

**Threads of memory: Memory as storytelling and narratives in
selected cinematography and art**

by

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DECLARATION

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I declare that the above dissertation is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

A handwritten signature in black ink, appearing to read 'Kruger', is positioned above a solid horizontal line.

Signature

January 2025

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“The pure present is an ungraspable advance of the past devouring the future.
In truth, all sensation is already memory.” - Henri Bergson, *Matter and Memory*



Figure 1. Lizl Kruger, Still from *Threads of memory* (2024) Macro videography. Approximately 5 x 5 x 5 cm specimen of fabric. Light through threads.

WEBSITE AND CATALOGUE LINK

<https://www.lizlkruger.com/>

ABSTRACT

This study investigated the interwoven relationship between memory and narratives, specifically focusing on the processes involved in the consolidation, storage and retrieval of episodic memories. This research also interrogated the reconstruction process of memories using a combination of accurate information and information from the individual's knowledge base (or even fabricated information). Furthermore, this study explored closely related topics that include the nature of narratives and literature that addresses memory through storytelling and narratives. And finally, it discussed storytelling and narratives, through the lens of visual media, focusing on film and art objects.

The principal questions addressed in this research were: How are the gaps in memory reconstruction filled in? What influences the information used? How is this applied to narrative construction? Succeeding questions address the visual devices and strategies used in selected cinematography and artworks that portray or address memory, and how fictional narratives relate to autobiographical narratives.

This qualitative study followed a practice-led methodology. The theoretical framework and relevant themes of the study were informed by a literature review. This is accompanied by a creative body of work consisting of stop frame animation, videography, photography and a catalogue curated to form a cohesive online exhibition. The reciprocity between the theoretical and the practical elements of this study emphasised the thread of memory through life. Conclusions were drawn through the literary analysis and the comparison between selected theorists and artworks, using the theoretical framework and literature review.

Key words/Concepts: Memory, Neuroplasticity, Distributed Cognition, Narratives, Recollection, Reconstruction, Storytelling, Visual Media.

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CHAPTER ONE: INTRODUCTION

1.1 Background

Expanding on the existing body of work produced in 2020, for a bachelor's degree, this research investigates the interwoven relationship between memory and narratives. Both memory and narratives are deeply embedded in human nature as the human brain is capable of recalling past experiences and imagining the future. The narration of memories takes place across generations. Whether shared in personal and familial contexts or expanded to a collective and societal scale, these memories shape both individual and societal identities.

The neurological memory system involves a variety of processes and different parts of the brain may be engaged when a single memory is consolidated, stored and retrieved. These biological processes raise questions regarding the reliability of recalled information. Theorists, such as Oliver Sacks, Martin Conway, Paul John Eakin and Christopher Hoerl, examine memory accuracy from diverse perspectives, focusing on the storage, retrieval, and reconstruction of memories. In this study, I explored these memory theories and closely related concepts, analysing how storytelling in selected cinematography and other visual art forms engages with themes of memory and narrative.

Memory and narratives exhibit a similar pliability in their construction and reconstruction, creating spaces for the integration of information from ideological and personal perspectives, retained in personal and collective knowledge bases. The practical component explores this pliable nature of memory and narratives and roams the abstracted narratives of memory woven from threads of factual and fictional elements.

Recalling an episodic visual memory is similar to watching a scene from a film as it is reconstructed and reanimated to recreate a past experience. This visual reconstructive capability of the brain aligns with the creation of film and animation, where the construction, production and reproduction of narratives parallels the reconstruction of human memory. Film and animation thus offer an ideal medium to explore this topic,

both in analysing cinematic works and art, and in the practical component of this study.

1.2 Rationale

The function of memory in the brain remains a mystery. This research was conducted around the theory that memory consists of partially accurate recollections of actual events that allow the individual to include or replace information in their knowledge base. These inaccuracies in recalled memory can range from minor details, such as a colour variation, to major discrepancies, for instance, an entirely fictional memory of an event that did not take place, or perhaps remembering an event differently to the actual event. This is unintentional because we believe that our memories are a true account of events. This is referred to as a “confabulation” which is remembering false information as the truth.

1.3 Statement of the research problem

The aim of this research was to explore the complex nature of memory in order to investigate visual methods and strategies deployed in film, video and animation media in relation to memory. Thus, memory and its aspects were explored through the lens of visual narratives. Memory is inherently woven into our existence, and this study focusses on proving this statement, reflecting the complex role memory plays in our existence and identity both personally and collectively.

Most memories are inaccurate to some extent. Reconstructions of memories are built from partial fragments of accurate memory, while the gaps are filled using information from our knowledge base. The choice of information is influenced by factors that include emotions, ideologies and imagination. This research specifically focused on episodic memories and the effect these have on the autobiographical, factual and fictional narratives created from them.

1.4 Research Questions

The research questions were:

- What information is used to reconstruct the gaps in memory and how does this information influence narrative construction?
- In what ways do art, film, animation and other cultural text represent and engage with the theme of memory?
- What visual devices and strategies are used in art, animations, and films to portray or address memory?
- How does storytelling of fictional narratives relate to storytelling of biographical narratives?

1.5 Project overview

This project comprises two interrelated components: a theoretical research component, presented in this dissertation, and a practical component, realised as an online exhibition of video and photographic works accompanied by a catalogue. The theoretical research offered invaluable insights into existing studies and theories on memory and narratives, which have significantly informed the practical outcomes of this body of work.

Additionally, the exploration and analysis of cinematography and art objects has provided further understanding of how memory-related themes are integrated into the creative practices of others.

1.6 Literature review outline

The literature review focused on memory and its mechanisms, an overview of the current research on memory and narratives, and their reciprocal nature. This included: an overview of current research on memory; theories regarding the consolidation, recollection and reconstruction of memory; the architecture of the brain and regions that play a role in memory processing, neuroplasticity, perceptions of time, collective memory and distributed cognition; and memory in matter. The literature review also explored narrative theory such as the nature of narratives and the interconnectivity between memory and narrative.

The literature review focused on addressing memory through storytelling and included

sources such as *Memory and Narrative – the Weave of Life Writing* by James Olney, *Memory and Narrative in Social Theory* by Myrian Santos and *From Episodic Memory to Narrative in a Cognitive Architecture* by Tory Anderson. Other authors included Jonathan Gotschall, Paul John Eakin and the early theories and insights of Marcell Proust and the scientific perspective theories of neurologists, such as Oliver Sacks, and neuroscientist Rebecca Schwarzlose. Also, the literature review explored: psychologists such as Endel Tulving, Martin A Conway, and Edward Casey on episodic memory, autobiographical memory and narrative; and, for the philosophical perspective, theories of philosophers Christopher Hoerl and Henri Bergson and parapsychology researcher Rupert Sheldrake.

1.7 Artistic Influences

The research for artistic influences focused on two components, firstly, the exploration and analysis of cinematography focussing on themes of memory loss, memory erasure and memory recovery and, secondly, the exploration of art objects incorporating the theme of memory in their works, through personal, collective and distributed memory and the concept of fading and erasure of memory. The selected films and artworks were then divided into subthemes of memory and placed into the most appropriate categories. This provided some insight into the various ways that the theme of memory can be incorporated into narratives and artmaking.

1.8 Chapter Overview

Chapter One: Introduction introduces the topic and presents the problem statement and aims of the research. Chapter Two: Literature Review and Methodology focuses on the literature pertaining to the research, approached from three angles: 1) research on memory from a scientific point of view; 2) research on memory portrayal in literature and cultural texts (such as films and animations); and 3) research on literature addressing visual and narrative mechanisms, devices, strategies, and tools used in cultural texts. This chapter also addresses the methodology applied in this research. Chapter Three: The Case studies focuses on an analysis of the chosen films and selected artworks conducted through the lens of literature review done in Chapter Two. Chapter Four: Practical

component is devoted to an in-depth discussion of my reflections on the practical component in relation to the research done in Chapters Two and Three. Chapter Five: Conclusion presents conclusions in relation to the problem statement and aims of the research and addresses reflections of each chapter.

1.9 Methodological approach to language editing

ChatGPT, a large language model developed by OpenAI, was strategically used to review specific sections of the manuscript for grammar, syntax, and clarity. I employed this tool solely to assist in refining language usage and enhancing readability, without contributing to the production of content or ideas. All final content decisions remained the responsibility of the author. Additionally, to ensure language accuracy, a human editor (independent of the author) was engaged to review the entire dissertation.

1.10 Ethical Clearance

This project received ethical clearance on the [29 August 2022].

CHAPTER TWO: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Theoretical Framework

While conducting the literature review, I realised that the subject of the memory function in the brain and its relationship with narrative could be studied from three different theoretical perspectives: scientific, psychological, and philosophical. I therefore included all three of these perspectives in my study and wove them together in the literature review to serve as a map for analysing the case studies in Chapter Three as well as a guide for the practical component.

While exploring the theories and findings from neurological studies, the **scientific perspective** focused on brain processes involved in memory and imagination. This included establishing the influence of the hippocampus and its connective regions on episodic and long-term memory, and the architectural proximity in the brain of different perceptual regions. New studies on neuroplasticity were also considered. The **psychological perspective** explored studies that deal with the influence of the human psyche in memory and narrative, the influence of emotional elements on memory, confabulations and narratives, and theories regarding narratives. The **philosophical perspective** explored theories of time and perceptions, the relationship between memory, identity and individuality, as well as the notions of collective memory, distributed cognition and memory in matter.

2.2 Literature Review

Greek mythology suggests that Mnemosyne, the Greek goddess of memory and “the mother of all muses” (Dudai & Carruthers 2005:567), held all memories because she was “... omniscient ... she knows all that has been, all that is, all that will be” (Eliade 1963:333). This mythology placed memory as something outside of the human body that was revealed to a human being only by the goddess of memory, and, when “the poet is possessed by the muses, he draws directly from Mnemosyne’s store of knowledge ...”

(Eliade 1963:333).¹ Indian mythology suggests that memory “is no longer the primordial past, but a series of former personal lives of which a knowledge is important” (Eliade 1963:334). Shamans claim that they too remember their former lives (Eliade 1963:334).



Figure 2. Michel Chretienat, *Photograph of Mnemosyne* (2010), Statue in Compiègne castle gardens (France).

Suggestions that the past is a dimension of the beyond, and forms part of death and passing on, are also part of ancient beliefs regarding memory, as, according to Eliade (1963:333), “[t]he dead are those who have lost their memories”. Ancient writings also commonly refer to death as a form of sleep, and sleep, in turn, as a form of death.² Comparing sleeping to forgetting is also common throughout mythologies on the topic of memory and forgetting. The Christian perspective suggests that “waking implies anamnesis, recognition of the soul’s true identity, that is recognition of its celestial origin” (Eliade 1963:339), suggesting that waking up or being awake is the opposite of forgetting.

¹ “The past thus revealed is much more than the antecedent of the present; it is its source” (Eliade 1963:333).

² “Forgetting is equivalent, on the one hand, to sleep and, on the other hand, to the loss of self, that is, to disorientation, blindness (having the eyes blindfolded)” (Eliade 1963:331).

The instruction given by a messenger of God to Adam is to “slumber not nor sleep and forget not that which thy Lord hath charged thee” (Eliade 1963:339) implying that sleeping will lead to forgetting.

Modern technologies enhance the accuracy of studying brain activity and “new techniques in brain imaging of people while they perform learning and memory tasks have provided an explosion of knowledge about the basic mechanisms of memory” (Robertson 2002:31). This brain imaging indicates that memory activates regions of the brain suggesting that they function as part of the brain, potentially influenced by chemical processes from different regions in the brain, for example, the hippocampus and the amygdala. The accuracy of memory depends on the processes involved in consolidating and recalling a single memory.

2.2.1 Overview of current research on memory

This section investigates the research available in the field of memory studies from early mythologies to recent scientific and scholarly studies. Studies that emerged at the end of the 20th Century provided new ways for scholars to understand the memory system and how it functions as a tool for remembering the past. Information on the functioning of memory, its accuracy and purpose, include personal memories, the history of memories and how identity is influenced by personal and collective memories.

2.2.1.1 Memory consolidation

Short term memory lasts for about 20 to 30 seconds after which the brain determines either to discard or store the information in the form of long-term memory. Long term memory is subdivided into implicit memory and explicit memory. Implicit memory is commonly referred to as the “unconscious” memory as no conscious recall is necessary for the retrieval of this information; it is consolidated as procedural memory and is mainly an automatic system that helps humans to function and retain skills.

Conscious memory refers to “explicit” memory, which consists of semantic memory that accumulates in one’s general knowledge base, and “episodic” memory which refers to life

episodes experienced. Episodic memory, after being effectively consolidated into long term memory, forms autobiographical memories and directly influences the identity and individuality of a person.

“Episodic memory is widely studied in neuroscience, psychology and maybe less so in philosophy. It is a critical part of the human mind and has frequently been claimed to be a cornerstone of personal identity” (Cheng & Werning 2016:1346).

The deterioration of episodic memories associated with illnesses, such as Alzheimer’s and amnesia, along with various other memory problems also directly influences the evanescing of personal identity. In addition, traumatic events are remembered more vividly than regular daily occurrences as “[e]motions are essential to the creation of a memory because they organise it, establishing its relative importance in a sequence of events ...” (Olney 1998:373). The Amygdala plays a vital role in our emotionally charged memories,³

... for new episodic memories would be less likely to be stored during low arousal when little may be happening in the environment, but would be stored strongly when significant and therefore arousing environmental events are occurring (Treves & Rolls 1994:377).

This statement supports the consolidation of memory that involves emotional arousal. Furthermore, Fowler, Sullivan and Ekstrand (1973:302) suggest that sleep has a great influence on memory consolidation as “REM sleep is responsible for or facilitates emotional memory consolidation”. This means that the quality of sleep could influence the quality of memory consolidation.

2.2.1.2 Memory recollection

The recollection of memory depends on the type of memory that is being recalled. Procedural memory rarely requires deliberate recall whereas episodic memory is mostly recalled deliberately. The extent to which a memory is consolidated is influenced by the amount of information that is available for recall but questions regarding accuracy are raised when investigating the recollection of memory. Boyd (2009) believes that semantic

³ Emotion plays a role in the consolidation of memory as “the amygdala plays a vital role in the emotionally charged memories that wield such a potent influence in our mental lives” (Olney 1998:373). This could refer to traumatic episodes but also could refer to memories that have happier emotions attached to them.

memory is stored in patterns to retrieve and use in similar situations, but that episodic memory is stored partially and according to importance because “we retain episodic memory partly so that we can re-evaluate past incidents if we encounter new information that challenges our evaluations and perhaps revise our understanding of this part of the past” (Boyd 2009:154). This suggests a pliability of memory that allows us to alter our memories as new information and new experiences become part of our knowledge base, similar to the writing, editing and re-writing of a novel.⁴

Research by Giroux, Boyd, Connolly and Bernstein (2018:150) suggest that at least some part of recalled episodic memory is not necessarily reliable because, “when individuals attempt to recall certain events, the newly reconstructed memory reflects what they believe they experienced”. Though the reconstruction of memory is pliable, it is not suggested that an intentional lie is being created, but rather that the individual truly believes the reconstructed memory is accurate.⁵ This refers to the concept of confabulations, meaning the construction of false or partially false memories that one believes is a true and accurate memory of an actual event.

