On Memory

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Declaration

I hereby declare that this thesis is of my own composition, and that it contains no material previously submitted for the award of any other degree. The work reported in this thesis has been executed by myself, except where due acknowledgement is made in the text.

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Abstract

This thesis is an attempt to consider the central question in the philosophy of memory, ‘what is memory’. Specific topics examined are the prominent views on memory in philosophy, causation in memory, and the relationship between knowledge and memory. The received theories of memory, representative realism and direct realism, comes with their own set of problems. These problems are analysed in detail in this work. A view on memory which treats memory as a passive device is also examined. It is argued that memory is not a passive device, but it actively reconstructs the past. Causal theory of memory and other non-causal explanations are examined. It is argued that causal theory has an explanatory advantage over other theories. Trace theory, which has its base in neuropsychology, can be helpful in analysing causation and to answer some of the objections raised against representative realism and direct realism. The relationship between knowledge and memory is also analysed. It is argued that memory does not entail knowledge.

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Chapter 1

INTRODUCTION

1.1 Introduction

Memory is a fundamental cognitive process which is essential for all other cognitive functions including perception and language. As memory subserves many other cognitive functions, and is fundamental to human experience, some philosophers have gone so far as to claim that memory is a mark of being human. Norman Malcolm, in his analysis of memory, writes that “a being without factual memory would not have the ability to remember that he was about to do so-and-so or that he had been doing such-and-such. […] A being without factual memory would have no mental powers to speak of, and he would not really be a man even if he had the human form” [212:1963]. To properly understand the immense importance of memory in our lives one can look through the reported cases where memory does not function correctly. Squire and Kandel report the case of E.P, whose memory started severely debilitating after a viral illness. The report goes on to say that E.P., after his memory debilitated, “repeated the same comments and asked the same questions over and over again, and he could not keep up with conversations. He never came to recognise new visitors to his house, even after more than 100 visits. […] He was uncertain which house he had earlier lived in for 20 years, or that one of his grown children lived next door, or that he had two grand children. The illness had kept him from carrying his thoughts and impressions into the future, and it had broken his connection to the past, to what had happened in his life before. He was now confined, in a manner of speaking, to the present, to the immediate moment” [2: 2009].

In contrast to debilitating memory, there are reported cases where the subject finds it hard to forget the information acquired in the past, a condition known as *Hyperthymesia*. Jill

Price, a New York woman who was diagnosed with this condition, writes in her memoir, “The emotional intensity of my memories, combined with the random nature in which they're always flashing through my mind, has, on and off through the course of my life, nearly driven me mad. As I grew older and more and more memories accumulated in my mind, my memory became not only a horrible distraction in trying to live my life today, but also the cause of my terrible struggle to come to terms with my feelings about my past. The more memories were stored, the harder and harder it became to cope with the rush of recalled events. So many painful memories kept asserting themselves. The thousands of things my parents said to discipline me, for example, or blurted out when they were having a bad day or when I provoked them have never faded” [38:2009]. While examining a case of Hyperthymesia, Parker, Cahill and McGaugh reports that the subject has written to them that “Most have called it a gift but I call it a burden. I run my entire life through my head every day and it drives me crazy!!!” [35:2006]. Debilitating memory and not being able to forget are both equally crippling conditions.

Memory and its nature has been discussed in philosophy from the times of Socrates. In Plato’s *Theaetetus*, Socrates debates the nature of memory with Theaetetus and Theaetetus calls some of Socrates’s controversial claims about memory as “monstrous.” [163d5]. Another important analysis of memory was from Aristotle in his classic monograph *De Memoria.* Early modern philosophers including John Locke, David Hume and Thomas Reid discuss memory in detail in their works. They treat memory as a topic that holds importance next to perception. Reid writes, “In the gradual process of man, from infancy to maturity, there is a certain order in which his faculties are unfolded…, The external sense appear first; memory soon follows…, and this seems to be the best order we can follow in treating of them” [253:2006]. Contemporary discussions on memory usually focus on specific problems in philosophy of memory. Time and memory, memory and personal identity, memory and imagination, and memory and its relation with knowledge are some of the issues discussed thus. Further, these discussions usually concentrate on any

