehow Leonard has memories of his wife from after his incident.

Although Nolan's later work, especially *Inception*, is a comment on the mutable nature of interpretation, it is important to notice Nolan's insistence that there is a "Truth" to the film.

*"Nolan, for his part, won't tell. When asked about the film's outcome, he goes on about ambiguity and subjectivity, but insists he knows the movie's Truth - who's good, who's bad, who can be trusted and who can't -- and insists that close viewing will reveal all. "What you're seeing here," he says, passing his hand over his blank expression like a magician who's made a swallow appear in a top hat, "is my poker face" (Timberg)*

As would be expected, however, the film has seen equal amounts of criticism interpreting Leonard's story as true and Teddy's story as true. There is probably even more literature about how the film is a comment on the ambiguity and subjectivity of narrative. As personal interpretation, I believe Teddy's story is in fact the more accurate one. I will delve into my argument for this shortly.

The plot bears a number of similarities to Jonathan Nolan's short story *Memento Mori*. In the short, Earl has the same condition as Leonard, but he is trapped inside a mental institution. Like the film, the short cross cuts between the time during which he is inside a mental institution, and the time during which he escapes. There are a number of psychological aspects to Earl's character that are implied in Leonard's character. Both Earl and Leonard have nothing to lose. Earl's story adds new depth to the story of *Memento* and illuminates a number of interesting questions. Why isn't Leonard in an institution? He would likely have been placed there after killing his wife. Earl's escape from his mental hospital provides a plausible backstory for Leonard.

Another Hollywood puzzle film about memory appears to be the reflection of *Memento*, just as *The Thing*'s alien reflects the one in Ridley Scott's *Alien*, or *Star Wars* reflects *2001: A Space Odyssey*. *Eternal Sunshine of the Spotless Mind* bears a number of striking similarities and opposites to *Memento*. Both films are about choosing to forget the past, in doing so the characters in both films determine the future. Both films use color in order to delineate the structure of the timeline (*Memento* with the color of film, *Eternal Sunshine* with the color of Clementine's hair.) Both films present the plot in reverse order, both films subvert the genre that

they are overtly a part of (Romantic Comedy, Film Noir). Finally, and perhaps most importantly, the films use very similar narrative structures in their presentation of flashback and flashforward structure. Howard, the memory doctor, tells Jim Carrey's character, "We'll start with your most recent memories and work backwards from there, more or less. There is an emotional core to each of our memories, and when you indicate that core, it starts the degradation process." Less than a minute later, he states "We'll dispose of these **mementos** when we're done, that way you won't be confused later." (emphasis mine.)

*Eternal Sunshine* opens with a scene that actually happens towards the end of the plot: Joel Barish meeting Clementine Kruczynski. Both characters believe that it is the first time they have met, although we later find out (as do the characters), that they have a shared past that they have forgotten. In the next scene, Joel finds out that Clementine has paid a company called Lacuna Inc. to erase him from her memory. After some deliberation, he chooses to undergo the same procedure. The film then begins cross cutting between his memories of Clementine in reverse, and Mark Ruffalo's character attempting to erase said memories. Over time, it is revealed that Mary Svevo (Kirsten Dunst) had an affair with Howard Mierzwiak, and underwent the Lacuna treatment in order to forget about it. She then sends the audio tapes from every patient back to each patient, and Joel and Clementine both understand their history together.

Patient Henry Molaison, or Patient HM, was a memory patient who underwent lesions to his hippocampus and amygdala in order to treat *grand mal* seizures that he was having on an almost daily basis. Unfortunately for him, after the surgery, he no longer had the ability to form new memories. His situation has been the basis for decades of neuroscience research. He had the

ability to learn new motor skills, which is what cued scientists into the distinction between declarative and nondeclarative memories.

As a result of studying Patient HM, neuroscientists have categorized memories into a number of categories. First is *declarative memory*, which is then divided into *episodic memory* and *semantic memory*. Episodic memory is the ability to remember specific events that transpire. Examples of this include what you did on tuesday, and where you were when you found out about the Kennedy assassination. Semantic memory is the recollection of facts and knowledge. Implicit memory is more unconscious, and is divided into *Procedural Memory*, *Conditioning effects*, and *Subconscious Priming*. Procedural memory is the ability to learn habits and motor skills (which HM was able to do.) Conditioning effects involve conditioning emotional reactions to events, and subconscious priming involves managing awareness by priming words or images.