The effects of sensory inputs on the consolidation and recollection of memories should also be considered. Bernstein and Loftus (2009:371) state that, through using a variety of testing methods in cognitive neuroscience, “sensory activity is greater for true memories than it is for false memories” suggesting that sensory attachment might assist in the distinction between true and false information in the recall of memory. However, there is still no procedure that can determine the accuracy of a memory.⁶ Thus, I conclude that most memories could be considered to be inaccurate to some degree,⁷ either in the

⁴ “Frederic Bartlett first showed in 1932 that our memories are not eidetically exact but partially reconstructed, reshaped by the mind at every stage: in initial perception, in encoding, during storage, and in retrieval. We remember only selectively according to what we attend to and its recency, salience, and emotional impact” (Boyd 2009:153)

⁵ Research on psychological perspectives by Bernstein and Lotus supports this statement “Other people lie without knowing that they are lying. In other words, they think they are telling the truth but they are reporting something that is false – a false belief or a false memory” (Bernstein & Loftus 2009:371).

⁶ “... to our knowledge, nobody had developed a neurophysiological procedure that can be used to predict whether a single memory is true or false” (Bernstein & Loftus 2009:371).

⁷ Considering the influence of our own ideologies and beliefs in the reconstruction of memories: “In

smallest detail or in believing that you have experienced something that, in fact, you have never experienced at all. There is also partial information that is accurately recalled, but a process of reconstruction combines this information with other information to form our current experienced memory.

2.2.1.3 Memory reconstruction

Memory reconstruction is the process of filling in the gaps of partially recalled accurate information. It is the fabrication of information to complete an incomplete narrative. This process could be considered as an “unintentional” fabrication suggesting that the recaller believes that all the information in this memory is accurate. Thus, the person is not lying, they are simply producing confabulations.⁸

Several factors influence the source and nature of the information used to reconstruct memory. Perceptions, the passing of time and personal ideologies could all have an influence on the information used for the reconstruction process.

“Narrative memories are linked to a hierarchy of goals within the self-memory system” (Beike, Lampinen & Behrend 2004:129). This statement supports the argument that our life stories and identities influence each other and are “fashioned” to support our goals that are influenced by cultural factors and personal beliefs.⁹ Because “our current needs, wishes, aspirations, and intents often control what is reported to others about our experiences” (Beike et al 2004:45), we tend to construct information to fit in with our

essence all memory is false to some degree. Memory is inherently a reconstructive process, whereby we piece together the past to form a coherent narrative that becomes our autobiography. In the process of reconstructing the past we colour and shape our life’s experiences based on what we know about the world. Our job as memory researchers and human beings is to determine the portion that reflects inference and bias. This is no simple feat but one worthy of our continued investigation” (Bernstein & Loftus 2009:373).

⁸ “... Confabulations ... termed *honest lies* by Moscovitch (1995)” (Conway & Loveday 2015:579).

⁹ “Narrative memories are linked to a hierarchy of goals within the self-memory system. This hierarchy of goals is in part determined by developmental and cultural factors related to the formation of a narrative identity that continues to evolve over the life span of the individual. We propose that self-defining memories are those memories that have the most relevance to the life story of identity fashioned by the individual” (Beike et al 2004:129).

ideologies, hopes and dreams. These stories then become part of us and we become part of our life narratives.¹⁰ Considering that we construct these stories from information that supports our self-concept and relates not only to reliable information but also to constructed information, we can conclude that “memories never fully correspond to our experience, only parts of it, although they may be coherent with the self” (Conway & Loveday 2015:578). We subconsciously choose not to remember certain things that do not support our self-concept “... or memories themselves may be altered, misremembered, or inhibited in order to preserve the self from change” (Conway 2001:1376). This could be viewed as a protective mechanism in the brain to support the self-preservation of idealised identity and inherently help us to become who we aim to become or believe we should be.

The hippocampus plays an essential part in the processes concerning episodic memory because “[a] striking feature of the memory problems that follow hippocampal damage is an inability to remember recent events” (Bird & Burgess 2008:183). The hippocampus plays a strong role in the imagination,¹¹ as Bird and Burgess (2008:187) assert that

“... a recent review of the imaging literature that the brain regions that are involved in memory tasks that involve rich mental imagery (such as episode recall and route planning/wayfinding), including the hippocampus, were the same as those involved in imagination”.

This would suggest that the hippocampus is not only involved in the process of episodic memory but also contributes largely to the imaginative process of narrative creation. Therefore, it could also be linked to the reconstruction process of memories, either the completely factual recalling of accurate information or in the creation of confabulations.

¹⁰ “A coherent autobiography, a chronicle of self, links your past your present and perhaps your future. Morals, behaviour and beliefs exist between the lines. We are the tales we tell” (Montague 2018:25).

¹¹ “... recent neuroimaging studies have found few differences between remembering, imagining the future, and what is sometimes termed ‘the default network’, all of which appear to share the same extensive distribution of interlocking neural networks” (Conway & Loveday 2015:574).

2.2.1.4 Perceptual regions of the brain, the role of the hippocampus and regions related to memory

The study of the human brain is one of the most challenging as well as fascinating studies that still remains unexplored in spite of the various theories that exist about it. Many theories about the function of specific brain regions exist but “by the 20th century, a consensus emerged that at least basic sensory and motor functions reside in specialised brain regions” (Kanwisher 2010:11163).¹² However, Kanwisher also states that “no complex cognitive process is accomplished in a single brain area, and arguments for the specificity of these regions by no means imply that other brain regions play no role.” (Kanwisher 2010:11165). This statement suggests different brain regions may be involved in more than one function and may work as an interconnective system rather than a having a separate system for each function. Rebecca Schwarzlose (2021) describes these interconnected brain regions as “brain maps” that work together to combine information from outside inputs of the sensory system to create functional information our brains can then use to process the world around us. Therefore, “brain maps serve as the loom upon which you weave the threads of perception, attention, imagination and dreams” (Schwarzlose 2021:6) that make up our memories.

The hippocampus plays an important role in the function of memory but exactly how and to what extent the hippocampus is involved in the formation and consolidation of episodic memory is still unknown even though it has “an important role in the consolidation of long-term memories stored in the cerebral neocortex” (Treves & Rolls 1994:374). Treves and Rolls (1994:382) add that “the hippocampus is an intermediate buffer store, into which information is stored in real time as events happen in the world” and are rapidly stored in the form of “snapshots”. There is also a capacity limit to the amount of memories that the hippocampus is able to store and that this could be influenced by the rate that new episodic memories are created, and that, at some point,

¹² “... evidence is now strong that each of at least three cortical regions in humans are selectively (perhaps even exclusively) engaged in specific cognitive functions: the FFA (Fusiform face area) in representing the appearance of faces, the PPA (Parahippocampal place area) in representing the appearance of places, and the EBA (Extrastriate body area) in representing the appearance of bodies ... simply imagining the face (with eyes closed) selectively activates FFA and imagining a place activates PPA” (Kanwisher 2010:11165). This shows that the imagination has a capacity as strong as the brain has.

overwriting of older memories will start to take place due to the capacity limit (Treves & Rolls 1994:388).

The hippocampus receives inputs from various areas in the neocortex, providing it with multimodal information from different and partially interconnected sensory pathways.¹³

The hippocampus then connects this information into a whole, “to link information originating from different brain regions in a single auto association matrix ... [that] is a key feature of hippocampal architecture”. Inputs from various parts of the brain are sent to the hippocampus for further processing that

... come from the inferior temporal visual cortex ... from the parietal cortex, from the superior temporal auditory cortex, and from the prefrontal cortex. In this anatomical sense, the hippocampus ... provides a single net in which information from these different cortical areas could be combined to form a *snapshot*, that is, an episodic memory (Treves & Rolls 1994:377).

These snapshots of memory, woven together, form the narratives of our lives and the autobiographical stories that make us who we are.

Damage to brain regions leads to different types of brain impairments suggesting that the storage and formation of memory is influenced and dependant on a larger part of the brain, and distributed among different brain regions:

“There is a large clinical literature, mainly on case studies of impairments of autobiographical memory, demonstrating that this type of remembering can be disrupted by impairments to many different brain regions including networks in frontal, temporal and occipital lobes as well to midbrain structures in hippocampus, amygdala, fornix, and thalamus” (Conway 2001:1379).

Memory loss can also occur due to dementia causing illnesses, like vascular dementia, mixed dementia, Lewy body dementia, frontotemporal dementia, focal dementia, or subcortical dementia (for instance, Parkinson’s disease dementia) with “Alzheimer’s disease” as “a specific disease entity” that is also “the commonest cause of dementia”

¹³ “The hippocampus receives, via the adjacent para-hippocampal gyrus and entorhinal cortex, inputs from virtually all associated areas in the neocortex, including those in the parietal, temporal and frontal lobes ... Therefore, the hippocampus has available highly elaborated multimodal information that has already been processed extensively, along different and partially interconnected, sensory pathways” (Treves & Rolls 1994:375). “Additional input from the amygdala and, via a separate pathway, from the cholinergic and other regulatory systems. An extensively divergent system of output projections enables the hippocampus to feed back into most of the areas from which it receives inputs” (Treves & Rolls 1994:375).

(Burns & Iliffe 2009:405). Secondary causes of dementia from intracranial lesions are also possible. “Of all chronic diseases, dementia is one of the most important contributors to dependence and disability” (Robinson, Tang & Taylor 2015:1).

In his book, *The man who mistook his wife for a hat* (1985), Oliver Sacks discusses various case studies about memory impairments due to injuries to certain brain regions as well as illnesses causing dementia symptoms. These tales of people, who lost some part of themselves due to memory loss, give us insight into how certain parts of the brain and identity are affected by memory loss. Discussing a significant case of sizeable memory loss, Sacks explains, “Such patients, fossilized in the past, can only be at home, oriented, in the past. Time, for them, has come to a stop” (Sacks 1985). Due to the loss of progression and the damage sustained, this particular patient has no way of consolidating new memories and lives now only in the past. But there are also stories where improvements were seen due to medication alterations, therapies and more. This suggests that the brain has the capacity for regeneration. This phenomenon is called neuroplasticity.

2.2.1.5 Neuroplasticity and memory replacement

According to Cassilhas, Tufik and De Mello (2016:976), in the past, “the scientific community believed that the mammalian central nervous system (CNS) became structurally stable soon after birth” and that brain functions did not change throughout life. Neuroplasticity is therefore a relatively new field that explores the plasticity capabilities of the brain in the form of memory construction and replacement. “Neuronal plasticity allows the central nervous system to learn new skills, to consolidate and retrieve memories, to reorganise neuronal networks in response to environmental stimuli and to recover after lesions” (Cassilhas et al 2016:976). Thus, the memory of the human brain allows the reconstruction of partially retrieved memories and opens up the possibility of confabulations, narrative creation and various other functions.

The section on memory consolidation (see 2.2.1.1), shows that emotionally charged memories have a higher probability of being consolidated into long term memory because

emotional or sensory triggers may more easily elicit vivid memories of traumatic events or even induce flashbacks ... [and that] stress can lead to different changes in brain plasticity in different regions. Evidence exists that stress-induced atrophy is reversible in the hippocampus and the medial prefrontal cortex, once stress has ceased. However, amygdala hypertrophy appears less readily reversible (Kolassa & Elbert 2007:323).

This is valuable information for the treatment of traumatic stress related disorders such as post-traumatic stress disorder and various other chronic stress disorders that ultimately lead to the atrophy of certain brain regions that include the hippocampus and amygdala.

2.2.1.6 Time and perceptions and collective memory

Diana Kwon's (2017) review of Dean Buonomano's book *"Your brain is a time machine"* states:

Timekeeping is built into our neural circuits, controlling everything from synaptic plasticity to circadian rhythms. Although we cannot physically travel to the past or future, to some extent our brain already does. We can learn, plan, build, prepare and even prevent disaster thanks to our ability to recall previous events and envision what could be (Kwon 2017:71).

Our traditional perception of time, according to Olney (1998:3), is that there is a "... past, present, and future. Though one might perhaps say there are three times – A present of things past, a present of things present and a present of things future" (Olney 1998:3). This suggests an alternative perception that all time exists only in the present, or that time does not exist at all, and that we re-live our past in the present moment through the reconstruction of a stored memory, and that the idea of our future is pulled into the present by simply imagining it. Thus, time exists only through our capacity to remember the past and dream of the future. This implies that the past is never really lost, it forms part of us, and is always with us, even though it might not be entirely factual. And, although we cannot accurately predict the future, it is always part of us because of our dreams and ambitions. We leave threads of ourselves in the past and keep threads of the past with us, which we use to weave together our imagined futures. In "Memory and narrative in social theory", Santos (2001:1) adds that "the simultaneity of the diachronic and synchronic dimensions of time becomes possible only when past and present are not

thought of as two separate entities, as is common practice in social theory”.

We think that the idea of collective memory refers to an event that a group of people remembers collectively, for example, the attack on the twin towers in New York. But collective memory encompasses more than just this one idea of a memory that can be recalled by multiple individuals. It also refers to the concept of a social and cultural collective memory¹⁴ that shapes and forms a collective identity as “the concept of collective memory, constitutes the field of oral history” (Assman & Czaplicka 1995:126). In other words, it refers to history that forms a cultural identity, that “becomes visible to itself and to others” (Assman & Czaplicka 1995:133). In addition, Assman and Czaplicka (1995:130) believe that “... no memory can preserve the past. What remains is only that ‘which society in each era can reconstruct within its contemporary frame of reference’.” This means that society constructs and reconstructs its own heritage consistently from its new frame of reference and, although some cultural ideas may appear to be permanent, there is a continuous flux, due to new information being interwoven into historical knowledge.

Collective memory, according to Olick (1999:336),

... has been used to refer to aggregated individual recollections, to official commemorations, to collective presentations and to disembodied constitutive features of shared identities; it is said to be located in dreamy reminiscence, personal identities, oral histories, tradition, myth, style, language, art, pop culture and the built world.

Olick (1999) show us that collective memory is a part of society and it has formed our cultural and individual identities. It is all around us embedded in our art, culture, traditions and our narratives, the stories that flow through generations and the stories that are yet to be created.

¹⁴ “Autobiographical memory is memory of those events that we ourselves experienced (though those experiences are shaped by group memberships), while historical memory is memory that reaches us through historical records. History is a remembered past to which we no longer have an ‘organic’ relation – the past is no longer an important part of our lives – while collective memory is the active past that forms our identities” (Olick 1999:335).

2.2.1.7 Distributed cognition and memory

Edwin Hutchins, a cognitive anthropologist, developed the theory of distributed cognition in the 1990s. This theory argues that cognition in individual brains is distributed among sociocultural systems, including cultural systems, external objects and teams of people. “Rather than seeing our cognitive system as instantiated only in the brain, we should see it as spread out across embodied brains and information- structures in the environment” (Heersmink 2017:3136). Memory, as a function of the brain, is then a distributed network of information stored in the environment and people around us.¹⁵ Transactive memory is an integral part of a social memory system as it depends on an interactive communicative system of information and thus memory sharing.¹⁶ Where two or more individuals share a specific memory, they can reminisce about the experience as each one contributes information from a different perspective. Memory can also be stored in the environment, artifacts, objects, personal items, places, clothing, and other elements or items. that can trigger a memory recollection.