one type of memory. (i.e., propositional memory and knowledge, experiential memory and imagination, etc.) The important question, what is memory, is not considered by these discussions. My thesis is an attempt to consider this central question, 'what is memory'. The important theories, and views presented by philosophers for some of the basic questions regarding the epistemological and phenomenological aspects of memory will be analysed in this thesis. In this introductory chapter, I will briefly explain the questions that I have considered in my thesis. But before that, some of the basic conceptual distinctions and the classifications have to be explained.

1.2 Recollecting, Remembering, Imagining

When the subject *recollects* something, he brings back a certain experience to his mind. This re-experience in the mind is different from perception, or any kind of "original experience." For example, I can recollect the pain I usually have when I have a migraine attack. But this re-experience in the mind is nothing similar to the original experience - the real pain I endure during a migraine attack. Even if my recollection is vivid and strong, it will not be anything like the actual migraine attack. Recollection is different from Remembering. Recollection is a loose term. Recollection includes remembering, seeming to remember, incorrectly remembering and falsely remembering.[1] When I recollect something from the past, I might be remembering that thing incorrectly. Nevertheless, recollection tells the subject things about the past. It is because of this recollection one knows what happened,

[1] Incorrect memory is different from false memory. Incorrect memory is only possible in the context of correct memory. To quote an example from Malcolm, "If I remember a dinner party which occurred in such and such a place, at such and such a time, attended by these persons and those persons, then there is room for some of my recollections of the occasion to be incorrect - for example, that there was a lady seated on my left. But if my belief about the supposed past incident was completely false - no social occasion of even approximately that description had occurred - one could not say that my memory was incorrect or erroneous" [190:1963]. The first case here, where I get *some* of the details about the past wrong, is a case of incorrect memory. The second case, where the past incident did not happen at all, is a case of false memory. Incorrect remembering is similar to illusory perception and false remembering is similar to hallucinatory perception.

although if the thing recollected is false, the subject will be wrong in thinking that the thing recollected actually happened. Also, when I recollect the pain of migraine, I need not have a specific episode of migraine attack that I have had, in my mind. Strictly speaking, recollecting is not remembering the past, but imagining the past, guided by one's own past experiences. In the thesis, I will be using the term "recollecting" in this loose sense.

1.3 Classifications of Memory

One of the classifications of memory, is based on the period of time in which the information is retained: This classification, at first presented by William James in 1890, classifies memory into short term memory and long term memory. Short term memory is that type of memory in which small amounts of information is retained over a brief interval of time and long term memory is that type of memory that involves retention over more than a few seconds. [Tulving & Craig, 78:2000] Short term memory lasts a few seconds or minutes where as Long term memory can last days, weeks or sometimes the lifetime of the individual. When the subject learns something it is usually registered in the short term memory and then passed on to the long term memory, if needed. From a neurological view point, short term memory results from a functional modification in the ability of neurone to signal each other where as long term memory involves an actual anatomical change in the way the neurone signal. [Squire & Kandel: 2009]

Another classification is based on the conscious thought involved in remembering. According to the "content" or thought involved, memory is classified as declarative memory and non-declarative memory. Declarative memory, refers to memory of the facts, ideas and events where the information remembered can be brought to mind as a verbal proposition or image and can be 'declared'. This can be contrasted to non-declarative memory, which is a non-conscious memory ability, where the subject does tasks (like swimming or riding a

bike) without consciously thinking about them [Squire, 223:1992]. When we talk about memory, usually we mean declarative memory, as this is the type of conscious memory of a past event, of a person's name, or of a birthday. Declarative memory is further classified as semantic memory and episodic memory. Semantic memory is declarative memory of facts - facts about objects, places, concepts etc. Episodic memory, also called autobiographical memory, is the memory of a past experience. It concerns with the personal experiences or episodes that occurred in a specific place at a specific time. While semantic memory does not store spatial or temporal context of the fact remembered, episodic memory does.