In addition to his ability to learn new motor skills, Leonard had a number of features that made his condition unique. He was able to draw a map of the home that he lived in, even though he only moved there years after his procedure. He watched tons of television. He was also able to identify John F. Kennedy, and tell that he was assassinated, though the assassination happened 10 years after his procedure.

Patient HM was able to remember that he had a bad memory, but primarily from context. John Gabrieli (John G) conjectures that because HM didn't know where he was, who he was with, or what was going on. He was intelligent, and his process of deduction clearly worked, so he constantly was guessing what it was that was going on around him, using social cues and details to work it out. Patient HM couldn't hold a job or maintain relationships, but he was generally very amicable. There are three possibilities that Gabrielli gives to account for this. The



first is that his personality was inherently like this, the second is that his amygdala (the center of the brain that processes threats) was removed, and that his placidness is a result of this, and the third is that all of his episodic memories happened a long time before.

Patient HM was given a multiple choice test where he was asked to give the definition of words that entered the lexicon after his surgery. For brain wash, he answered “the fluid that surrounds and bathes the brain”. For Software, he answered “expensive clothing made of a soft, twilled fabric”. HM thus had no understanding of computers or information technology, and clearly had no context for the words that have been given to him. He could recall numbers, as long as he could concentrate on them, but as soon as there was a distraction, he would forget them.

Another interesting aspect of Patient HM’s condition is that he could tell stories from before his surgery. John Gabrieli discusses this in a MIT lecture. He says that HM would tell a story about his Gun Collection, but that after he finished, he would sit contemplatively, and then ask “Hey, have I told you the story about my gun collection?” The thought process was still on his mind, but he had no memory of telling the researcher the story. This is paralleled in Leonard’s telling of the Sammy Jenkins story.

Patient HM was also very tranquil, amicable, and generally very willing to let researchers do whatever experiments they wanted to do. One researcher describes remarking that his case was very interesting: “he kind of colored — blushed, you know — and mumbled how he didn’t think he was that interesting, and moved away.” This is a noted contrast to both Leonard and

Sammy Jankis, both of whom seem fairly angry and aroused. Sammy Jankis flips off the researchers, and Leonard kills a bunch of people. One explanation for this is that the fictional Leonard and Sammy Jankis may have intact amygdalas. Patient HM had an incision made on his amygdala, which is the part of the brain responsible for responding to threats or outside dangers. Leonard is constantly responding to threats, and Sammy is quick to anger.

The Neuroscience presented in *Eternal Sunshine* is essentially non-existent -- the film glosses over the technical details of the process -- the closest we get is the claim "Technically, the procedure is brain damage, on par with a night of heavy drinking." In *Eternal Sunshine*, Memory loss is a procedure akin to breast enhancement or cosmetic surgery. The props used for memory erasure look suspiciously like kitchenware and hair dryers. Even though the actual science in *Eternal Sunshine* is glossed over, neuroscience is used thematically, and the procedure is plausible, even if it doesn't exist.

As presented in the film, memories are indeed made up of maps. When scientists use an fMRI to take brain imagery, images of a chair prompt neuron activation in many regions around the brain, similar to how Lacuna produces a "map of Clementine". However, the delineation is not as concrete from memory to memory as it is implied in the book. Imagining a chair may trigger the same area as imagining a couch for example, or imagining Cher. Erasing these neuron connections would likely be impossible without also eliminating dozens of other neurons unrelated to the subject of erasure.

That said, the concept is essentially possible. One of the leading theories behind memory production is that a memory is reformed every time it is accessed. If you could repeatedly block

protein synthesis prior to memory recall, you could cause a memory to become weaker and weaker until it no longer is reinforced. Studies in rats have demonstrated that if you block protein synthesis during learned behavior, for example training a rat to push a button for food, the trained behavior will actually cease. (Barondes and Cohen)

One aspect of consciousness that has developed in the last couple of decades is the metaphor of the brain's attention center as a spotlight. Eye tracking studies have demonstrated that individuals watching a film will physically look at all kinds of stimuli that they don't notice. In the famous Gorilla Experiment, subjects were asked to count the number of basketball passes between a team, while a woman in a gorilla suit walks onto the screen, pounds her chest, and walks away. When this study was repeated using eye tracking hardware, scientists found that those who saw the gorilla were actually less likely to fixate on it, while some of those who did not see the gorilla fixated on it for over a second. This implies that awareness is a separate mechanism than visual perception. As a result, attention has been called a spotlight that moves around and focuses on individual things at once. This is used as a metaphor in *Eternal Sunshine*. As Joel looks at the memorabilia he associates with Clementine and new situations arise in his memory, he runs through the bookstore being chased by a spotlight. In the film, he is literally trying to avoid his awareness. As he becomes aware of each thing he forgets them, so he must run away from the spotlight of his awareness.