2.2.1.8 Memory in matter

The previous sections discuss memory as a function of the brain. In contrast, this section explores the concept of memory in matter. Rupert Sheldrake, a parapsychology researcher, proposed the theory of morphic resonance, which suggests that memory may not be stored inside the brain but rather accessed by the brain through a process that could be described as a kind of telepathy, allowing organisms to tap into a collective memory shared by their species.¹⁷ Sheldrake’s theory is grounded in the absence of

¹⁵ “Memory systems, in particular are typically instantiated in distributed networks, as the environment affords easy and often reliable storage of information” (Heersmink 2017:3136).

¹⁶ “During transactive encoding, group members discuss incoming information and negotiate who has to store the information and in which form. During transactive retrieval, group members have to determine where the information is stored, which can involve the integration of information stored in different brains” (Heersmink 2017:3137).

¹⁷ “The hypothesis of formative causation provides a radical reinterpretation of the nature of memory. It proposes that memory is inherent in all organisms in two related ways. First, all organisms inherit a collective memory of their species by morphic resonance from previous organisms. Second, individual organisms are subject to morphic resonance from themselves in the past, and this self-resonance provides the basis for their own individual memories and habits” (Sheldrake 2011:162).

evidence supporting the storage of memory traces within the brain.

Memory is conventionally believed to be explicable in terms of physico-chemical modifications of the nervous system, the 'traces' of past experiences. Attempts to locate such traces within the brain and to analyse them have so far been unsuccessful; but from the point of view of the mechanistic theory, memory must depend on material traces of some kind (Sheldrake 2011:163).

This theory introduces the possibility that memory may exist outside of the brain and could extend to matter.

Philosopher, Henri Bergson's theories on memory further support this idea, proposing that memory is not stored in the brain but is instead a visual output created by the brain's analytical processing capabilities, activated by various external inputs.

"Memory is not in the brain but rather in time, but time is not a thing, it is duration, hence nothing can be in anything. Hence his argument, curious at first, that when there takes place a lesion to the brain it is not that memories are lost, simply that they can no longer be actualised and translated into movement or action in time" (Ansell-Pearson 2010:64).

The theory of memory in matter closely relates to distributed cognition, positioning memory as a broader phenomenon that extends beyond humans and other organisms, existing outside of the brain, and accessed through its analytical capabilities. While these theories of Sheldrake and Bergson diverge from mainstream scientific perspectives on memory, their ideas of memory being distributed in matter and accessible collectively hold potential relevance for this study. This is particularly significant in relation to the memory of fabric and cloth, specifically clothing, which was a central focus of the practical component of this body of work.

2.2.2 Narrative theory

This section focuses on the nature of narratives, storytelling through visual media, literature addressing memory through storytelling, and the relationship and interconnectivity between narratives and memory. Human beings are genetically wired for storytelling. Our whole lives are represented in a story format, stored in the form of memories that we write and rewrite to incorporate new meanings and our ever-updated knowledge base. This pliability in our own stories allows for truth and fiction to be

combined to suit our current identity. We weave, untwine and reweave our stories until we are satisfied. We curate our identities and deliberately omit information that could be damaging to our image, our idealised self. We construct and reconstruct ourselves to become who we think we ought to be. “Scientists have discovered that the memories we use to form our own life stories are boldly fictionalized” (Gottschall 2012), suggesting that we shape and build our identities on fictions we perceive as truth.

2.2.2.1 Nature of narratives

The creation and narration of stories is a compelling human activity and exists in various shapes and forms. This is evident in historic narrative material. Oral histories, myths and traditions are passed from one generation to the next, and this act of narration transcends otherwise inhibiting boundaries such as age, gender, nationality and culture. But how, and from what information are narratives created? Do fictional narratives contain some facts, and factual narratives some fiction? What is the influence of our autobiographical memories on the narratives created by us? And what is the ultimate function of narratives, are they merely for entertainment or is there another function that could be explored?

Jonathan Gottschall (2012), in “The storytelling animal”, suggests that humans tell stories for different reasons: to become more attractive and attract a mate by showing intellectual capabilities; as a form of cognitive play; as a low-cost source of information and vicarious experience; or a form of social glue that brings people together around common values. Gottschall and Sloan Wilson (2005:187) argue that

... the function of storytelling could be to prepare other human beings for similar real-life situations and encourage the creation of an adaptive skill that could prove invaluable to someone when facing a dangerous or challenging situation that they have never faced before. Learning adaptive behaviour from listening to stories ... [implies] that fictional experiences function as a ‘motivational guidance system’.

This could help individuals adapt to situations faster which could be valuable in various circumstances. In a book by Gottschall and Sloan Wilson (2005), “*The literary animal*”, the evolution of storytelling is described as being either an adaptive function evolved to aid human survival, or as a by-product with unintended consequences “that evolved to

perform other functions” (Gottschall & Sloan Wilson 2005:178). Whether stories were intentionally created for an adaptive function or if the adaptive function is coincidentally formed as a by-product of storytelling, stories do provide a form of intellectual preparation for certain real-life situations. Narrating lived memories of unusual situations and combining them with fictional elements creates a map that an inexperienced person could use to navigate life experiences.

Another theory suggests that the function of some narratives is to implement strategic ideologically-centred stories that could be used to manipulate and deceive an individual, a cultural group or a society.¹⁸ This form of narrative creation could be used by individuals as well as governing bodies or religious leaders to shape society according to their goals and ideologies. These manipulative narratives are then incorporated into societies’ collective memory and could influence an entire society’s identity. Another theory is that forming a collective memory for society through narrative creation means that

... humans must find a means by which to maintain their nature consistently through generations. ... the solution: a cultural memory, a collective concept for all knowledge that directs behaviour and experience in the interactive framework of a society and one that obtains through generations in repeated societal practice and initiation (Assman & Czaplicka 1995:126).

Collective memory therefore forms the basis of information for a cultural group of people or a larger society¹⁹ and could be viewed as the narratives of a society that influence the traditions and beliefs, and ultimately the collective identity of that society. Creating narratives in various forms can be seen as the perfect catalyst to ensure the survival of societies’ collective memories that help to preserve their cultural and social systems.

What a theorist tells us is that narrative is a powerful aid to ‘meaning making’; that by ‘emplotment’ it can produce the significance of ‘configuration’ out of the insignificance of ‘succession’; that it is an indispensable component in the essential

¹⁸ “... Machiavellian intelligence – that is the ability and inclination to deceive our fellows when it serves our fitness interests – points to a more sinister benefit of information sharing: narrative may be developed strategically to influence the opinions, beliefs, and behaviour of the audience in ways that serve the storyteller’s ends” (Anderson 2015:2).

¹⁹ “The employment of ‘collective memory’ can be justified only on a metaphorical level – and this is how historians of old have always employed it – as a general code name for something that is supposedly behind myths, traditions, customs, cults, all of which represent the ‘spirit’, the ‘psyche’ of a society, a tribe, a nation” (Gedi, Berliner & Fischer 1996:35).

human 'effort after meaning'; that it renders what we have experienced 'followable' and thus understandable; that it is 'capable of forming meaningful sequences and ordered connections' that in turn will do no less than redeem our sad and wasted lives (Olney 1998:294).

Narrative gives shape to our existence and experiences, it assists in deriving meaning from seemingly unmeaningful events, it assists in forming our cultural and societal identities through collective memory, it offers a medium for entertainment and it even prepares us to handle certain real-life situations that could ultimately ensure our survival.

2.2.2.2 The interconnectivity of narratives and memory

Neurologist Antonio Damasio "makes the case for the emergence of self in the narrative matrix of consciousness; for him narrative is biological before it is linguistic and literary" (Eakin 2020:1). This indicates that all narrative is formed from the self, even historical narrative needs an author or authors to capture the details of the narrative, and all authors are biological in nature, and influenced by their own identity and memories. The research for this study indicates that the pliability of memory provides both the author of a literary piece and the storyteller of a performance piece with the opportunity to use these memories, combining them with fictional and factual information to create relatable narratives and ultimately forming narratives that could fulfil all of the functions mentioned above. Even if an accurate account of events is being recorded within a narrative, there is always an element of personal identity and memory that influences the way that the stories are portrayed.

One of the forms of narrative that contains the most elements of the self is the autobiographical narrative, which "is not merely something we read in a book; rather, as a discourse of identity, delivered bit by bit in the stories we tell about ourselves day in and day out, autobiography structures our living" (Eakin 2020:3). Christopher Hoerl (2007:1) refers to Tulving's claim of the particular form of memory unique to humans which is the ability to "travel back to the past in one's own mind". If we consider this statement, similar to Dean Buonomano's comparison to the brain as a time travel machine (Kwon 2017:71), Tulving (in Hoerl 2007) suggests that humans travel back in their own minds and view the past somewhat like a movie. In view of the pliable nature

of memory, this “movie” of our past experiences could be altered and eventually become a reconstructed narrative that we then narrate as our autobiographical story.²⁰ The book, *“Memory and narrative - the weave of life writing”* (1998) by James Olney, deals with the evolution of autobiographical narrative writing through the span of centuries. It explores the reciprocal relationship between memory and narrative. The past influences the future through narratives; we write, talk and visually represent parts of the past in our narratives. There could thus be no storytelling without memory.

2.3 Conclusion

Descriptions in early mythologies placed memory as a function outside the body that is accessed from an outside source and that memory is the accumulation of past lives remembered. Modern scientific, psychological and philosophical studies consider processes, including consolidation, recollection and reconstruction, that place memory inside the body as a function of the brain, utilising an interwoven system of neural networks and synapses. Alternative theories propose that memory exists externally from the brain and is distributed into matter, placing memory outside of the brain, suggesting that it is accessed by different species in their collective capacity. While animals mostly use their memory system for survival, the storytelling human uses memory in the construction and reconstruction of our identities to write and rewrite our life stories. It is then used to form our collective memory as a society and our perceptions of time and space.

The concept of time keeping can be intrinsically linked to our ability to retain and analyse memory. Our brain, with its capacity for memory, functions as a personal time machine, enabling us to recall the past and imagine the future. Storytelling, a fundamental aspect of human nature, is made possible by this capacity for memory retention. Through narrative creation, we reconstruct memories and shape autobiographical stories,

²⁰ From episodic memory to narrative in cognitive architecture, Anderson (2015) assert that “[t]his paper regards episodic memory as fundamental to narrative intelligence and considers the gap between simple episodic memory representations and narrative structures and proposes an approach to generating basic narratives from episodic sequences”.

preserving and re-interpreting our life experiences over and over throughout our lives.

CHAPTER THREE: METHODOLOGY AND CASE STUDIES

3.1 Research design

Engaging with this project on memory and art, I followed a practice-led methodology and strived to have a consistent engagement with the reciprocal nature of my theoretical research and art practice.

I conducted my approach to the literature review through the three perspectives outlined in the theoretical framework: the scientific, psychological and philosophical. These perspectives form the content of the literature review. The theorists discussed were carefully selected to align with the scope of this study. Given the extensive range of available theorists and studies, certain figures and perspectives were intentionally omitted to maintain a clear and focused direction. Including additional foundational theories would have significantly broadened the study's scope beyond its intended limits. My research includes examples that offer valuable insights into memory from an artistic point of view as well as an analysis of the artistic methods employed by the selected cinematographers and artists. Examining artworks and films as cultural objects, which specifically engage with aspects of memory, is done through the lens of the literature review and is the key step in my methodology. The discussion and analysis of these selected cultural objects unveil strategies relating to memory and how they have been deployed by the artists and cinematographers. The perspectives on memory explored in Chapter Two underpin these analyses; this methodology extends to my artmaking component where I engage with memory using the three perspectives mentioned in Chapter Two.

3.2 Case studies: Storytelling through visual media and story lines in cinematography dealing with themes of memory

In this section, I focus on the examination and interpretation of visual strategies employed in the selected cinematography to highlight the theme of memory in these films. Furthermore, I discuss how the theme of memory is addressed through the three different perspectives outlined in the methodology.

My aim for this section is to analyse selected works regarding their portrayal of memory in narratives and consider their scientific correlations and insights. This analysis, apart from highlighting the relationship between scientific research on memory and the ways memory is addressed in film, will establish links between narratives and memory as per Antonio Damasio's concept of memory playing out "a movie-in-the-brain" (Eakin 2004:126). Marcel Proust (1871–1922), a French novelist considered to be one of the most influential authors of the 20th Century, proved that, through the exploration of the self, artists have insights into memory without necessarily studying neuroscience. Johan Lehrer (2008:76) states that Proust: "... intuited some of modern neuroscience's most basic tenets".¹

Because there is a variety of films and other cultural works that incorporate the theme of memory, I have organised my selected films into four categories: first, themes related to anterograde amnesia, a rare form of memory loss where new memories can't be formed, but past memories remain accessible, which address memory loss resulting from brain damage; second, themes of memory eradication and replacement, which explore the intentional erasure of memory; third, themes concerning cognitive progressive impairments, such as Alzheimer's disease and dementia; and fourth, themes that examine the reliving of the past and the value of memory through the collective or individual recovery of memories.

3.2.1 Themes on the predicament of anterograde amnesia due to brain damage

Peter Segal's film, *50 First Dates* (2004), is a story about Lucy (Drew Barrymore), a young woman who on a daily basis relives the day before her brain injury not being aware of time passing and not being able to form new memories from the day of her horrific accident. This film is shown through the eyes of the protagonist, Henry (Adam Sandler), who has a romantic interest in Lucy and who, together with the audience, is unaware of

¹ Another insight from Proust is that our memory is fallible and full of errors, and that we bend the facts to suit our stories as "our intelligence reworks the experience" (Lehrer 2008:81). Constantly pliable and ever evolving reconsolidated with new information, Proust had early insights into the modern studies of neuroplasticity.

Lucy's peculiar memory problems. These problems are gradually revealed in the first part of the film and Henry and the viewers are made aware of a relatively rare medical condition concerning the inability to create new memories. In this film, the concept of memory is approached from a scientific perspective as Lucy grapples with memory loss resulting from the brain damage, she sustained in a car accident one year before the events of which the film focuses on. Lucy's physician, Dr Joseph Keats (Dan Aykroyd), serves as the medical director of the Callahan Institute Brain Injury Clinic. Dr Keats identifies her temporal lobe damage as a condition known as Goldfield Syndrome, which is entirely fictional and presumably created to support the film's narrative. From a scientific perspective, the most closely related medical condition is anterograde amnesia, a condition that impairs the formation and retention of new memories, in contrast to retrograde amnesia, a condition that primarily affects the recall of past memories, or "memories that occurred prior to the onset of memory problems" (Kritchevsky, Zouounis & Squire 1997:1751) that is more commonly portrayed in film narratives, either as the main theme or to create tension for a certain segment of the film.