Memories are also distinguished by the cue that triggers the recall of information. Cued recall happens when the subject remembers a past episode or a fact with the help of a cue - some information presented about the episode/fact. The information given here, the cue, is usually some contextual information and is not the same as the information that the subject is trying to remember. The cue triggers memory of the event/fact. Free recall is the type of remembering where the subject is not presented with any such information to help him recall. A third category, recognition, is the type of memory, where the subject remembers based on a cue that bears resemblance to the past experience or fact. Here, usually the cue presented contains the information that the subject is trying to remember.

In philosophy, memory is traditionally classified as three. Habit memory, experiential memory and propositional memory. Habit memory, also called skill memory or procedural memory, is remembering how to do something. In habit memory, one need not consciously recollect anything from the past. Here, remembering consists in the successful performance, 'getting it right' or 'getting it done.' Examples of habit memory is swimming or riding a bike. It is a previously acquired and retained skill and is a matter of being able to perform efficiently when the need arises. To ride a bike, one need not remember any past occasion on which one rode a bike. A previous occasion on which one one rode the bike might assist one's remembering, but this in no way is necessary. If one's memory performs

well, one need not recall a previous occasion in which one did the thing in question. A J Ayer says that, the better one remembers, “the less likely it is that they will have [a previous occasion] in mind; it is only when one is in difficulties that one tries as it were to use one’s recollections as a manual” [135:1990].

Experiential memory, also called personal memory, is the memory of events that one has personally experienced in the past. In experiential remembering, one has to remember what happened in the past, and also remember what it was like. Norman Malcolm defines personal memory thus. “A person, B., personally remembers something, *x,* if and only if B previously perceived or experienced *x* and B’s memory of *x* based wholly or partly on his previous perception or experience of *x”* [215:1963]. Experiential remembering is usually accompanied with an ‘image’ of the past event, and involves emotions and feelings (the qualitative experiences or ‘qualia’) about the past in varying degrees. Classical philosophers usually had experiential remembering in mind, when they analysed memory. Thus, Aristotle says that one cannot “remember the future” (which is possible in the case of factual memory), John Locke holds that memory is a power of mind to revive perceptions with an additional perception attached to it that ‘it has had them before’, and David Hume says that memory is the reappearance of those perceptions that the mind have had in the past, without losing their vivacity (reappearance of ‘impressions’ as Hume calls them). Hermann Ebbinghaus, one of the pioneer psychologists who took the study of memory into the laboratory, defines experiential memory as “calling back into consciousness a seemingly lost state that is then immediately recognised as something formerly experienced” [quoted by Bernecker, 14:2010].

A third class of memory is propositional memory, also called as semantic memory or factual memory. Propositional memory is the memory of facts. Propositional memory is the type of memory where we use the word “remember” followed by the clause “that p” where p can be substituted by any sentence expressing a proposition. The fact thus remembered can be in

any tense. It can be about the past (S remembers that John F. Kennedy was assassinated), it can be about the future (S remembers that his birthday is coming up), or it can be tenseless too (S remembers that 3+2 = 5). Prima facie, to say that one can *remember* the future looks like an implausible suggestion. But even if the remembered proposition is about the future, the claim “I remember that p” includes a reference to the past. It can be treated as a short form of saying: "I remember [that I learned - and I have or have not completely forgotten the occasion on which I learned it] that p.” One need not have a mental imagery of the fact that he is remembering. Also, one need not remember the spatial and temporal context in which he learned the remembered fact. When one remembers that Kennedy was assassinated or that one’s birthday is coming up, one need not be recollecting any past event; nor they need an image. Propositional memory holds an important position in the concept of memory. Some philosophers claim that every other type of memory in some way or the other, implies propositional memory. Norman Malcolm says that he has “not been able to discover any form of memory which does not …[imply] factual memory” and says that it is logically impossible for one not to have propositional memory and that “a being without factual memory would have no mental powers to speak of, and he would not be a man even if he had the human form” [222:1963].