*Eternal Sunshine* is now used as a go-to reference point for scientists who are interested in marketing procedures of forgetting. A treatment called Accelerated Resolution Therapy (ART) uses conditioning to treat anxiety disorders and Post-Traumatic Stress Syndrome (PTSD). One of the symptoms of a PTSD flashback is rapid eye movements and dissociative consciousness when

presented with traumatic memories. Researchers essentially wave their hand in front of a patient's face while presenting them with traumatic images. By training subjects to associate normal eye movement with their traumatic memories, researchers have been able to treat anxiety symptoms in PTSD sufferers. This procedure has shown significantly significant, if marginal amounts of success. (Kip and Elk)

Researchers have also found that by stimulating a type of Dopamine receptors called D1 receptors in the pre-limbic cortex, that they can prevent memory recall of both aversive and rewarding memories. This has significant implications for PTSD patients or other individuals who may benefit from forgetting. In a similar way to ART, sufferers could potentially block the recall of traumatic memories and begin to associate positive or normal behavior with specific memories. (Lauzon et al.) This drug could potentially be used in conjunction with a procedure such as ART to enhance positive reinforcement. Researcher Steven Laviolette is quoted in Science Daily: "In the movie, *Eternal Sunshine of a Spotless Mind*, they attempted to permanently erase memories associated with emotional experiences. The interesting thing about our findings is that we were able to prevent the spontaneous recall of these memories, but the memories were still intact. We weren't inducing any form of brain damage or actually affecting the integrity of the original memories."

For decades, Persistence of Vision has been cited by film scholars as the physical mechanism that causes us to perceive still frames as motion in films. Unfortunately, this is completely false and a myth. (Anderson and Anderson). Persistence of Vision is the concept that a passive viewer sits and has images that are projected onto their retinas. Persistence of Vision theorists claim that an afterimage is left on the retina, and it is the superimposition of the next

image that causes the illusion of motion. This mechanism has been interpreted by film scholars as a metaphor for the viewer, a passive observer. Similar to the way that the viewer is forced to reconstruct the fabula (story) of a film from the events as they are portrayed in the narrative (syuzhet), it is necessary to redefine our perception of motion and how we perceive it.

In his review of *Memento*, Roger Ebert questions how Leonard can remember the fact that he has short term memory loss, citing similar inquiries from Vasudha Ghandi and Michael Cusumano. He says

*“ Perhaps a neurologist can provide a medical answer, but I prefer to believe that Leonard, the hero of the film, has a condition similar to Tom Hanks' "brain cloud" in "Joe vs. the Volcano"--Leonard suffers from a condition brought on by a screenplay that finds it necessary, and it's unkind of us to inquire too deeply. ”*

I contend that this type of reading of *Memento*'s screenplay is a mistake, and causes us to miss crucial plot elements that are not included in the story. To respond to this reading of *Memento*, I will use both Jonathan Nolan's short story, *Memento Mori*, as well as the neuroscientific literature on Patient H.M.. First, in *Memento Mori*, almost a third of the story is devoted to Earl's situation: How he figures out that he has a condition, how he sends messages to himself in the second person, and how he relearns that his wife is dead. He tapes a picture of himself at his wife's grave stone to the door, and Nolan writes repeatedly about the different situations that comprise him looking at his picture. As previously mentioned, he has a MRI of his brain with the

words “your brain” sharpied into it. A sign above his bed says “THIS IS YOUR ROOM. THIS IS A ROOM IN A HOSPITAL. THIS IS WHERE YOU LIVE NOW.” A large portion of “Memento Mori” is devoted to describing how it is that Earl is constantly rediscovering his condition.

In a stroke of genius, Christopher Nolan bypasses all of these mechanisms that Earl uses in order to remember his wife with Leonard’s tattoo, “Remember Sammy Jankis”. Because Leonard would still have his memories about Sammy Jankis, a tattoo telling him to remember Sammy Jankis would allow him to cognize what was going on. Indeed, we see Leonard rediscovering this tattoo over and over again: He is constantly trying to rub it off, as if it was written in pen or ink.