Lucy's doctor also mentions scar tissue on her temporal lobe, impairing her ability to convert short term memory into long term memory while she sleeps. As stated in the literature review, sleep does have a function in the consolidation of memories, however sleeping cannot cause a person to wake up with no recollection of the previous day's events. This idea more closely correlates with early mythologies that suggest that sleeping is a form of forgetting (see section 2.2.1).

The narrative explores Lucy's loss of identity as her father Marlin (Blake Clark) and brother Doug (Sean Astin) alongside a close-knit community work tirelessly to recreate the same day for her to provide a simulation of normalcy, and to spare her the shock of learning about her condition daily. Their entire lives seem to revolve around maintaining the fabricated version of sameness for her. From piles of newspapers with the same date, to Marlin washing her pink shirt and white pants that she wears every day for the first part of the movie, these visual cues emphasise that Lucy is held captive by time, with no hope to move forward with her life.

Henry spends the first part of the film devising ways for Lucy to fall in love with him each day, in an attempt to cope with her memory loss. Eventually, he plays a significant role in her regaining some sense of control over her life. He creates a video for Lucy, which serves as a form of storing her memories. Through this video aid, she is able to start making new memories. As she begins to regain autonomy, she keeps her own journal that marks a pivotal moment in claiming back control over her life and her identity. This shift symbolises the transition from relying on others' perspectives concerning her memories, to her documenting her experiences from her own viewpoint. This use of external devices to serve as a storage system for memory outside of the brain is an example of distributed cognition. At this point in the film, she starts wearing different clothing, visually signifying regaining control over her life leading to her freedom from being trapped in time.



Figure 3.1. Stills from *50 First Dates* (2004). Lucy starts participating in the recording of video of her life, later it is revealed that she has also started keeping a diary that acts as a coping system in dealing with her condition, her diary consists of writing, photos and drawings.

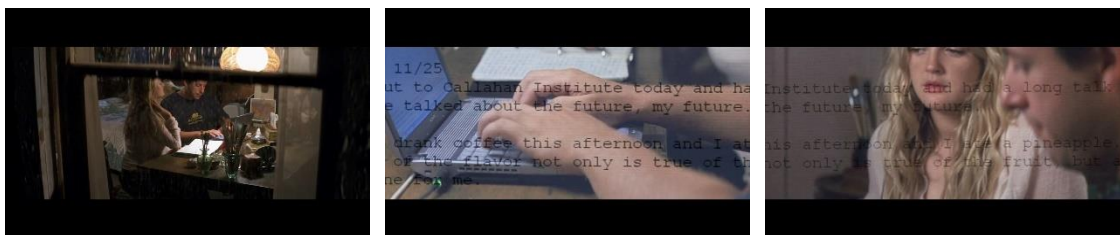


Figure 3.2. Stills from *50 First Dates* (2004). Henry helps Lucy type over the parts of her journal that does not include any traces of him, this is visually a painful experience for both of them, as the words gets typed the new system of memory storage, is visually emphasised.

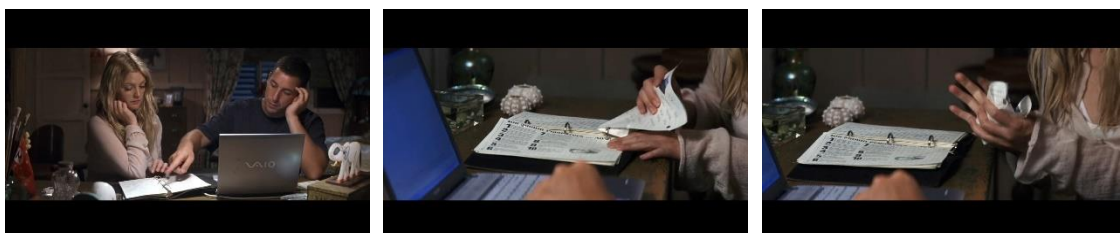


Figure 3.3. Stills from *50 First Dates* (2004). Lucy tearing out and disposing of memories that connect with Henry.

In an attempt to free Henry and her family from the burden of caring for her, Lucy decides to break up with him and move to the Callahan Institute. But, before leaving, she erases all traces of Henry from her journal, believing that this act will completely erase him from her memory. This leaves Henry processing the loss of the relationship and their memories together on his own. Near the end of the film, a series of events lead to Henry visiting Lucy at the institute on a quest to find out whether she remembers him. Even though she claims not to know him, she leads him to her studio that is full of paintings and drawings of his face. She confesses to dreaming about him every night, suggesting that traces of her memory of Henry are present in her brain. The film concludes with Henry and Lucy as a married couple and Lucy watching the tape recording created by Henry each morning to help her to continue living her life.

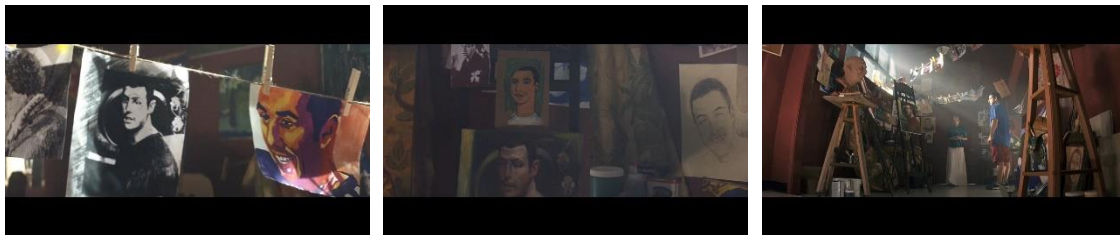


Figure 3.4. Stills from *50 First Dates* (2004). Lucy shows Henry her studio that is filled with drawings and paintings of him, and she claims that he is in her dreams every night.



Figure 3.5. Stills from *50 First Dates* (2004). The first frame shows Lucy watching the video Henry made for the first time, The second two slides show Lucy watching the film at the end of the movie but now it includes their wedding video, and the progress of her life thus far.

Although several aspects are fictionalised in the narrative while being presented as scientific, this film presents a blend of a scientific and psychological perspectives. Despite its comical tone, the film highlights the tragic situation and the impact of Lucy's inability to form new memories on her capacity to build a future. There is an emphasis on the important role the function of memory plays in shaping personal identity and enabling a

person to move forward with their life, while also highlighting the effect of memory impairments on family and friends.

Although much of the scientific information presented as facts in the film is, to a large extent, fictionalised, the medical condition created for Lucy may not be entirely implausible. The brain and the mechanisms of memory remain a mystery, and brain damage can result in a wide range of debatable symptoms. Therefore, it is difficult to conclusively dismiss the possibility of a condition like the one Lucy experiences in the film. Through her art, Lucy expresses her dreams, creating a tenuous thread connected to her fragmented memory of Henry. This suggests a connection between artistic and cultural expression and the brain's capacity to recover or regenerate certain functions. Supporting this suggestion, Carol Levine makes the following observation in her review of *"The man who mistook his wife for a hat"* by Oliver Sacks:

Through his funny-sad narratives Sacks explores the loss of self [that] such patients experience and their efforts to accommodate the deficit (or excess or transformation of neurological activity), the regeneration of the mind and body, and the transformative power of art, comedy, religion and music (Levine 1986:42).

Memento (2001) directed by Christopher Nolan, follows the narrative of a young man, Leonard (Guy Pearce), who is determined to solve the murder of his wife, and is driven to seek revenge against her killer. However, he faces a significant challenge – after suffering brain damage in the same attack that killed his wife, he is incapable of retaining new memories as he has lost the ability to consolidate them. He refers to his memory impairment as his "condition". As a coping strategy, Leonard has developed a system of distributed cognition. Using visual cues to manage his condition, he relies on his ability to analyse these accurately to function in society and ultimately achieve his goal of revenge. However, unlike *50 first dates*, where memory loss occurs on a daily cycle, Leonard's memory loss occurs more rapidly. Whilst the exact duration it takes is unclear, it appears to be only a couple of minutes. The time he is able to hold onto a memory also seems to be influenced by the level of stress and concentration he experiences. Despite his debilitating condition, he is not portrayed as a victim, instead Leonard's memory condition in the film is actually presented "... as a skill, as a unique way of dealing with information" (Hesselberth & Schuster 2008:102).

Using his self-made system of distributed cognition, Leonard is able to compensate for his memory loss, using Polaroid images, written notes, and tattoos on his body. These tattoos are done in reverse so that he is able to read them in a mirror. Throughout the film, he repeatedly rediscovers these visual cues, because he has no memory of these. Re-reading notes, examining photos, and discovering the tattoos, he is constantly re-analysing these cues to try and make sense of the time that has passed since he has lost his capacity to consolidate memory.



Figure 3.6. Stills from *Memento* (2001). Leonard's memory storage system, notes, polaroid photos, and tattoos, he is visually surprised every time he sees the tattoos as he has no memory of getting them.

The film's non-linear timeline, filled with repetitive moments and brief scenes, allows the viewer to experience some of the disorientation and confusion that Leonard must feel. As the reverse chronological narrative unfolds, it becomes clear that Leonard's system might not be as reliable as he believes and that it can be susceptible to manipulation, leaving him vulnerable to be used as a killing machine by those who are familiar with his condition and his coping system. For instance, Natalie (Carrie-Anne Moss) exploits his inability to find a pen to write down a critical note, in order to convince him to execute her own agenda. When the truth is finally revealed to Leonard by police officer Teddy (real name John Edward Gammell, portrayed by Joe Pantoliano), Leonard makes a conscious decision to disregard this information and fabricate new evidence that will lead him to believe that Teddy is his wife's murderer. Leonard's sense of his own identity is brought into question when, after killing one of the "murderers", Leonard dresses in the victim's clothes, which can be interpreted as a symbolic act of shedding his old identity and adopting a new one, either as the man who avenged his wife, or perhaps as a new person who is completing his goal. In either case, he struggles to hold on to a sense of self which may be a result of his condition and underlines the idea of a loss of identity

through a loss of memory.

3.2.2 Themes of specific and focused memory eradication and replacement

Eternal Sunshine of the Spotless mind (2004), directed by Michel Gondry, follows the story of Joel (Jim Carrey), who has recently separated from his girlfriend Clementine (Kate Winslet). He discovers that she has undergone a procedure to erase him from her memory, and he decides to do the same, after discovering the clinic she used that offers a newly developed procedure capable of erasing specific people or animals entirely from a person's memory. The audience is taken on a journey through Joel's memories he shared with Clementine, as he undergoes the procedure to erase them. Gradually he starts to regret his decision to erase her and, in an attempt to preserve his memories of her, Joel tries to hide her within his earlier memories that did not originally include her to prevent her from being completely erased.

This film takes a comical approach to the issue of erasing painful memories. Dr Howard Mierzwaik (Tom Wilkinson), who works at the Lacuna clinic, where the memory erasing procedure is performed, instructs Joel to gather all items linked to Clementine that will be used to create a map of their memories in his brain. This map will guide the procedure erasing her from his memory while he sleeps. When Joel expresses his concern about the possibility of brain damage, Dr Mierzwaik reassures him that the point is actually to cause brain damage as erasing someone from the brain is made possible by causing brain damage. The procedure is set to take place in Joel's bedroom, with the emphasis on him lying on his bed, sedated and helpless in his sleepwear, while wearing the brain machine, and with technician, Stan Fink (Mark Ruffalo), positioned nearby guiding the procedure on his computer.

During the procedure, the audience is taken on a journey of revisiting Joel's memories of Clementine in a reversed chronological timeline, moving backward from the present to the beginning of their relationship. Guided by the map created earlier in the film, Clementine is erased from each memory, one by one. Experiencing severe emotional pain as a result of the procedure, Joel starts to regret his decision. He tries to hide her in

memories that are less likely to be found that include childhood memories. Despite his efforts, she is ultimately erased from his memory. However, the two meet again, now as strangers but with a lingering familiarity. They are drawn to each other and start a new relationship but this ultimately fails when the truth about why they ended the first relationship is revealed.



Figure 3.7. Stills from *Eternal Sunshine of the Spotless Mind* (2004). Joel is sitting in the waiting room with his trash bags filled with the mementos he has of Clementine; Joel with a brain machine mapping his memories of her; an image of the brain with the memories of Clementine mapped out in colour.

The film explores ideas relating to neuroplasticity, though the concept of erasing selected memories through a machine is entirely fictional and arguably philosophical. Even with its fictional nature, the idea of erasing specific memories, as presented in the film, could be highly appealing, as everyone has memories, painful or traumatic, that we might prefer to forget. Although this procedure might be misused as a coping mechanism to avoid confronting painful memories, it will also bypass the emotional healing process, and the possible lessons that could be learned from facing and processing these memories.

Ariana Grande's Music video, *We can't be friends (wait for your love)* (2024)² closely mirrors the narrative of *Eternal sunshine of the spotless mind*. In the music video, the main character, Peaches, portrayed by Grande, embarks on a similar journey. Arriving at a clinic with a box of items, presumably the remnants of the relationship she is trying to erase, Peaches is seated in a chair with a device attached to her brain, while each item in the box of mementos is used to locate and erase a corresponding memory, closely resembling the map of memories created from objects in *Eternal sunshine of the spotless*

² Ariana Grande music video: *We can't be friends (wait for your love)* (2024): <https://youtu.be/KNtJGQkC-WI>

mind. As the audience follows the journey of these memories in Peaches' brain, they vanish, are violently torn away, or are replaced by another fabricated version of the memory, illustrating the idea of neuroplasticity and the pliability and malleability of memory, and our recollections thereof.



Figure 3.8. Stills from *We can't be friends (wait for your love)* (2024). Peaches sitting in a waiting room with a box of mementos of the person she wants to forget; in a chair with a small brain device mapping her brain; her brain map with the memory being deleted highlighted.

3.2.3 Themes dealing with narratives on Alzheimer's and Dementia

The film *The Father* (2020), directed by Florian Zeller, portrays the life of Anthony (Anthony Hopkins) as he grapples with the symptoms of severe dementia. The narrative unfolds as a complex, maze-like journey from Anthony's perspective, while the audience is immersed in his growing confusion. As the narrative progresses and he encounters various "strangers", visually emphasised by the supporting actors changing faces throughout the film, Anthony frequently mistakes his nurse for his daughter and his doctor for her husband. Through his struggles to recognise them, the film mirrors the disorienting effects of his condition and then reveals that they are his family and caregivers. The audience shares in Anthony's confusion and the emotional turmoil he experiences as he gradually loses his autonomy.

The psychological impact and emotional turmoil experienced by both the person with dementia and their family are central themes in the film. As Anthony loses his sense of self, the film accentuates the crucial role that memory plays in preserving one's identity. As Anthony tries to make sense of who is around him, he ultimately arrives at a more profound question: "What about me? Who exactly am I?" Placing the emphasis on how the loss of memory is intertwined with the loss of identity, as the inability to recall and piece together one's past threatens the core understanding of self. "Memory is

inherently a reconstructive process, whereby we piece together the past to form a coherent narrative that becomes our autobiography” (Bernstein & Loftus 2009:373). We spend our whole lives weaving together our identity, from our lived experiences that form our memories but, with the loss of those memories, our identity starts to unravel.



Figure 3.9. Stills from *The Father* (2020). As Anthony brings up the question, what about me? who exactly am I? His nurse tries to calm him and comfort him, as the camera slowly pans around them.