A point to be noted here is that sometimes it is difficult to differentiate between propositional memory and experiential memory. Consider, for example, my memory claim: “S remembers that he had eaten bacon and eggs for breakfast.” Though the verb ‘remember’ is followed by the clause ‘that’, though it is of the schema, “S remembers that p”, if S has a mental imagery associated with this memory, one will be inclined to say that it is a case of experiential memory. But classifying this as experiential memory, wholly based on the imagery associated with it, is problematic. Empirical experiments conducted by psychologists suggest that mental-imagery can be completely absent in some people. One of the earlier studies in this was conducted by Francis Galton. Some of his respondents reported that the visual imagery is “zero” and that “there is almost no association of

memory with objective visual impressions." (As quoted by Schwitzgebel [43:2002])] A more recent study by McKelvie (1995) reports that while remembering, some of the subjects have imagery perfectly clear and as vivid as vision while some has "no image at all, you only 'know' that you are thinking of the object." Such difficulties motivate some philosophers to say that the distinction between both types of memory is unclear. Bernecker says that "there is no way of drawing a sharp and intuitively compelling boundary between experiential and propositional memory" [19:2010].

In my thesis, I will be following the philosophical classification of memory, i.e., experiential memory, propositional memory and habit memory. Habit memory will not be analysed in detail. I will use the terms semantic memory, propositional memory and factual memory interchangeably. Terms episodic memory or event memory will sometimes be used instead of experiential memory.

1.4 Role of Images in Remembering

As we saw, some scholars claim that imagery is of prime importance in experiential memory. Others claim that there need not be imagery at all. But even if there are no "visual images" present in a memory experience, there can be other types of images. For example, the 'image' that accompanies experiential memory need not be a visual image always. When I remember a melody I had heard, the 'image' might be an auditory one, and when I remember the feel of the surface of my table, it could be a tactual 'image'. The above empirical studies conducted by psychologists analysed the presence of visual imageries. The point behind the idea of an "image" in philosophy of memory is that one should 'relive' or 're-experience' the past while experientially remembering it. Wollheim compares the imagery involved in such mental states with a theatrical performance, where the subject is an "internal dramatist" who draws upon the past event and acts, i.e., represents to himself the various characters and experiences [72:1984]. Even those philosophers who hold that

an image which *represents* the past is not required in remembering, do not reject the presence of memory-images altogether. Imagery, in this sense, has been the basis for traditional accounts of memory. Some philosophers have tried to answer the central question *what is memory,* based on imagery.

There are various difficulties in studying an image and examining the contents of an image. Firstly, the contents of an image can be vague, uncertain and elusive. The more one tries to determine the accuracy of an event from the memory-image that is presented, the more it becomes elusive. Schwitzgebel writes, ”Necessarily, the periphery [of an image] is elusive: As soon as you move your attention toward the periphery to determine what it is like, the periphery moves somewhere else. Nevertheless, the periphery appears to constitute a significant part, if not the bulk, of our conscious experience. […]; so if you are wrong about the periphery, you are wrong about a major part of your conscious experience” [39:2002]. It should also be noted that the characteristics of the image can only be described by a second order act. That is, when the subject produces in himself an image, he can analyse the image as an image only by turning his attention away from the contents of it. He can describe the object of the image; if the object of the image is an event, he can describe the details of the event, the context of the event, and maybe, the time and place of the event. But to describe the characteristics of the image as image, he has to turn his attention from the object of the image and examine how the image is given. [Sartre, 4:2010].