To confirm this, recall that Patient HM has the ability to tell stories from before his incident. Leonard’s repeated question, “Have I told you about Sammy Jankis” parallels Patient HM’s “Have I told you about my gun collection?” This is actually an interesting aspect of *Memento* -- Leonard claims fairly adamantly that he doesn’t own a gun, but we see him with a handgun throughout the film. He is also depicted as having a gun when his wife is raped. This implies that he is editing his memories and perception of the past.

The main ambiguity or interpretative dichotomy is between Leonard’s story and Teddy’s story. This essay chooses the latter as a primary interpretation. Teddy doesn’t seem to have any incentive to lie to Leonard at this point: he knows that Leonard will forget what he says at any moment. So how is it possible that Leonard could have remembered his wife’s death by insulin? Once an autopsy had been performed on his wife, doctors would likely know that his wife had died of insulin overdose. At this point, Leonard would immediately become a suspect his wife’s

murder investigation. If he was institutionalized, as Earl is in *Memento Mori*, he would likely try and find ways of expediting the method of informing himself of his wife's death. He would be constantly reinforcing the association between his wife's death and the story of Sammy Jankis.

Nolan's portrayal of Leonard's memories of his wife seems to support this conclusion. When Natalie asks him about his wife, he launches into a monologue that is entirely in the second person. He never refers to himself remembering his wife, he only used the hypothetical second person, which reinforces the idea that he is resistant to revisiting memories of his wife. In addition, the sounds of the diner fade away and we begin to see images of his wife that appear to be from Leonard's perspective. While some shots could easily be a Point Of View, others, such as the one from outside the window, are clearly not POV. Leonard would never stand in his garden next to the window and peer into the kitchen to look at his wife. This lends credence to the idea that Leonard is altering his memories of his wife in some way.

Why does Leonard reject the idea of his wife taking insulin? Let us return again to our hypothetical situation in which Leonard is arrested and charged with his wife's murder. As Leonard continues to reinforce the connection in his mind between Sammy Jenkins and his trial, he would likely be attempting to record his story somehow. It is established in the film that Leonard is willing to lie to himself for pleasure, not just lie to himself, but to tattoo a lie onto himself. As he descended deeper and deeper into grief, a tattoo blaming John G for the rape and murder of his wife could begin to seem very, very attractive. The idea that Leonard can change his memories through conditioning fits with the rest of the film. That one tattoo (which appears to be handwritten) would, in this situation, be enough to convince him that his memories were false. This would explain how he has memories from the rape -- he should be unable to

remember the five minutes before his injury. It would also explain why he begins to exhibit signs of retrograde amnesia: he had started to condition memories that became stronger than his original memories.

Further evidence that Leonard is intentionally editing his memories pervades the film. According to Teddy, Leonard has edited the evidence of his wife's murder. It is possible that he is lying, but again, he has very little motivation to lie to Leonard at this point, as he thinks Leonard will immediately forget what he is told. There is an argument to be made that Teddy is trying to make sure Leonard doesn't know that he has killed Jimmy but if this is the case, why would he leave Leonard with the polaroid of Jimmy's body? It is Leonard who burns that memory, not Teddy. We witness Leonard's final edit of his past when he writes Teddy's license plate down to get it tattooed.

Both *Memento* and *Eternal Sunshine of the Spotless Mind* use amnesia as a metaphor for the cycles of history and society. We know the phrase "Those who do not learn from the past are condemned to repeat it", but these films use amnesia as a microcosm for these tendencies. In *Memento*, Leonard is unable to follow the plot of *Happy Days*. He can solve his case and do detective work, but he can't sit down and watch TV at Natalie's house. Part of Leonard's condition is that he is ultimately unaware of the passage of time: he is, in every sense of the word, living in the present. Indeed, in the exact temporal middle of the film, he burns his wife's mementos, her things that he keeps to remember her by, saying "I've probably burned truckloads of your stuff, but I can't remember to forget you." And what is primarily shown as burning? A clock, the thing that his wife used to tell the time. In *Eternal Sunshine* the metaphor is more explicit. Individuals who are uncomfortable with their past willingly pay money in order to



forget it.