Still Alice (2014), directed by Richard Glatzer and Wash Westmorland, is a film adaptation of the novel written by neuroscientist Lisa Genova (Davis 2014:543). The narrative centres on Dr Alice Howland (Julianne Moore), a linguistics professor who is diagnosed with early onset familial Alzheimer’s disease at the age of 50 years. It follows her journey as she struggles to accept the inevitable, while also dealing with the burden of how this illness will affect her family. Because the disease is hereditary, she also has to deal with her children undergoing testing for the same disease. While the characters are fictional, the narrative leans towards a scientific perspective, “describing the experience of dementia from the perspective of the victim” (Davis 2014:543). This story of the deterioration of a brilliant mind follows Alice as she is “... mastering the art of losing” (Haskell 2015:62) through the gradual loss of her memories and, consequently, her identity. As a coping strategy to deal with her deteriorating cognitive function, Alice starts using her phone to store notes and reminders. This externalises her memories and is an example of using distributed cognition as a tool to keep memory outside of the brain and helps her to have some sense of control over her life and her identity.



Figure 3.10. Stills from *Still Alice* (2014). Alice looks desperately in the mirror, as she is feeling the effects of the Alzheimer's, she spreads toothpaste on her hand and then erases her face in the mirror. Metaphorically representing her loss of self.

Alice and her family experience a range of emotions; each member of the family sharing in a different facet of the Alice's distributed cognitive memory, as they hold on to their unique shared memories with her. While Alice strives to live in the moment, while remaining connected to who she once was, her identity slowly fades with the progression of the disease. "She does not want to leave life too early, but she also doesn't want to sink into total dementia" (Davis 2014:543). To prevent this, she formulates a plan for suicide, recording a video to act as a replacement for memory, once again placing the function of memory outside of herself. The video provides instructions for her to follow when the disease has advanced to the point where she can no longer take care of herself.

The devastating impact of the disease becomes clear when Alice watches the video. She forgets the instructions as soon as she reaches her bedroom, forcing her to go back and replay the video multiple times. Eventually, she carries the laptop with her as she searches for the bottle of pills and finds them. However, just as she is about to take the pills, another distraction causes her to spill the pills all over the bathroom floor. The reflection in the bathroom mirror amplifies her confusion, as she is unable to make sense of what she is doing there, leaving her disorientated. This mirror, though it reflects her face, no longer reflects the person she used to be. This recalls Proust's exploration of memory: "This is what Proust knew: the past is never past. As long as we are alive, our memories remain wonderfully volatile. In their mercurial mirror, we see ourselves" (Lehrer 2008:95). However Alice has lost this ability, and memory loss due to brain damage, and diseases, such as Alzheimer's and Dementia, completely remove the mirror, so we can no longer see ourselves; we lose ourselves through losing our memory. The

mirror, both literally and metaphorically, emphasises Alice's loss of self and the confusion in her mind.



Figure 3.11. Stills from *Still Alice* (2014). Alice as she forgets her plan to commit suicide and looks confused in the mirror with various reflections of confusing staring back at her, visually emphasising her lostness.

As the film draws to an end, Alice's daughter reads to her: "In this world, there is a kind of painful progress. Longing for what is left behind, and dreaming ahead" (Lydia Howland, *Still Alice* [2014]). This quote refers to the brain's capacity to store memory and dream about the future. Alice has not only lost years of memories but, along with them, an identity that she has spent years constructing.

The film *Iris* (2001), directed by Richard Eyre, portrays the life of novelist Iris Murdoch and her husband, John Bayley. The narrative explores the difficulties they experience while Iris deteriorates due to Alzheimer's disease. The film alternates between scenes of the older Iris (Judi Dench) and John (Jim Broadbent), and their younger selves (portrayed by Kate Winslet and Hugh Bonneville), juxtaposing a vibrant, healthy Iris of the past with her fragile, declining present. This emphasises the cruel nature of Alzheimer's that erases not only one's memory but also one's sense of self.



Figure 3.12. Stills from *Iris* (2001). The doctor discusses the deterioration of Iris brain, with her husband John.

The severity of Iris's condition is highlighted in the scene where her husband discusses her brain scans with her doctor. John's struggle to come to terms with Iris's condition and the difficult journey that they have ahead, is poignantly communicated to the audience in this moment. The harsh reality of dealing with diseases that affect memory is highlighted in this film taking the audience on an emotional journey that confronts one's own fears of losing oneself or a loved one due to the loss of memory. This highlights the emptiness that comes when identity-defining memories are lost forever, leaving a person unrecognisable not only to themselves but also to their closest family and friends.

3.2.4 Themes of reliving the past and the gift of memory

The Giver (2014), directed by Phillip Noyce, revolves around a social experiment aimed at the preservation of an entire community that lives in isolation, completely deprived of historical memory. Each individual is assigned a specific role within the society that contributes to the functioning of a system that resembles a highly controlled network of distributed cognition, with access to information or memory strictly limited to what is relevant to each individual's task within the community. This film is set in a world that is devoid of colour in which its citizens are drugged daily to suppress any intense emotions implemented as a strategy to create a stable society, free from violence and war.

One individual is designated as the "Giver of Memory", a concept reminiscent of the mythology of Mnemosyne, being the holder of memory and giving it only to whom she chooses, with it being inaccessible to anyone else. The protagonist, Jonas (Brenton Thwaites), is chosen to become the next "Receiver of Memory" and he must undergo training with the current Receiver (Jeff Bridges) who later becomes known as the Giver.



Figure 3.13. Stills from *The Giver* (2014). The moment Jonas receives the memory of colour, he is transported to a ship sailing into a sunset, directly after this he spots the apples on the table and can identify them as red.

In the film, Jonas is visually transported into the memory he receives, experiencing it as if it were his own. With each memory comes not only the experience but also the knowledge that stems from it. As Jonas receives these memories, his emotions are triggered and, despite these memories not being his own, some are painful to endure.

The position that the Giver assumes in the society is to provide wisdom in times of need, in other words, memory provides him with the knowledge he needs to be able to advise others on the best course of action. This connects to one of the possible functions of storytelling discussed in the literature review: to impart knowledge to others allowing them to gain wisdom about situations that they have not lived through.

The film explores the concept of identity shaped by a collective memory as a foundation of societal culture. It emphasises the idea that a society deprived of individual memory merely exists, without living life to its fullest. At the film's conclusion, when Jonas crosses the "boundary of memory", and grants everyone in society access to the memories, the collective moment of remembering is portrayed as a form of awakening or enlightenment. This mirrors early mythology that waking up is the opposite of forgetting.

Reminiscence (2021), directed by Lisa Joy, is set in a futuristic post-apocalyptic Miami, where rising temperatures have forced people to adopt a nocturnal lifestyle, and much of the world lies in ruins, with the rising water level submerging cities. The protagonist, Nick Bannister (Hugh Jackman), uses a machine developed using holographic technology that helps his clients not just to view, but to fully re-experience their memories. The narrative explores themes of escapism, as individuals seek refuge in their past, longing for happier times.³ "Time is no longer a one-way stream, memory is the boat that sails against its current, and I'm the oarsman" – Nick Bannister, *Reminiscence* (2021).

³ "The past can haunt a man. That's what they say ... The past is just a series of moments. Each one perfect, complete. A bead on the necklace of time ... The past doesn't haunt us. Would not even recognise us. If there are ghosts to be found, it's us who haunt the past. We haunt it so we can look again, see the people we missed and the things we missed about them" – Nick Bannister *Reminiscence* 2021.



Figure 3.14. Stills from *Reminiscence* (2021). Nick places the connection device on a client's brain, visualisation of the "synaptic map" mentioned, the client revisits a memory he has with his dog Angie, presumably long gone, nick mentioned it is fifteen years ago.

The narrative centres on the relationship of Nick and Mae (Rebecca Ferguson). When Mae disappears mysteriously, Nick embarks on a journey to find her. At the end, Mae uses her captor's memories to communicate with Nick one final time. Mae relies on Nick's love for her to lead him to the captor and eventually use the machine to access those memories and discover her message. This exemplifies distributed cognition, with Mae embedding a memory in the mind of her captor for Nick to retrieve later. After discovering the truth and learning of Mae's death, Nick chooses to live out the rest of his life confined to the machine, reliving his memories of her.

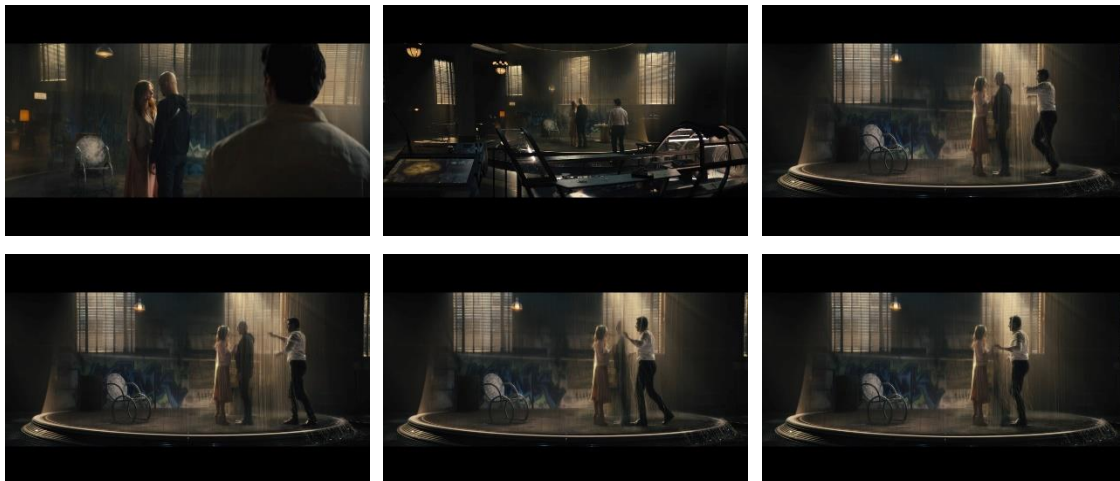


Figure 3.15. Stills from *Reminiscence* (2021). Mae communicates with Nick one last time as he watches her through the memory of her captor, overwhelmed by emotion he moves into the machine, visually inserting himself into the memory, and she talks directly to him.

3.2.5 Concluding the cinematography section

The cinematography in the selected films reflects contemporary understandings of memory, blending fictional elements with artistic representations of established facts and

theories. These films align with the three perspectives I used to structure my literature review. From a scientific standpoint, concepts are explored, such as brain damage leading to amnesia, neuroplasticity, and conditions like Dementia and Alzheimer's disease. The psychological viewpoint is explored with issues that relate to identity, collective memory, and memory manipulation. The philosophical angle explores theories of time and perceptions, memory machines, time travel, and memory erasure. A common thread that runs through the selected films, regardless of their theme, is the use of brain imaging or scans. These visual cues signal to the audience that the narrative engages with issues related to the brain.

The theme of memory has long been a central focus in cinematography, with personal memories, collective memories and memory conditions, such as amnesia, frequently incorporated into narratives. The many films that examine aspects of memory serve as powerful tools that evoke emotions such as fear, tension, joy, longing and hope. We all fear the loss of self, which is closely tied to the loss of memory. We all long for something in the past, whether a person, a time or a place that is forever out of reach while many of us wish to erase certain memories, whether they involve trauma, a difficult relationship, or a challenging period in our lives.

3.3 Case studies: Memory through art objects

When considering visual artworks, writing, drawing, painting, photography, videography, statues and even tattoos serve as tools to externalise memory, transferring it from the visually narrated form in the brain onto and into an object that might outlive individual accessible human memory. This process also transforms these art objects into components of our collective societal memory.

This section discusses selected artworks that explore the theme of memory. The artists and artworks offer a brief and selective overview, highlighting the significance of memory in their practices. The works featured provide insights into how memory operates not only as a personal and collective phenomenon but also as something residing in physical objects and matter.

The discussion examines artworks addressing memory from various perspectives: personal memory; collective and distributed memory; and themes of memory erasure and fading. Particular attention is given to artists who combine the theme of memory with fabric in their work, aligning with the medium of my practical component. The intention of this section is to engage with artists who address similar themes and mediums, thereby gaining a more informed understanding of how other artists have approached these topics in their artmaking.

3.3.1 Memory represented from a personal perspective

Many artists incorporate personal memories into their creative practices, demonstrating that memory can be embedded in or transferred onto material objects. For instance, Alexander James focuses on themes of family and lineage, Ibrahim El-Salahi draws inspiration from childhood memories, Ioanna Sakellarakis creates deeply personal works that are triggered by a blend of memory, experiences and fantasy, while Sallisa Rosa views her ceramic art making as a process of transferring her memories into the clay. Artists Billie Zangewa, and Tamara Kostianovsky was selected for their elements of deeply personal memory. These works as well as the animation of Gianluca Maruotti demonstrate the diverse ways in which artists integrate personal memory into their artmaking:

Billie Zangewa creates fabric murals by hand stitching pieces of silk to form tapestries that depict scenes from her daily life and significant events, essentially weaving her personal memories and identity into these works. *Soldier of Love* (2020) (Fig 3.16) is the memory of taking her son to school. This may seem to be a mundane task but Zangewa recognises the importance of transferring this memory into a visual narrative, and the significance it may carry into the future for herself and her son.



Figure 3.16. Billie Zangewa, 'Soldier of Love' (2020). Embroidered silk. 110 x 135cm. Courtesy Templon.⁴

Tamara Kostianovsky creates artworks using fabrics. In *Shaving* (2018) (Fig 3.17), she used her late father's old clothes to create life-size tree stumps, the residue of his memory is essentially embedded into these pieces. This emphasises how clothing items of a loved one, their look, feel, and scent, can trigger personal memories, echoing the presence of the individual and the memories they left behind. This work resonates with the theory of memory in matter and distributed cognition where the storage of memories is not merely in the brain but also in the environment and objects around us.

⁴ Link to article on this artwork by Billie Zangewa: <https://ocula.com/magazine/conversations/billie-zangewa/>



Figure 3.17. Tamara Kostianovsky, *Shaving (Big Slice)* (2018). 42 x 46 x 13 in. Discarded clothing.⁵

Paper plane (2013), a collaborative work by director and animator Gianluca Maruotti, illustrator Felicita Sala, and vocal artist Massimo Giangrande,⁶ is a music video that follows the narrative of a character searching for a woman. His memory, which serves as the motivation for his longing for her, is visually represented through the photograph he gazes at continually. This repeated focus on the photograph highlights his internal struggle. The longing for the past, and the people who are no longer part of our lives represents one of the more poignant and painful aspects of memory.

3.3.2 Collective and distributed memory represented in artwork

Collective memory that emerges from shared experiences, history, storytelling, and art shapes our social and cultural identity. Artists who engage with collective memory

⁵ Link to artwork: <https://tamarakostianovsky.com/artwork/4742627-Shaving%20%28Big%20Slice%29.html>

⁶ *Paper Plane* (2013) by Giangrande, animated by Gianluca Maruotti: <https://vimeo.com/75196023>

include: Lubaina Himid, whose work focuses on themes of cultural history and identity; Mary Bernadette Lee who created an installation from childhood memorabilia contributed by willing participants representing a society's collective memory; and Don McCullin's photographs of the Vietnam War provide a visual archival account of the conflict, preserving its historical and societal significance.