Something to be noted here is that the presence of image is not an exclusive characteristic of memory experience. “It is not possible to think without an image”, says Aristotle. Remembering shares its fundamental structure with a diverse array of experiences including imagination. In his study on Imagination and the imagistic nature of imagination, Sartre says that memory and imagination are dichotomous but also states that “Certainly, the memory, from many points of view, seems very close to the image” [181:2010]. Sartre’s examples of images in his analysis of imagination were primarily from memory than from

imagination.[2] The images in imagination and memory are so much interrelated that some say Sartre's phenomenological description of imagination is wholly applicable to recollection. [Levy, 143:2012]. This similarity in the phenomenology of memory and imagination sometimes makes it difficult for us to differentiate genuine memory from imagination, incorrect-memory and false-memory. This difficulty also poses problems for certain theories of memory as we will see. Some philosophers attempt to solve this problem by trying to find a memory-mark in the memory-images, a mark which says that the image is a memory-image, thus differentiating it from other images. Thus, Hume says that a memory-image is more vivid than the imagination-image and that they maintain their "order and form" in which its objects are presented [11-12:2000], Russell speaks of "feelings of familiarity" and "feelings of pastness" that comes along with the image [163:2007], and Harrod speaks of "liveliness" of the image [51:1942]. Such attempts have their own limitations, and cannot convincingly explain the difficulty one faces in differentiating memory-images from other images. The image, or the experience alone cannot tell us conclusively about the nature of the image. As Don Locke writes, "So long as it is possible for people to be mistaken, or even unsure, about whether they are remembering, as opposed to imagining, then it seems it cannot be anything about the experience itself that tells us which it is" [9:1971].

Despite these difficulties, "image" is of central importance in the analysis of experiential memory for many reasons. Chiefly because there are experiences which are verbally indescribable, and can be recalled only with the aid of an image. The taste of a candy, or a melody heard in the past, or the experience of a splitting headache, can all be called back

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[2] Sartre says that he was sometimes able to draw his "examples from memory to better understand the nature of image." [181:2010]. But some of his other examples, specifically chosen to illustrate the images in imagination are also from memory. To show the "*given-absent*" nature of imagination Sartre chooses an example of the image of a dead friend. He says, "If the image of a dead loved one appears to me abruptly, there is no need for a 'reduction' to feel the ache in my heart; it is part of the image. It is the direct consequence of the fact that the image gives its object as a nothingness of being." The image in this example is more similar to a memory-image than of an imagination-image.

to mind only with the help of an (visual, tactual or auditory) image. In their seminal paper *Remembering,* although Martin and Deutscher says that it is a mistake to insist that a person must have mental images of what he remembers, they admit that if someone cannot form a mental image of the sound of a musical instrument, or the look of affected concern on a person's face, then one may well be completely at a loss to recall such things in any other way. [165: 1966] In such cases, images are not aide-mémoire - but what constitutes the memory itself.

In other types of memory however, image does not go to constitute the memory-experience. In propositional memory and in habit memory, one need not bring back the past occasion to one's mind for a successful performance. When I remember that India was partitioned in the year 1947, I need not remember the occasion in which I learned this fact. I might have an image of reading a history book, or learning this fact in the school. But that image is not what constitutes my memory. I can remember the fact without having an image at all. The remembering here, consists in getting the fact right. The more easily I remember, the more correctly my memory functions, the less likely it is that I need assistance of an image. AJ Ayer writes, "To have learnt a thing properly is to be able to dispense with them" [137:1990].

1.5 Remembering, Representation, Metarepresentation

To claim that I remember p, I must not only represent p, but also know that I had represented p in the past. That is, there is a second-order representation or a meta-representation in my claim. If I say that I *remember* Gandhi was assassinated, my claim includes two believes. First, I believe that Gandhi was assassinated, and second, I believe that I have learned in the past that Gandhi was assassinated. If this was not learned in the past, if I have just read this fact in a book, I cannot claim that I am remembering it.