Memento can also be analyzed through the lens of trauma theory. Much of trauma theory stems from cases of early childhood abuse. In cases of lacunar amnesia, where an individual had a gap in memory, this gap was only identifiable because of the existence of an outside narrative. Trauma theorists claim that trauma memory is processed and stored by a different process in the brain than ordinary narrative or episodic memory, and that there is no explanation for how traumatic memories can become narrative memories. (Thomas) However, if, as trauma theorists suggest, these memories are stored in a different part of the brain, this would lend credence to the argument that Leonard had rewired the traumatic memories of his wife's death to his memories of Sammy Jankis.

There are parallels between the concept of trauma theory and the modernist / postmodernist distrust of depictions of history. In trauma theory, the case has been made that the Holocaust must be written about and theorized "under the sign of massive trauma, meaning that these events must be confronted and analyzed in their capacity to endanger and overwhelm the composition and coherence of individual and collective identities that enter into their deadly field of force." The construction of a German national identity happened through the use of propaganda, and especially the work of Leni Riefenstahl. *Triumph of the Will* was a constructed national myth that portrayed German unity and nationalism focalised around Hitler. (Geraci, 72) This environment, the structuring of politics for political benefit, photo ops, and public relations can be traced back to this film.

The modern use of propaganda to produce a national identity can be traced back to the Kennedy administration. The Kennedy campaign effectively used self produced documentary in

order to drive voters and public opinion. Geraci argues that Kennedy incorporated elements of fascist propaganda into his campaign in order to connect with the American public. She cites White House advisor Fred Dutton's 1960 campaign papers insisting that a speech must contain a visual representation of the ideas within the speech. Rather than simply speaking in New York about intolerance, "when flying to New York for an appearance, [the president should] take along several nationally known Jews and let the picture at the airport show the group getting off with the candidate. ... All of this, of course, is part of the larger need to be tangible and understandable with the great majority of people who live their lives without much regard for word communication of abstract ideas, when in contrast is the great preoccupation of politicians. " (Geraci 73) This is a perspective of film viewership that clearly coincides with the myth of persistence of vision, that which portrays the spectator as a passive actor who is positioned to receive a film. It also qualifies Frank Herbert's description of the reviewer who doesn't like *Dune* because it made him think.

There is another type of memory called episodic memory which is the memory involved in recalling specific events and specific times. Lacunar amnesia is the loss of memory of specific events and specific times. In the context of film and television, Leonard's inability to watch an episode of TV can be construed as an inability to form episodic memories. The lacunar amnesia willingly bought by patrons of Howard's establishment is also a metaphor for audiences wilfully ignoring what is before them and behind them. Leonard's condition can also be interpreted through trauma theory as a metaphor for American attention spans post-1963. JFK was at the focal point of American national identity, as was Bobby Kennedy. This is an event in the American identity that "must be confronted and analyzed in their capacity to endanger and

overwhelm the composition and coherence of individual and collective identities that enter into their deadly field of force.”

John F. Kennedy was the first television president: He famously beat Richard Nixon in a debate among Television viewers. Jimmy hits the back left of his head when he wakes up as Leonard drags him down the stairs. Teddy's Gunshot wound is in the back left side of his head (Echoing the famous Bill Hicks bit “Back and to the Left”.) Leonard is obsessed with the angles during his wife's assault and is convinced there was a second gunman. Teddy tells him that there was no conspiracy, just some nutjob with a gun. Leonard's trauma is depicted with his wife saying “Time for my shot”. In addition, in the first time recordings of HM were made available to the general public, he had somehow committed the JFK assassination to memory, as seen in the following exchange.

Dr. MILNER: How about 1963? Someone was assassinated.

H.M.: He'd been a president.

Dr. MILNER: That's right.

H.M.: And he was assassinated.

Dr. MILNER: What was his name?

H.M.: He had been, like you said, he had been a president.

Dr. MILNER: His initials are JFK.

H.M.: Kennedy.

Dr. MILNER: That's right. What was his first name?

H.M.: John.

By a fortunate coincidence, this is also the interchange that confirms that Leonard could potentially recall the story of his wife's rape (JFK is also a John). The JFK assassination is what is called the flashbulb type of episodic memory, a "where were you when" type of memory. 9/11 also fits into this category of flashbulb memory. In addition, with an intact amygdala, Leonard would possibly be able to encode a traumatic or violent memory. Patient HM could also recognize JFK by seeing a half-dollar coin.