The following artists, namely William Kentridge, Christian Boltanski, Maya Lin and Emma Kay all demonstrates how collective and distributed memory is incorporated in their artmaking.



Figure 3.18. William Kentridge, *More Sweetly Play The Dance* (2015). Mixed media Video animation. On display Zeitz Moca, Cape town.⁷

William Kentridge's artwork, "*More sweetly play the dance*" (2015) (Fig 3.18) consists of a continuous procession of individuals moving across multiple large-scale panels in carefully curated clothing designed to convey a narrative, performing, and presenting metaphorical symbols as they move. This artwork combines video, performance, and animation. Like many of Kentridge's works, it addresses themes of collective memory, specifically referencing the shared history of Johannesburg, known as the "City of Gold". One notable frame features a hospital scene, symbolising the Ebola outbreak that

⁷ *More sweetly play the dance* by William Kentridge: <https://www.youtube.com/watch?v=pA7uob5PIW>

occurred during the creation of this artwork. Kentridge frequently explores societal issues that shape collective memory that include the legacy of apartheid in South Africa.

Christian Boltanski's *Personnes* (2010),⁸ exhibited at the Grand Palais in Paris, comprises 30 tons of used clothing and 3000 stacked cookie tins. The clothing is meticulously arranged in squares, with a large central pile and a crane as the focal point. The crane repeatedly lifts stacks of clothing, only to drop them back onto the pile, the garments falling down to rejoin the pile, gently in a ghostly manner. A soundtrack of recorded human heartbeats plays in the background, and visitors are invited to add their own heartbeat to the archive. Many of Boltanski's artworks, directly addresses the holocaust. This artwork also emphasises a collective societal concept evoking the concept of mortality, and these piles of clothing gives the viewer the feeling that an entire society is represented in these "remains" in the form of used garments carefully placed and piled.

While Boltanski intended this artwork to raise questions about human mortality, it also evokes the memory and presence of the individuals who once wore these garments, as well as the profound sense of loss their absence elicits. The connection between memory and material objects is evident in this artwork that includes the ghostly presence of the people who once wore these clothing items, emphasising the concept of memory embedded in matter.

⁸ Christian Boltanski, *Personnes* (2010). Alternative title *No Man's Land*. Installation 30 tons of used clothing and 3 000 stacked cookie tins. Park Avenue Armory, Grand Palais, Paris. Artist interview on the work - <https://www.youtube.com/watch?v=Lv7tatnhFAc> Longer video with focus on detail and experience with heartbeat soundtrack. <https://www.youtube.com/watch?v=SXND1GZdBzM>



Figure 3.19. Maya Lin, *Map of Memory: Hudson River Timeline*. A river is a drawing/ Hudson River Museum. Dimensions variable.

In her ongoing project, *What is Missing*, Maya Lin develops a global platform dedicated to ecological conservation. This interactive initiative invites participants worldwide to engage and contribute by sharing memories of specific ecological sites to highlight the degrading of the natural world.⁹ Through these contributions, Lin creates a collective digital memorial, drawing on distributed cognition and memory to form a collaborative, interactive global artwork. The work, *Map of Memory Hudson River Timeline* (Fig 3.19), illustrates one of the site-specific works involved in the project. It is exhibited at the Hudson River Museum and is one of several sites involved which include Madison Square Park and the Orlando Museum of Art, alongside a website that extends the project's reach to a global audience.

⁹ Visit Maya Lin's work, and contribute: <https://www.whatismissing.org/>

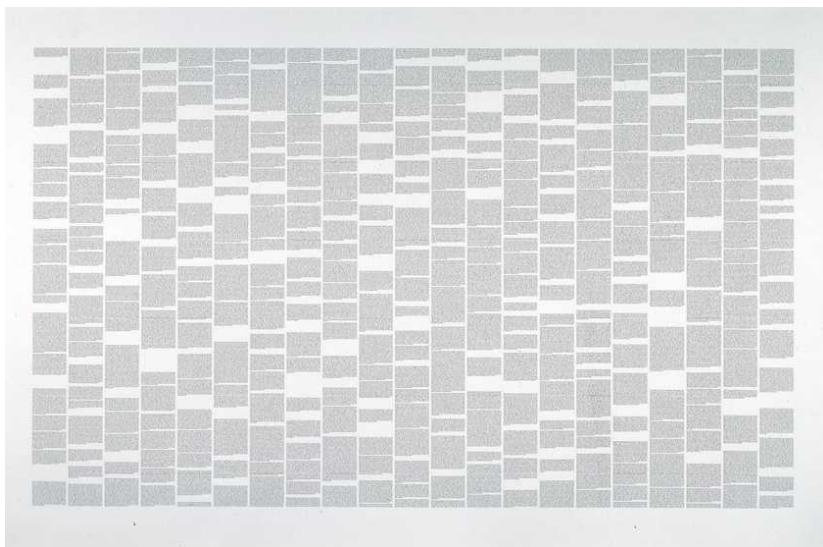


Figure 3.20: Emma Kay, *Worldview* (1999). Digital print on paper. 1760 x 2705 mm. Tate Collection.

In her artwork, *Worldview* (1999) (Fig 3.20), Emma Kay documented world history entirely from her own memory, offering a personal perspective on collective memory. Although this work incorporates both personal and collective dimensions, I categorised it under collective memory, as Kay transforms her recollections of societal events into a book format. The pages of this book are then expanded into a large-scale artwork. Through this piece, Kay contributes a personal, subjective perspective of a recorded, distributed social history. The reader of the book or viewer of the artwork is also prompted to reflect on their own memories of these events.

3.3.3 Artworks focused on fading and erasure of memory

The fading and erasure of memory is one of the most challenging concepts for humans to grapple with in seeking to understand the function of memory. Losing memories of a loved one or sentimental places can threaten an individual's ability to maintain a sense of identity. Rachel Whitehead addresses the erasure of memories of places in her work, while the performative and site-specific nature of Janet Cardiff and George Bures Miller's collaborative project,¹⁰ performed in remembrance of the Holocaust, embodies the

¹⁰ Article on the artwork:

<https://www.tandfonline.com/doi/full/10.1080/17504902.2019.1578454#abstract>

YouTube video of the performance: <https://www.youtube.com/watch?v=sOkQE7m31Pw>

transient nature of moments that become memory – present one moment and gone the next, despite being recorded. Artists Ania Roszkowski, Angus Fairhurst and Susan Aldworth all demonstrate this concept of erasure of memory in their work.

Ania Roszkowski's video artwork *Studio Practice 2*,¹¹ part of her broader project, *Memory Loss*, created during her art degree studies, delves into themes of identity and the devastating impact of dementia. In the video, viewers are prompted to remember an address and answer a few questions, then the viewers are confronted with the gradual dissolving and disappearing of this simple information. Drawing from her experience of caring for her mother during her battle with the disease, Roszkowski examines the cruelty of dementia and its ability to sever individuals from their sense of self during this project.



Figure 3.21. Angus Fairhurst, *Over Mont Blanc, All Evidence of Man Removed* (1993). Postcard on paper. 105 x 148 mm. Tate Collection.

Angus Fairhurst's *Over Mont Blanc* (Fig 3.21) forms part of the series *All Evidence of Man Removed* (1993) and revolves around the concept of the erasure of human presence from

¹¹ Link to artwork: <https://vimeo.com/398493353>

his artworks by obscuring or rather erasing man-made objects. The series primarily focuses on landscapes, emphasising erasing the memory of humans of the natural world. Yet the remaining shapes of the erased elements serve as traces suggesting that true erasure of memory may be impossible and that traces of them always remain.



Figure 3.22. Susan Aldworth, *Traces of a Childhood 8* (2018). Monotype. Photograph by Peter Abrahams. 56 x 76cms.

Susan Aldworth's monotype print, *Traces of Childhood 8* (Fig 3.22), forms part of her series *Traces of a Childhood*¹² consisting of nine prints inspired by a collection of Edwardian baby clothes, gifted to the artist. These prints evoke a ghostly sense of absence and also presence at the same time as the traces and memories of the children who wore them can be felt through the image. The memory, embedded in these clothing items, which is subsequently transferred to the monotype, highlights the concept of memory being preserved within and conveyed through material objects.

¹² Link to artwork: <https://susanaldworth.com/works/traces-of-a-childhood/>

3.3.4 Concluding the art object section

Representing memory from a personal perspective is one of the most commonly used ways to explore memory in art, providing the artist with an internal source of inspiration. Autobiographical works document personal experiences, creating memorials that preserve moments which might otherwise fade. This practice extends beyond artists to the broader public, as everyday acts, such as taking family photos, recording videos, keeping diaries, or writing autobiographies, all serve to create personal records of life. These practices can also be interpreted through the framework of distributed cognition. The act of creating art with memory as a central theme can be seen as a process of converting memory into material matter.

The concept of distributed cognition extends to collective and societal memory, as it encompasses the shared narratives and historical experiences that shape society. While elements of the artist's personal perspectives may be present, artworks addressing collective memory primarily draw from shared societal experiences, incorporating diverse viewpoints, ideological frameworks, historical events and injustices. These works not only reflect but also actively contribute to the formation of our collective identity as a society.

The erasure and fading of memory are common human fears. As discussed in the section on cinematography, memory loss resulting from brain damage or illnesses, such as dementia and Alzheimer's, can cause individuals to lose their connection with their identity and, in severe cases, to lose their sense of self entirely. Even without such conditions, memory naturally diminishes over time, as people age and depend on other factors. Childhood events and other past experiences often become less vivid or even disappear completely.

3.4 Conclusion

This chapter explores and analyses visual media that incorporates the theme of memory through narratives. The cinematography section addresses topics such as amnesia caused by brain damage, the erasure and replacement of memory, Alzheimer's and dementia, and the gift of memory through reliving the past. The section on art objects examines

themes of memory from both personal and collective perspectives, as well as the erasure and fading of memory.

Although there is a vast array of films and artworks that engage with the theme of memory, the selection of works for discussion was guided by their relevance to the central theme of this study and their ability to bridge theory and practice. In the art object section, particular attention was given to artists who integrate fabric or clothing into their explorations of memory.

The perspectives discussed in the theoretical section – spanning scientific, psychological, and philosophical viewpoints – are evident throughout the selected works and make connections with various aspects of the literature review, both within the cinematography and art object sections. This chapter also underscores the enduring relevance of memory as a theme in storytelling and other artistic practices, highlighting its richness as a subject for ongoing theorisation and future research.

CHAPTER FOUR: PRACTICAL COMPONENT: MEMORY SPACES

This practical component focuses exclusively on my reflections on the methodologies I explored throughout the process of research and artmaking. For my 2020 body of work, I created animations combining stop-motion and video techniques. These works revisit seven childhood memories deeply intertwined with my identity, animating them using only my old clothes as metaphors for episodic memories, suggesting that our experiences leave imprints of themselves onto the clothing we wear.

At the start of this research journey, I was unaware of the vast amount of research that exists on the phenomenon of memory, with various theories on how this is possible and what the function of it might be. I began my research with an idea of what I envisioned the practical component would embody, hoping to create narratives that were similar to, and enhanced, my body of work in 2020. However, my research profoundly influenced and ultimately reshaped my initial ideas by manifesting the reciprocal nature between the research component and the practical component.

Over the course of the study, the artwork transitioned from highly detailed, complex creations with intricate storylines and nostalgic undertones to more simplified and abstracted representations. These evolved works represent the journey and essence of memory itself rather than specific episodic events. From a personal point of view, memory transformed from a longing and nostalgic reminiscence into a sense of an ongoing state of being – a continuous presence encompassing past, present and future. It became an enduring part of my existence, not as something longed for, but as something inherently woven into my existence. This body of work captures this evolving understanding of memory – reflection on its presence in time, its journey, and its integral role in shaping us.

4.1 Exploring memory as distributed into matter and materials

The practical component explores the relationship between recalled memory and the memories embedded in material objects through lived experiences, specifically focusing on clothing as a repository for memories. Susan Aldworth's monotype print *Traces of*

Childhood 8 (Fig 3-xxii) from her series *Traces of Childhood* discussed in section 3.3.3, exemplifies this concept. The artwork evokes the ghostly presence of the clothing's wearer, a theme that is similarly evident in the works of other artists, such as Tamara Kostianovsky and Christian Boltanski, also discussed in the art objects section 3.3.2. There seems to be a lingering sense of a person embedded within their clothing. Could it be the result of physical impressions left on the clothing through wear and tear, or is there an alternative explanation? I propose the possibility of a reciprocal relationship between the body and the clothing, grounded in the sensory exchange that occurs through wear. Considering the role sensory input plays in the consolidation of memory, this interaction could explain why we may perceive the presence of a person from a piece of their clothing.

4.1.1 Memory and sensory imprints on clothing

Our senses are fundamental to how we perceive and interpret the world around us. As discussed in the literature review, sensory input plays a role in determining the information that is consolidated into long term memory. Proust's early ideas on memory present the possible influence that the senses may have on memory, particularly "in that our senses of taste and smell are uniquely sentimental" (Lehrer 2008:76), and often trigger memories and that taste and smell are the senses that directly connect to the hippocampus therefore they have a significant impact on memory formation and recall. Revisiting the statement of Bernstein and Loftus (2009:371) that "sensory activity is greater for true memories than it is for false memories" highlights this concept that sensory input influences memory, to some extent.

In her book *Brainscapes*, Schwarzlose (2021) explores the intricate maps within the brain and their functions. Drawing on this, I envision the brain's architecture as a complex web of interconnected maps and pathways that link perceptual regions, integrating the senses into a cohesive system that enables us to interpret and navigate the world around us. Schwarzlose (2021) describes how certain regions of the skin, such as fingertips, contain

more touch receptors that make them more sensitive to tactile input¹³ giving us the ability to distinguish between different types of textures.

Clothing provides a rich source of tactile input, engaging multiple senses. We see it, smell it, and feel it against our skin, where it acts as a second layer, experiencing life alongside us. It provides warmth, protection, bears the marks of our daily lives in the form of food stains, tears, creases and absorbs our distinctive scents. In this way, clothing becomes our constant companion, becoming a sort of diary on which we imprint our daily experiences, continuously stimulating sensory input.

Brand-new clothing items also carry memories already imprinted upon them, embodying cultural histories and societal ideas and experiences woven into the styles and patterns that represent a rich collective memory. Clothing can be seen as a representation of identity, allowing us to shape and redefine who we are through changes in our attire. As we wear our clothes and live our lives, we transfer traces of ourselves and our identity onto these items. Clothing then, in the absence of the body, becomes a repository of lived experiences and a vessel for the possibility of new experiences yet to be lived.

4.2 Exploration and experimentation

I began the exploration and experimentation phase with my own old clothes, sorting and piling them to create a kind of library of colour and texture. This process led to the exploration of the properties of these garments and opened up multiple possibilities for artmaking. As I worked, specific items of clothing triggered memories of past events I had experienced; my perspective shifted and these mountains of clothes somehow became mountains of memories.

Additionally, I expanded my exploration by examining various materials and their unique qualities, spending time in fabric shops to feel and study the textures of different fabrics.