Erroneous memories can happen if the meta-representational claim is false. An example suggested by von Leyden [60:1961] goes thus: S sees crowd panicking in Trafalgar Square. S interprets this scene as a stage setting of a film and falsely believes that a film was being shot at Trafalgar square. S subsequently claims to remember that there was a film shooting at Trafalgar square. Here, the memory claim is erroneous because the meta-representational claim is false. Strictly speaking, memory is not at fault here, as the meta-representational claim is false because the original perception was faulty. Leyden says that "it is the inheritance of a mistake, not a mistake of inheritance" [62:1961].[3]

1.6 Truth in Memory:

For the memory claim to be true, 1) the content of the thought has to be true and 2) one should have represented the content in the past.

For me to remember that the last lunar eclipse was on October 18, 2013, it must be true that the last eclipse was on October 18th. I cannot say that I remember this unless it is so. Similarly, I must also have learned this information in the past for me to remember this date. If I have just learned this, I cannot claim that "I remember". These two conditions are not independent. My present thought content must be true because my past thought content was true. If my past thought was not true, the present reproduction of it cannot be true, and it will not qualify as memory.

1.7 Chapters

1.7.1 Representative Realism, Direct Realism, Trace Theory

[3] A similar example is given by GEM Anscombe in her paper *The Reality of the Past*. [107:1981] Both these examples go on to show that a functional fault of memory need not be the only reason for errors in memory.

What is it to recollect something? What processes does it involve, and what is the nature of it? Can memory provide us with knowledge of the past and if it can, how does it do it? Any account of memory has to consider these questions and has to answer them. One of the obvious answers is that when I remember something, I recall that something and bring it to my mind. This natural answer is the basis for two important theories on memory: Representative Realism and Direct Realism. The first chapter of the thesis will be an analysis of these theories.

According to David Hume, *perceptions of the human mind* or the element in our mind to which our focus of attention turns when we think, can be classified into two. Impressions and Ideas. Impressions are those that enter with strength and intensity under which all our perceptions or sensations belong. Ideas are reappearance of these impressions without their original vivacity. Ideas are faint *images* of impressions, which lack strength and intensity. If the reappearing impression loses its entire strength and intensity, it is a perfect idea. The reappearing impression can also retain a considerable degree of its vivacity, and can be between a perfect impression and a perfect idea. According to Hume, if the reappearing impression retains its intensity, it is memory and if it reappears without its intensity as an idea, it is a case of imagination. This account, where a vivid *image* which represents an event that has already happened re-appears in the mind, is the basis of representative theory.

In his analysis of memory, Don Locke [3:1971] summarises Representative theory thus: “To remember is to undergo a certain sort of mental experience. In particular, it is to experience an image, a memory-image, which reproduces some past sense-experience. The image might even be said to be literally a reproduction of the original sense-impression, which has, in the meantime, been stored away in the mind. This image provides us with the information we are then said to remember; it is because we have and experience the image that we have the particular piece of memory-knowledge.”

The representative realist holds that, in recollection, it is an image that one is directly aware of. This image is the *object* of one's experience. The past constitutes the memory-image and one's relation to the memory-image constitutes one's memory experience. While remembering, we are aware of this image and this image gives us information about the past. We are in contact with the past *via* this image, and it is in this sense the awareness of the past is indirect. But if what we are aware of is the image that occurs in the present, that would mean that our awareness is not of the past. The awareness is not of what has happened in the past, but is of what is happening in the present.

This theory raises a lot of questions. The most important question that a representative realist will have to answer is that, how can an image or representation that happens now, in the present, give us the awareness of the past, something that does not happen now, that is not present now.