Incorporating the Kennedy Assassination into our neuroscience interpretation is not a suggestion that *Memento* is a film that advocates for any conspiracy, but rather that it is about how conspiracies stem from our inability to perceive traumatic events. If, as modern neuroscience suggests, we are reforming memories every time we access them, an event like the JFK assassination would be reformed so many times and so rapidly that we would lose all hope of ever accurately interpreting what truly happened.

If we interpret *Memento* as a metaphor for our inability to process traumatic events, then *Eternal Sunshine of the Spotless Mind* is a film about the lengths to which we will go in order to avoid processing those events. Most of Charlie Kaufman's work is about Transcendence in one way or another. In *Being John Malkovich*, a fat man wants to feel skinny for just a moment wants to be John Malkovich. In *Adaptation*, Meryl Streep escapes from her life using a fictional drug. In *Eternal Sunshine*, Lacuna Inc's clients attempt to fix their emotional woes by creating gaps in their lives. In one case, an old lady carries all her paraphernalia that reminds her of her pet dog, so that she can forget he ever existed. There is a message in the film that this kind of forgetting is futile. Joel and Clementine both find each other even after losing their memory, and Howard and Mary also reunite for a brief moment before Howard's wife finds them both.

Joel's memories are presented as books in *Eternal Sunshine*: They are the stories of his life. This is a theme in both films: people's pasts are the stories that they tell themselves and others. This augments and develops the theme of transcendence and cycles. History is made up of the words 'his' and 'story'. Those who do not construct a story out of the past are doomed to repeat it. In a similar fashion, without the stories of his past, Leonard is driven to murder again and again, and can't remember his victory. Without the story of their break-up, Joel and Clementine reunite and start the same process over again. The only thing that breaks Mary and Howard's cycle is the fact that his wife knows what he did and isn't ready to forgive him again. Without the bookshelves of memory, without the stories that make up the past, these personalities are ready, even eager to do the same things all over again.

Eric Saunter discusses the concept of narrating traumatic events, and how those who wish to do so run the risk of undertaking "narrative fetishism. Hayden White discusses this: "The threat posed by the representation of such events as the Holocaust, the Nazi Final Solution, or the assassination of a charismatic leader such as Kennedy or Martin Luther King or Ghandi, or by an event such as the destruction of the Challenger, which had been symbolically orchestrated to represent the aspirations of a whole community, is nothing other than the threat of turning these events into the subject-matter of a narrative." White suggests that modernist approaches to storytelling can "provide the possibility of de-fetishizing both events and the fantasy accounts of them with deny the threat they pose, in the very process of pretending to represent them realistically.

*Eternal Sunshine of the Spotless* mind offers us a moral conundrum. If we have the ability

to forget things, does that mean that we should? Christopher Grau contemplates this question by framing the film as what he calls a “reverse-experience machine.” He compares the procedure depicted in a film to the brain-in-a-jar conundrum presented by the Wachowski’s film *The Matrix*. Rather than questioning whether it is right to live in the Matrix, and experience things that are not real and do not exist, *Eternal Sunshine* offers us the opportunity to not experience things that are real and do exist.

This moral conundrum applies to the application of real life forgetting techniques to our PTSD sufferers. Are we truly treating a disease, or are we simply treating the symptoms of a larger, more systemic flaw in our society? Perhaps PTSD is a natural reaction that the human brain has to participation in a militant society. If we commit murder, or if we see our squad mates shot by an RPG, is it right to forget those things? Do we have a moral responsibility to incorporate these things into our life? *Eternal Sunshine* presents this philosophical question to us: if we have no qualms about forgetting vaporous ‘experiences’, or even traumatic memories, do we have qualms about forgetting close, personal relationships? Grau suggests that there are two types of harm, and that both types should be incorporated into a lexicon of harm: there are harms that wound our psyche, and there are harms that deprive our psyche of experience.

Grau compares memory erasure to the concept of prisoner rehabilitation, arguing that you can never brainwash someone into being a good person, you can merely brainwash them into being a machine. *Eternal Sunshine*’s conundrum is more subtle however, and touches on the nature of self: If someone removes a part of their psyche consciously and willingly, is that part of consciousness still a part of their psyche? Gondry’s film appears to argue this point: even though all of the participants in the Lacuna Inc. procedure willingly undergo the treatment, all of them

eventually choose to access their past again, and all of them attempt to recapture that aspect of themselves.