¹³ “... some zones are more conveniently placed for key tactile tasks and, thanks to evolution, these areas of skin tend to contain more touch receptors than others do ... thanks to inequality and magnification, your fingertips allow you to tell cotton from polyester ...” (Schwarzlose 2021:66).

The experiments primarily focused on exploring and testing the properties of various types of fabrics, examining aspects such as texture, colour, pliability and their reactions to different substances and processes. These include exposure to stains such as coffee, food colouring, paint, markers, as well as physical manipulations such as cutting, tearing, burning, unravelling, hardening, stitching, reshaping and exploring how light travels through different types of fabric. These experiments revealed that fabrics respond in unique ways depending on their texture, pliability and retention qualities, displayed in the way the fabric lies in folds and creases. Various fabrics responded differently to processes, for example, some fabrics did not respond to bleach, seemingly colourfast, meaning that the colour of the garment remained vibrant over time. See figure 4.1, where the white textured and rough fabric did not react to bleach at all, whereas the red fabric took a few hours to bleach to a white blotch. For this reason, I eliminated many fabrics from my experiments, as I was looking for pliable fabrics with a faster reaction to bleach as well as absorbency for the food colouring.



Figure 4.1. Example of experimentation with red and white fabrics.

The variability in fabric pliability can be metaphorically compared to the pliability of memories. Some memories have a thicker “texture”, making them more resilient, while others could be represented by a thinner fabric, easily adjusted, manipulated and reconstructed into different forms. For instance, viscose and denim demonstrate prominent differences in pliability. Viscose is highly pliable, with softer texture and looser weave, making it more susceptible to burning and allowing liquids to spread and bleed quickly. It is also easier to disassemble and reshape into new forms.



Figure 4.2. Example of experimentations and notes with viscose and denim; leading to an index used for reference during the making of the final three works.

Certain types of denim, on the other hand, are much more resilient. Denim’s robust texture and tighter weave resist burning up to a point and absorb liquid slowly. Both viscose and denim react significantly to bleach, but viscose undergoes a faster transformation, while denim takes longer to lose its original coloration, bleaching to a brown or a light blue colour. Despite their difference in pliability, bleach affects both fabrics. Although there is a difference in the time it takes, both fabrics become very light and distorted from the original colouration.

Metaphorically, these distortions and discolorations can be compared to the fragility of memory. My intention for the interventions into the fabric is to make them comparable to the way memory can be manipulated and effected. For that reason, flexibility of fabric was crucial for my experiments and the choice to work

mostly with viscose and denim seems to be appropriate. These fabrics allowed me to utilise their pliable and susceptible characteristics to support the narratives of the artworks. Additionally, these are also the fabrics taking the most space in my closet and most worn as I have a love for both of these fabrics.

4.3 Perspectives on the processes used and metaphorical references

Due to their inherent nature, both fabric and memory hold the potential for alteration, the incorporation of information and reconstruction. Fabric intended for clothing, curtains or upholstered furniture could be altered, repurposed and reappropriated for other functions, or be recycled into a completely different object. Through cutting, sewing, dying, shaping, adding of additional materials as well as objects, weaving, reweaving and reconstruction, the entire function and story of the original fabric is changed. This is analogous to memory alterations through neuroplasticity, and to the writing and rewriting of narratives. The human brain often suppresses or alters bad memories, deeming them as unproductive for the “happy” functioning of a human, and “memories that derive from traumatic experiences often contain errors and distortion” (Conway & Loveday 2015:580). Similarly to fabric, the cutting out, stitching together, whitewashing, colouring and alteration of memories happens regularly in the brain. Thus, my main metaphor is the fabric itself, representing memory that provides the surfaces for memory inscription.

The processes and uses of the material afford the abstract narratives for these works, metaphorically incorporating the three perspectives used to approach the literature review. The scientific perspective is alluded to by adding substances, such as coffee and food colouring, to represent the malleability of memory, and bleach to represent the fading memories and possible erasure of memories. The psychological perspective is represented in the emotive effect of the food colouring and the light shining through the fabric creating highlights, shadows and shapes. The reshaping, forming, cutting and tearing of the fabric represents the process of experiencing emotions that are evoked by memory. The philosophical perspective touches upon the awareness of the journey and the passing of time, and the memories transferred onto and from the fabric. The

examination of autobiographical, factual and fictional narratives for the practical component involved the exploration of memory and emotion, personal memory, memory and identity, time and perception, memory replacement, collective memory, distributed cognition and memory in matter.

4.4 Final creative outputs

During the creation of the final outputs for the practical component, I utilised techniques explored in the experimentation phase. I created abstract landscape-like scenes using stop frame animation and video techniques, while adding coffee, food colouring and bleach to the fabric to represent the addition and removal of information. I focused on creating close up frames of certain parts of the landscape of the fabric with a macro lens to emphasise the texture and weave of the fabric. The exploration of different lighting options revealed that the texture and weave become more prominent, furthermore, the use of lights from various angles create contrasts. I aimed to use fabric in its most natural form, draping wrapping, and loosely folding it into various landscape-like scenes. I constructed supportive structures to aid in creating shapes and forms for the final works using various materials, such as polystyrene, foam and mouldable splinting material, to create the shapes and forms used to shape the fabrics. I used the smallest size specimen pins I could find to gently pin the fragments of fabrics into place to emphasise the fragility of the fabric. By treating memory and its fragments as specimens, I intended to evoke their liveliness, certain autonomy and ephemerality and allude to them as “creatures” in their own right. These pins also metaphorically emphasise the floatability of memory, and the act of pinning them into place as a strategy to hold onto memories. Thus, the artworks acknowledge that the act of pinning down something that is not always fully definable, something that is momentary, might be futile.

Throughout the process, I experienced a variety of technical difficulties. While I chose to work with fabrics for their pliability, unfortunately, this decision also presented some difficulties especially in animation setups. The extreme pliability

of fabric made it a challenging medium to work with for both video and stop frame techniques. Using the fabric in its most natural form, without hardening mediums, caused uncontrollable movements of the fabric. Even the slightest breeze shifted the fabric, altering the composition and affecting the camera. This was remedied by using a manual focus on the lens and a higher f-stop to create a deeper focus. A constant aim during this journey was to create shapes and forms that remained stable by using stuffing materials and specimen pins, rather than overmanipulating it.

The creative output consisted of two sections emphasising the stages in my artmaking. The process-oriented stage includes experimental works, abstract “sketches”, maquettes and explorations of textures. The focus is on work done during the exploration and experimentation phases of the practical component. This led to the phase where I made three final artworks.

4.4.1 Abstracts

These works include a variety of abstract works that form the bridge from the experiments to the final artworks. They consist of a collection of photographs and videos that explore the possibilities of the processes discussed above. The following artworks, as well as the additional pieces in this section of the online exhibition hint at the idea of the movement of memory to and from clothes, which is the moment experiences are exchanged between body and fabric. Collectively, these form a micro-society of memory inwoven fabric specimens.



Figure 4.3. Lizl Kruger, Stills from *Imprints on Viscose* (2024). Process video.



Figure 4.4. Lizl Kruger, Stills from *Imprints on Viscose* (2024). Display video. Stop frame animation. 21 x 7 x 7 cm.

Imprints on Viscose (2024) consist of two videos, the first in figure 4.3 displays the process video showing the fragment of fabric draped on a table. The video is sped up and it shows various substances being added, as discussed above. The second video in figure 4.4 consists of a stop frame animation, using the fragment of fabric used in the first video. After it dried completely, I wrapped it around a cylindrical prop and fixed it into place with specimen pins. The work rotates and continues to play in a loop similar to the memories that play and replay in one's mind - the ones you cannot seem to forget.



Figure 4.5. Lizl Kruger, Stills from *Flashbacks* (2024) Macro videography. Approximately 5 x 5 x 5 cm Specimens of fabric. Light through fabric.

Flashbacks (2024) in figure 4.5., consists of three video works that reflect the outcome of explorations with light shining through fabric, using a macro lens to zoom closely into the landscape of these fabric pieces. The first piece is made using denim, shifting the focus to various depths of the scene, and creating some movement in the fabric that resembles breathing as the garment is being worn and memories are being made. The second piece focuses on a hand-woven woollen fabric. The light flickers through the fabric and shows the finest threads of the wool giving a hint of remembrance and then of the memory disappearing. The third piece was made by layering a thin piece of yellow polyester. Here, the light almost dances through the fabric and creates a sense of movement. Unlike the first piece, no physical movement is made here that hints at the dancing of memories through the mind.

4.4.2 Memory spaces

The series, *Memory Spaces* consists of three video works created using stop frame animation, each conceptually reflecting the journey of memory that emerged in my mind during this study. These works are created using the same techniques discussed in sections 4.2–4.4. While employing variation in their physical form, such as shape and movement to create differences in meaning, the works are bound together as a cohesive reflection on different takes on memory, namely, scientific, psychological and philosophical. Collectively, they represent three main concepts related to how memory functions in time and space. My aim is to visually represent how memory exists in the fabric of time. Throughout the journey depicted in these works, memories were added, symbolised by stains created with coffee and food colouring, and were subsequently erased with bleach to represent memory loss or gaps in recollection. The same substances were then added again to refer to new information and to signify the reconstruction or attempted reconstruction of original memories. These works also explore the sculptural properties of fabric and working on a very small scale was helpful to focus on textures, folds, weaves and unravelling threads of the fabric.



Figure 4.6. Lizl Kruger, Still from *Scape of recollection* (2024). Stop frame animation. 3 x 30 x 25 cm. Mixed media.

Scape of recollection (2024) in figure 4.6, was built using a polystyrene base, the

mountain shapes were created using mouldable splinting material, and covered with a thin layer of foam, to hold the specimen pins. These pins refer to the fragility of memory and the act of trying to keep them from floating or flying away. The front of the mountain shape is covered with viscose and the back with denim, representing more solid memories through the denim and fleeting ones through the viscose. The viewer is taken on a journey through this landscape-like memory space, while symbolically, memories are made and erased, using the techniques discussed above.

The concept involves the idea of memory from a traditional, linear perspective, viewing memory as it exists in time, through moving from the past to the future. This piece metaphorically represents the **scientific** perspective, with a more realistic perspective on the journey of memory.

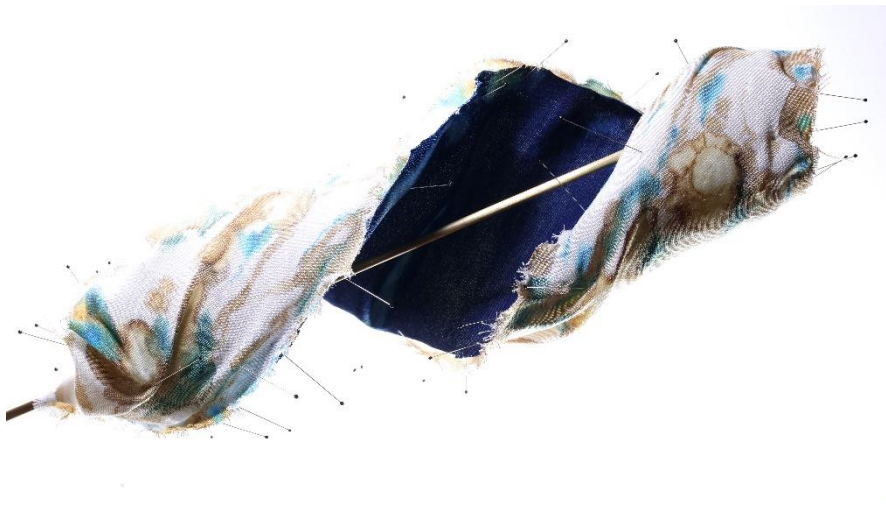


Figure 4.7. Lizl Kruger, Still from *Spiral of reminiscence* (2024). Stop frame animation. 27 x 9 x 8 cm. Mixed media.

Spiral of reminiscence (2024), in figure 4.7, is made with mouldable splinting material, formed around a brass rod, and covered with thin foam, to hold the specimen pins. These pins are used to keep the fabric in place and to represent the fragility and fleeting nature of memory. The pins are mostly used around the edges to merge the denim and viscose. The outside of the spiral is covered with viscose while the inside is covered with denim, pointing to more solidly

consolidated memories on the inside and fleeting memories on the outside. The viewer is taken on a rotating journey through this memory space and memories are again symbolically made and erased with the same techniques used in the other two works.

In this work, I use a spiral to evoke pliable and cyclical aspects of memory. The flat space of the landscape in *Scape of Recollection* has been bent and twisted into a spiral form. This concept shifts the idea of memory as a linear flow of time to the more complex phenomenon where cycles, rotations, and fluid points of reference blur the past experiences. The work acts as a portal for reinterpretation and reshaping of memories. The concept that human memory is malleable and subject to manipulation underpins this work. The **psychological** perspective is metaphorically represented in this work and suggests the idea of memory manipulation and the reshaping of existing memory.



Figure 4.8. Lizl Kruger, Still from *Sphere of reflection* (2024). Stop frame animation. 12 x 12 x 12 cm. Mixed media.

Sphere of reflection (2024) in figure 4.8, was made with a polystyrene ball as base placed on a brass rod and covered by wrapping strips of denim around the ball, representing more solidly consolidated memory. A thin layer of viscose is draped around the denim sphere using specimen pins to hold it in place. The viscose represents fleeting memories and the pins are a strategy to hold onto them. Similarly to the spiral, the viewer is taken

on a rotating journey, through this memory space while the symbolic adding and erasing of memory takes place.

This memory space represents the existence of memory in time and space as I moved through this study and strongly leans towards the **philosophical** viewpoint regarding the exploration of the relationship of memory in time. In contrast to the other two works, this memory space is constructed as a rotating sphere, metaphorically holding both consolidated memory and fleeting memory. My aim is to present an imaginary way of looking at how memory exists in time; that a human's past, present and future exists within them all at the same time, through the capacity to hold memory or access memory and the ability to imagine the future, using our brains to perform time travel, as "Buonomano's states that the human brain itself already acts as a time machine of sorts" (Kwon 2017:71). Our memories, even though they are pliable and easily manipulated, are never really left behind as they become part of us. Our futures, though uncertain and not guaranteed, are not really out of reach as we imagine them all the time, the past, present and future rotate around us, and within us.

4.5 Conclusion

This chapter explores a variety of fabrics, including old clothes, store bought fabrics and fabrics from old curtains equating them to metaphors for memories, either in themselves or as surfaces for memory inscription. The exploration and experimentation of the various characteristics of fabrics results in a deeper understanding of the textures and pliability of these fabrics. A comparison between the pliable nature of fabric and the nature of memory and narratives forms the basis of the practical component. Through these explorations, the final works were created.

The pliability of memory is visually represented in this body of work as well as the representation of how memories function in time. The final creative outputs are in the form of an online exhibition titled *Scapes of Memory* this metaphorically refers to the spaces where memory exist in these fabric landscapes, containing the entire body of work including final creative outputs, a catalogue, experiments and process videos.