In contrast to representative realism, there is the theory of Direct Realism, which avoids the difficulties that a representative realist faces. According to direct realism, an intermediary image is not required for remembering. While remembering, one is having a direct awareness of the past, without any intermediary image. One of the early summarisations of a direct realist position comes form Thomas Reid in his work, *An Inquiry into The Human Mind.* Reid writes, "Suppose that once, and only once, I smelled a tuberose [and] next day I relate what I saw and smelled. When I attend as carefully as I can do what passes in my mind in this case, it appears evident that the very thing I saw yesterday, and the fragrance I smelled, are now the immediate objects of my mind, when I remember it. Upon the strictest attention, memory appears to me to have things that are past, and not present ideas, for its object" [28:1997]. According to J Laird, another direct realist, "memory does not mean the existence of present representations of past things, it is the mind's awareness of past things themselves" [56:1920].

There is nothing that mediates one's access to the past, which means there are no questions about the nature and characteristics of an intermediary image, and the relationship between this image and the past. That is, direct realist avoids the difficulties that a representative realist face, but this position comes with its own set of problems. For example, how can the subject have an immediate knowledge of a past event *now*, at the time of remembering as the past event cannot exist *now?*

Trace theory is not a theory which is very different from representative realism. It is a scientific theory which tries to explain the physical presence of a representation in one's brain. This theory achieves significance as this can explain many difficulties faced by a representative realist. In representative view, there are two steps involved in the process of remembering. Firstly, the rememberer is conscious of the image. Secondly, the rememberer then interprets the past event from this image. This motivates some philosophers to claim that the representative view is a form of dualism. [Woozley, 40:1949]

Trace theory postulates engrams or memory traces in brain, which are representations of the past events and experiences. For the rememberer, there is no need to go beyond this representation to become aware of the past. That is, memory involves a representation of the past, but it need not involve an awareness of the representation itself. We are not conscious of the traces when we remember an episode from the past. The 'interpretation' of these traces and the translation of these traces to the information about the past event, happens unconsciously. We need not go beyond 'the given' and in this sense there is no dualism involved in remembering.

In this chapter, I attempt to examine representative theory and direct realist theory, the problems faced by these theories and the attempted solutions for these problems. I attempt

to show that a proper understanding of trace theory can successfully solve many of these problems.

1.7.2 Copy Theory

In the beginning of this introduction, I said that recollecting does not amount to remembering. I also said that recollecting is imagining the past, guided by one's own past experiences. As one's own past experience is involved in recollection, a representative element is present in recollection. But this element will not make recollection a case of remembering. What makes a case of recollection, a case of remembering? Genuine remembering has to copy the past and reproduce it at a later time. Our every day notion of remembering is something similar to that of the function of a photocopier. At t_2 S remembers that p only if p was true at t_1 and p is true at t_2. As one cannot *remember* something which is not true, some philosophers hold a view that memory is a passive, input-output device, which reproduces a copy of the past thoughts and experiences. I examine this view in my second chapter.

An early version of the copy theory of memory was first proposed by Aristotle in his *De Memoria.* Aristotle compares a memory image with the image sealed by a signet ring in hot wax. From there emerged an entire tradition in which memory is reduced to a process of registering and storing impressions. This tradition is still very much alive. This model of memory stands against the model of "activism" where memory-images and memory as such, is not a duplication of the past thought, but an active reconstruction of the information. That is, memory reconstructs the past experience or thought and does not merely *copy* the past thought content [Bartlett (1932), Janet (1928)[4]]. This reconstructive nature of memory, they claim, is the reason behind difficulty in distinguishing memory from imagination or confabulation.

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[4] As quoted by Casey [15:1987]

There are many arguments raised against copy theory of memory. If the reproduction of a past event is in any way different from the original event, it can be argued that the copy theory is incomplete. Also, we sometimes have episodes of summarised memory, where memory comes up with a summary of a certain period. Such summarised memories are also cited as an objection to copy theory.