Under examination, too, is the concept of whether or not this procedure is a victimless crime. Clementine's choice to undergo the procedure quickly drives Joel to undergo the same procedure (Howard the Doctor subtly encourages this, in order to avoid legal consequences of allowing Joel to find out about the procedure.) This too, is an analogue for traumatic memories. The cartoon/documentary *Waltz With Bashir* tells the story of an Israeli filmmaker who cannot remember what he did in the war with Lebanon. It features fractured narrative, and ambiguous depictions of events, but in doing so the film effectively communicates the modernist understanding for the impossibility of narrativizing certain events. He interviews his old squad mates, and asks them to share what they know. At one point, a psychologist tells the filmmaker that he is conflating his memories of the war with his memories of the holocaust. The film serves as an effective model for a modernist approach to documentary. Rather than construct a narrative, it effectively portrays many different, sometimes conflicting, always incoherent narratives. It rejects any kind of metanarrative and uses dream logic to instead explore psychoanalytic states. In doing so it carefully illustrates the dangers of mishandling traumatic memories. The main character concludes that he rejected his memories because his father was a holocaust survivor, and he thus felt as culpable as those who actually took place in the Sabra and Shatila massacre. Does our failure to narrativise historical events implicate us in events in the future?

Towards the end of his life, Salvador Dali fell under financial hard times. Yet he continued throwing lavish parties at the finest establishments. He invited all his friends, and

when the bill came, he pull out his checkbook and write a check. Then, he would turn the check over, and draw a tiny picture on it. He would then sign it, Salvador Dali. His checks were never cashed. Although his paranoid-critical perspective approach to art and consciousness serves as the archetype for the modernist approach to narrative theory, film criticism, and space-time, it does not produce sustainable and democratic economic principles.



Anderson, Joseph and Barbara. "The Myth of Persistence of Vision." *Journal of Film and Video*. 45.1

(1993): 3-12. Web. 12 Dec. 2012.

<[http://web.archive.org/web/20080526105906/http://www.uca.edu/org/ccsmi/ccsmi/classicwork/Myth Revisited.htm](http://web.archive.org/web/20080526105906/http://www.uca.edu/org/ccsmi/ccsmi/classicwork/Myth%20Revisited.htm)>.

Barondes, Samuel, and Harry Cohen. "Comparative effects of cycloheximide and puromycin on cerebral protein synthesis and consolidation of memory in mice." *Brain Research*. 4.1 (1967): 44-51. Web. 12 Dec. 2012.

Bragues, George. "Memory and Morals in Memento: Hume at the Movies. ." *Film-Philosophy*. 12.2 (2008): 62-82. Print.

Campora, Matthew. "Art cinema and New Hollywood: multiform narrative and sonic metalepsis in *Eternal Sunshine of the Spotless Mind*." *New Review of Film and Television Studies*. 7.2 (2009): 191-131. Web. 12 Dec. 2012.

Carey, Benedict. "H. M., an Unforgettable Amnesiac, Dies at 82." *The New York Times*. N.p., 04 2008. Web. 12 Dec 2012.  
<[http://www.nytimes.com/2008/12/05/us/05hm.html?pagewanted=1&\\_r=0](http://www.nytimes.com/2008/12/05/us/05hm.html?pagewanted=1&_r=0)>.

Cordaiy, Hunter. "Mistaken Identity: Memento." *Screen Education*. 50 (2008): 111-116. Web. 12 Dec. 2012.

Dali, Salvador, and Robert Descharnes. *Oui: The Paranoid Critical Revolution*. 1998. Boston: Exact Change, 1998. 93-114. Print.

Ebert, Roger. "Memento." *RogerEbert.com*. Chicago Sun-Times, 13 2001. Web. 12 Dec 2012.  
<<http://rogerebert.suntimes.com/apps/pbcs.dll/article?AID=/20010413/REVIEWS/104130303/1023>>.

Edwards, Kim. "White Spaces and Blank Pages: *Eternal Sunshine of the Spotless Mind*." *Screen Education*. 2008: 119-124. Print.