CHAPTER FIVE: CONCLUSION

This project aimed to build upon the body of work of 2020 and explore the complex relationship between memory and narrative. The practices of fictional and autobiographical storytelling have deep historical roots as individual and collective memories play a crucial role in shaping our personal, cultural and societal identities. This study investigated current research and theories on the functioning of memory, including how it is consolidated, stored, retrieved and reconstructed. It also examined how gaps in memory are filled and suggested that this is done through drawing from an individual's personal knowledge base, which is strongly shaped by personal perspectives and ideologies. The rationale for this study was rooted in the understanding that memory is inherently fallible and prone to confabulation with information from one's knowledge base.

The research questions explored in this study were: What information is used to fill the gaps in memory? How is memory addressed? What visual strategies are employed to depict memory in cinematography and art objects? Additionally, how does the storytelling of fictional narratives relate to the storytelling of biographical narratives?

5.1 The theoretical framework and literature review

The theoretical framework for this study approached the theme of memory from three perspectives: scientific, psychological and philosophical. The literature review began with a historical overview of the early mythologies and theories related to memory. These included the idea of Mnemosyne, the Greek goddess of memory, who was believed to hold all memory and distribute it to humans as she deemed fit, thus positioning memory as an entity outside of the human brain accessed only through an external source. Indian mythology proposed that memory is the recollection of a series of former lives, a belief echoed by shamans who claim to remember their former lives. Christian perspectives, in contrast, suggest that waking represents the opposite of forgetting, with slumber leading to forgetting. Modern scientific research suggests that memory is a function of the brain and that its consolidation and recall is influenced by the brain regions and neural

chemical processes. These theories continue to be subjects of ongoing investigation and theoretical development.

5.1.1 Consolidation recall and reconstruction of memories

The consolidation of memory is either implicit or explicit. Implicit memory functions unconsciously and is consolidated as procedural memory, while explicit memory encompasses semantic memory – one's general knowledge base – and episodic memory, which refers to life events and forms the foundation of our constructed autobiographical narrative. This study focused on episodic memory, establishing its direct influence on identity. The literature review established that the deterioration of episodic memory, caused by conditions, such as Alzheimer's disease, amnesia or brain damage, caused memory loss that significantly impacts an individual's ability to maintain their sense of identity and individuality. Additionally, the research highlighted the essential role emotions and the quality of sleep play in the organisation and consolidation of memory, mediated through the amygdala.

The recall and reconstruction of an episodic memory are influenced by how effectively the original event was consolidated and the accuracy of the stored information. Most memories are, to some extent, inaccurate as the gaps are reconstructed from information in our personal knowledge base and influenced by our personal ideologies, cultural beliefs, and self-concepts. This results in recalled memory that may deviate from the actual event. This demonstrates the pliability of memory, despite the human tendency to believe that recalled information is an accurate representation of past events, even when only partially accurate.

This study also highlighted the influence of sensory input in the consolidation and recall of memories, with research suggesting that sensory attachments may aid in distinguishing between true and false details in memories. However, no existing procedures can definitively determine the accuracy of human memory, as all recalled events undergo some degree of reconstruction. The research determined that the hippocampus is a critical role player in the processes involved with episodic memory, as

well as the function of imagination, although the true extent of its involvement remains to be established. This duality in function suggests that factual memory may be supplemented with fictional elements from the imagination when forming autobiographical narratives.

Evidence from brain injuries and associated memory loss reveals that memory storage is distributed across various brain regions. While dementia-related illnesses lead to irreversible memory loss, memory deficits resulting from brain injuries may allow a partial recovery, made possible by neuroplasticity. This ability of the brain to adapt and reorganise may also explain its capacity to reconstruct memories. Neuroplasticity is a relatively new and actively researched area, offering promising potential for therapeutic applications, particularly in treating stress and trauma-related disorders.

5.1.2 Time, collective memory, distributed cognition and memory in matter

The relationship between time and memory was also explored, including the suggestion that the brain functions as a “time machine”, enabling us to mentally travel to the past or envision the future. While numerous theories exist regarding the perception of time, our understanding of time and our ability to keep track of time is reliant on the brain’s capacity to recall past events and imagine future scenarios.

This study also established that collective memory plays a crucial role in shaping societal, cultural and individual identities. It is deeply embedded in art, cultural traditions and narrative practices, and influences how we understand and express ourselves in our contexts.

Hutchin’s theory of distributed cognition that “as an adaptive strategy, the human cognitive system has evolved to offload and incorporate information in the environment to complement the limitations in its capability to store and process information” (Heersmink 2017:3136) was another key focus. This theory hypothesises that memory is not confined to individual brains but is distributed across sociocultural systems, groups and external objects. This means that different parts of shared experiences are stored

across various perspectives, environments, and individuals, creating a collective repository of knowledge.

Additionally, the study examined memory in matter, and explored Sheldrake's concept of morphic resonance, which suggests that memory may not be stored in the brain but accessed from a collective memory shared according to species. Similarly, Bergson's theory proposes that memory is not stored in the brain but rather in a visualised output of the brain's interpretative processes, triggered by external stimuli. This suggests that memories are the brain's analytical responses to the external world rather than fixed, internal records.

These theories were particularly valuable for exploring the idea of memory distributed into matter, as reflected in the practical component of this research. They also emphasise the need for further investigation into memory, highlighting alternative perspectives that challenge dominant scientific paradigms. This suggests that the phenomenon of memory remains a rich and evolving field of study.

5.1.3 Memory and narratives

This study also delved into the nature of narratives and their connection to memory, examining how storytelling serves as a fundamental human activity. Our lives are represented and reshaped through storytelling, as we continuously write and rewrite stories to construct our idealised identities. Like memory, narratives are pliable, allowing individuals to revise their autobiographical stories over time.

The research identified several reasons why humans are compelled to tell stories. Storytelling may serve as a means to attract a mate by demonstrating intellectual capacity, function as a form of social cohesion or cognitive play, or aid in the survival of the species by passing down lessons that prepare others for similar life challenges. Storytelling also serves broader societal purposes. For instance, governing bodies may use manipulative narratives to influence collective memory, shaping societal ideologies and behaviours to align their goals and ensure the survival of the community.

Beyond these functions, storytelling helps us make meaning of our existence, organise our daily lives, and transform fragmented memories into coherent life narratives. There is a reciprocal relationship between memory and narrative: all narratives require an author, and every author is shaped, consciously or unconsciously, by memory. Even purely fictional narratives are influenced by memory, to some degree. Whether subtly or overtly, memory influences both autobiographical and fictional storytelling, as we inevitably write elements of ourselves into the stories we create.

5.2 Case studies

Through his exploration of the self, Proust's intuitive insights as a novelist align with some of modern neuroscience's theories of memory that support the notion that artists may provide valuable insights and contributions to the study of memory through their creative practices and investigations. Artistic media may be regarded as forms of distributed cognition and memory as external objects contributing to collective societal memory. This chapter explores how artists engage with the theme of memory and integrate it into their artistic practices. The study of art objects is categorised into three themes of memory: firstly, personal memory; secondly, collective and distributed memory; and thirdly, themes of erasure and fading of memory.

In addition, exploring how artists incorporate the theme of memory into their art practices prompted an analysis of how artists also use cinematography to explore and visually represent memory. The films selected included themes of anterograde amnesia, memory eradication and replacement, cognitive progressive impairments leading to memory loss, reliving the past, and the significance of both collective and individual memories. The chapter firstly discusses films then it presents an analysis of art objects, leading to the practical component of this thesis.

The methodological approach to the body of work is mirrored in the selected films and art objects chosen, which integrate scientific, psychological, and philosophical perspectives. Scientific concepts, such as brain damage caused by amnesia or illness and the potential for neuroplasticity, were examined. Psychological viewpoints explored

themes of identity, collective memory, and memory manipulation. Philosophical ideas included the perception of time, memory as a mechanism for time travel, and the erasure of memory. These perspectives provided a comprehensive framework for understanding how memory is represented and reimagined in the visual media.

5.2.1 The exploration and analysis of case studies: Cinematography

The section on anterograde amnesia analysed the films *50 First Dates* (2004) and *Memento* (2001), offering a brief comparison of how each film approached this theme in contrasting ways. *50 First Dates* adopts a comical tone with scientific elements, while *Memento* explores a darker narrative centred on revenge. Both films employed visual strategies of distributed cognition, utilising external objects, such as notes, film, photos and diaries, as external memory sources for the characters, whose ability to form and consolidate new memories was impaired. Additionally, both films highlighted the profound impact of memory loss on the actors, emphasising the stagnation, repetitive cycles, and inability to progress in time when the capacity to create new memories is lost.

The section on memory eradication and replacement analysed the film, *Eternal Sunshine of the Spotless Mind* (2004), and the music video, *We can't be friends (wait for your love)* (2024), drawing a comparison between their approaches to the theme of memory erasure following the painful end of a relationship. In both works, memories are depicted as being systematically removed from the characters' minds by a memory erasing machine, which uses personal items to map the relationship targeted for erasure. While such a machine and procedure are purely fictional, these narratives underscore the neuroplasticity and the pliability of memory, highlighting how memories can be reshaped and manipulated to align with our constructed idealised self-concepts.

The section on Alzheimer's and dementia examines the films, *The Father* (2020), *Still Alice* (2014) and *Iris* (2001), analysing their focus on the devastating impact of memory loss caused by cognitive-impairing diseases. Each film portrays the main characters grappling with severe symptoms of memory decline, making the audience acutely aware of the profound loss of self-associated with these conditions. In *Still Alice*, the protagonist

actively resists the progression of her disease, employing strategies of distributed cognition to externalise her memory and preserve a sense of identity. Despite her efforts, she ultimately succumbs to the illness, mirroring the outcomes of the other two films, where the disease mercilessly consumes the characters' identities.

The section on reliving the past and the gift of memory are explored in the films, *The Giver* (2014) and *Reminiscence* (2021), both of which examine the profound role memory plays in shaping human experience. *The Giver* presents the idea of an evolved system of distributed cognition that makes a society function in a “perfect” manner, where collective memory is strictly controlled to eliminate emotion, violence or individuality. This portrayal highlights the societal implications of collective memory and the ending of the film posits remembering as a sense of awakening, echoing early mythological theories. *Reminiscence* delves into the emotional weight of memory, exploring themes of longing for the past, yearning for lost relationships, and escaping reality through a machine capable of reanimating memories. The film also incorporates an element of distributed cognition, as the female lead leaves a message for the male protagonist via the memory of another character, accessed through this machine. Both films underscore the dual nature of memory as a source of both great joy and enlightenment, and severe pain and nostalgia.

5.2.2 The exploration and analysis of case studies: Art objects

Artists who explore memory from a personal perspective often instil an autobiographical narrative in their artworks by incorporating personal memories. For instance, Billie Zangewa and Tamara Kostianovsky both utilise fabric as a medium to create deeply personal artworks. Zangewa draws on everyday memories to create intricate hand sown silk tapestries, while Kostianovsky repurposed her late father's old clothes to create memorial tree stumps saturated with traces of his memory. The work of these artists evokes the essence of lives lived and reinforces the concept of memory distributed into physical matter, particularly fabric and clothing.

The works of William Kentridge, Christian Boltanski, Maya Lin and Emma Kay were explored for their incorporation of themes related to collective memory and distributed cognition. These artists address societal issues by integrating ideas of collective memory into their artworks, drawing from shared societal experiences, historical events and critically reflecting ideological frameworks. For example, Boltanski's artworks engage with the holocaust. In his artwork, *Personnes* (2010), he used old clothes arranged in squares with a massive pile of clothing as the focal point, evoking the impression of an entire society represented through the garments that they left behind. This installation symbolises collective memory in the cultures, traditions and identities of individuals it represents, converging into a singular, poignant pile of remains.

Artworks addressing the fading and erasure of memory explore one of the most challenging aspects of memory: its impermanence, whether due to natural deterioration, brain injury, or memory related illnesses. Artists, such as Ania Roszkowski, Angus Fairhurst and Rachel Whitehead, engage with these themes in their work. Susan Aldworth's monotype prints, for instance, incorporate antique baby clothes, evoking the traces of the garments' original wearers. These works underscore the idea of memory leaving imprints on objects, with Aldworth's use of clothing particularly resonant with this study's exploration of memory embedded in materiality.

5.3 Practical component

The practical component focused on creating a body of work that visually reflects elements of the study. Initially, the project aimed to expand and enhance narratives used in the body of work done in 2020. However, as the research progressed, the artworks evolved, ultimately transforming into more abstract representations of concepts such as the relationship between memory and time, and the narration thereof. The works also explored the idea of memory being embedded in matter – specifically clothing – highlighting the role of sensory input between memories and clothing. This focus naturally aligned with fabric as the primary medium for artmaking in this body of work.

The exploration and experimentation process began with sorting old clothing according

to colour and texture. Through this activity, I became acquainted with various fabric types and their textures, while these items of clothing also evoked personal memories. The experimentation involved diverse techniques such as cutting, tearing, burning, unravelling and staining fabrics with food colouring, coffee, paint and markers. I discovered that fabrics possess unique properties. Furthermore, I concluded that fabric, with its pliable and adaptable qualities, is metaphorically relatable to memory in its fluid and transformative nature.

These processes developed into a visual language metaphorically representing the processes of memory and the transfer of memory from the body and the mind to the fabric. The three perspectives used to approach the literature review and analyse the case studies were mirrored in the artistic processes. The **scientific perspective** was represented through staining and bleaching the fabric, symbolising memory consolidation, memory loss and erasure, and reconstruction. The **psychological perspective** emerged through the emotional resonance of the colours added by substances, and through the interplay of light dancing through the textures of the fabrics, as well as the emotional pain of memories through cutting, tearing and reshaping the fabrics. The **philosophical perspective** was reflected in the animation of the journey of memory onto and from the fabric, and its reflection of the passing of time.

These metaphors and processes informed the creation of the final body of work, which was divided into two sections. The first section, Abstracts, comprised a variety of photographs and video works that document the process and journey leading to the second section. The second section, Memory Spaces, included three stop-frame animation works developed using the techniques refined during the experimentation and exploration phase of this study. These three animations collectively represent the concept of memory from three perspectives, these perspectives may benefit humans' awareness of the complexity of memory and time.

5.4 Final thoughts

Memory is a widespread theme in visual media, including film and other cultural objects,

as it forms the foundation of all creative expression. Authors and artists are influenced by memory, whether personal or collective, factual or imaginative. This study highlighted the fragility and malleability of memory, as well as the significance of both individual and shared memories. A recurring theme throughout the case studies was memory loss, whether through brain damage, memory related illnesses or philosophical concepts of memory erasure and replacement.

The idea of distributed cognition emerged repeatedly in the case studies, serving as both a tool for preserving cherished memories or as a coping mechanism to manage severe memory loss and maintain a sense of identity. Externalising memory – through notes, photographs, videos, drawings, paintings and other artistic mediums – offers a way to preserve it, often more permanently than relying on the brain alone. This underscores the concept of memory embedded in matter and emphasises the potential to externalise and immortalise memory through tangible artistic forms.

The study of memory continues to be a highly relevant and compelling topic. Future research in this field promises to yield valuable insights and advancements as our understanding of memory processes and functions continues to evolve. I have found this area of research extremely stimulating and enriching and a process of personal growth as my understanding of memory has evolved during this research and artmaking process.

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