- Friedlander, Saul. *Probing the Limits of Representation: Nazism and the "Final Solution"*. Cambridge, London: Harvard University Press, 1992. Print.
- Freud, Sigmund. *Beyond the Pleasure Principle*. Bantam Books, 1959. Print.
- Geraci, Melissa Wye. *John F. Kennedy and the Artful Collaboration of Film and Politics*. Lewiston, New York: Edwin Mellen Press, Ltd, 2003. Print.
- Grau, Christopher. "Eternal Sunshine of the Spotless Mind and the Morality of Memory." *Journal of Aesthetics and Art Criticism*. 64.1 (2006): 119-133. Web. 12 Dec. 2012.
- Herbert, Frank. *Eye*. I Books , 2001. Print.
- Jackson, Tony. "'Graphism" and Story-time in "Memento." *Mosaic: A Journal for the Interdisciplinary Study of Literature*'. 40.3 (2007): 51-66. Web. 12 Dec. 2012.
- Kip, Kevin, Carrie Elk, et al. "Brief Treatment of Symptoms of Post-Traumatic Stress Disorder by Use of Accelerated Resolution Therapy." *Behavioral Sciences*. 2. (2012): 114-134. Web. 12 Dec. 2012.
- Lauzon, Nicole, Melanie Bechard, Tasha Ahmad, and Steven Laviolette. "Supra-normal stimulation of dopamine D1 receptors in the prelimbic cortex blocks behavioral expression of both aversive and rewarding memories through a cyclic-AMP-dependent signaling pathway." *Neuropharmacology*. 67. (2013): 104-114. Web. 12 Dec. 2012.
- Lubin, David. *Shooting Kennedy: JFK and the Culture of Images*. Berkley and Los Angeles, California: University of California Press, 2003. Print.
- Newhouse, Brian. "H.M.'s Brain and the History of Memory." *NPR*. National Public Radio, 02 2007. Web. 12 Dec 2012.  
<<http://www.npr.org/templates/story/story.php?storyId=7584970>>.
- Nolan, Jonathan. *Memento Mori*.  
<[http://www.impulsenine.com/homepage/pages/shortstories/memento\\_mori.htm](http://www.impulsenine.com/homepage/pages/shortstories/memento_mori.htm)>.
- Renner, Karen. "Repeat Viewings Revisited: Emotions, Memory, and Memento.." *Film*

- Studies*. 8.0 (2006): 106-115. Web. 12 Dec. 2012.
- Salcman, Michael. "The Persistence of Memory (1931) by Salvador Dali (1904-1989)." *World Neurosurgery*. 76.5 (2011): 364-367. Print.
- Schaffhausen, Joanna. "The Day His World Stood Still." *Brain Connection*. N.p.. Web. 12 Dec 2012. <<http://brainconnection.positscience.com/topics/?main=fa/hm-memory>>.
- Simmons, Gary. "Memory and Reality in *Eternal Sunshine of the Spotless Mind*." *Screen Education*. 55 113-118. Print.
- Sobchak, Vivian. *the persistence of history: cinema, television, and the modern event*. New York and London: Routledge, 1996. 17-38;39-54;55-68;113-126. Print.  
<<White, Hayden *the modernist event*; Staiger, Janet *cinematic shots: the narration of violence*; Nichols, Bill *historical consciousness and the viewer 'who killed vincent chin'*; Burgoyne, Robert *modernism and the narrative of nation in 'jfk'*>>
- Smith, David. "Eternal Sunshine of the Spotless Mind and the Question of Transcendence." *Journal of Religion and Film*. 9.1 (2005): n. page. Web. 12 Dec. 2012. <<http://www.unomaha.edu/jrf/Vol9No1/SmithSunshine.htm>>.
- Thomas, Peter. "Victimage and violence: Memento and trauma theory.." *Screen*. 44.2 (2003): 200-2007. Print.
- Timberg, Scott. "Indie Angst." *New Times*. 25 2002: 13-18. Print.
- Tseng, Chiaoi, and John Bateman. "Multimodal narrative construction in Christopher Nolan." *Visual Communication*. 11.1 (2012): n. page. Web.
- University of Western Ontario. "Research identifies a way to block memories associated with PTSD or drug addiction." *ScienceDaily*, 5 Dec. 2012. Web. 12 Dec. 2012.
- Vernallis, Carol. "Music video, songs, sound: experience, technique and emotion in *Eternal Sunshine of the Spotless Mind*." *Screen*. 49.3 (2008): 277-297. Web. 12 Dec. 2012.
- Williams, Christopher. "Factualizing the Tattoo: Actualizing Personal History Through

Memory in Christopher Nolan's Memento.." *Post Script*. 23.1 (2003): 27-36. Web. 12 Dec. 2012.