I examine these objections raised against copy theory. My conclusion in this chapter is that most of the arguments raised against copy theory are not serious threats to the theory. I conclude that the theory is incomplete, for summarised memory is sometimes part of the function of memory.

1.7.3 Memory Causation

Even if it can be shown that copy theory is not faulty and the objections raised against copy theory are not a serious threat to the theory, merely copying and reproducing the past will not go on to make genuine memory. The reproduction of the past event, or the present memory-experience should be *appropriately* connected to the past event for it to be a case of memory.

What does an *appropriate* connection mean? In contemporary discussions, this means an appropriate causal connection. That is, memory should be causally connected to the remembered event. If it is a case of propositional memory, it should be causally connected to the past time at which the subject learned the information. However, causal connection is not the only *appropriate* connection between past representation and the present representation. There are philosophers who hold the view that a causal connection is not needed at all. Before 1960s, many philosophers held a view that our concept of memory did not require a causal connection between the past experience and the present recollection.

This view was advocated by Ryle (1949), Malcolm (1963), Munsat (1966) and Zemach (1968).

It was Martin and Deutscher's seminal paper on memory, *Remembering* [1966], that brought the causal condition to the forefront of the philosophical and psychological discussion on memory. In their paper, Martin and Deutsher argued against the claim that a causal process is not required for the concept of memory. I analyse Martin and Deutscher's version of causal theory, and my conclusion here is that this version of causal theory is problematic, as the argument is from counterfactuals. After questioning M&D, I examine other causal accounts and show these have problems too. In the chapter I also consider some of the non-causal explanations of memory-retention. I conclude that the non-causal theories are weak and can be proven faulty. Though causal theory and the present arguments for it are problematic, it clearly has an explanatory advantage over non-causal theories.

1.7.4 Knowledge and Memory

In this chapter, I analyse how memory can provide knowledge of the past. In our everyday life, we usually trust our memory-cognitions. We usually consult our memory and take our memory-cognitions at face value. We think that if we remember that p, we know that p. This motivated some philosophers to hold a view that propositional memory entails knowledge. According to them, if I remember that p, I know that p. In his detailed analysis of memory, Norman Malcolm says, "A person B, remembers that *p* if and only if B knows that *p* because he knew that *p*." [223:1963]. Similarly, Robert Audi states, "if you remember that we met, you know that we did." [67:2011]. Roger Squires [1969] and Michael Dummett [1996] viewed memory as retention of knowledge. The received view in philosophy of

memory is that, if one learns that *p* at t_1, and remembers that *p* at a later time t_2, one knows that *p* at t_2.

The alternate view, the view that memory does not provide knowledge, is not a new one. In Plato's *Theaetetus,* Socrates says that one must be directly acquainted with the object, to *know* that object. In the case of memory, such a direct acquaintance is impossible, and thus it is impossible to *know* what is remembered. That is, memory, even when it is accurate, does not provide us with knowledge. [163d5]

The view that is prevalent in the contemporary discussions on memory, is the epistemic theory of memory, the view that memory provides us with knowledge of the past. This is also the common sense view. Bernecker summarises the epistemic theory of memory thus. "To remember that p is to know that p, where this knowledge was previously acquired and preserved. A source other than memory is responsible for the original acquisition of knowledge that p. Memory preserves rather than generates knowledge" [67:2010].

Since the three conditions, belief, justification and truth are individually necessary and jointly sufficient for the traditional concept of propositional knowledge, these three conditions have to be satisfied in propositional memory too. Among these conditions, the third condition, the truth-condition, is unproblematic. One can know or remember only what is the case. If the case is not-p, then S's cannot remember that p. He might think that he remembers or might even claim knowledge, but cannot actually remember. The other two conditions, justification condition and belief condition are not so. These conditions need to be examined and if it can be shown that one can remember that p though one did not justifiably believed that p in the past, or that one can remember that p though one does not justifiably believe that p in the present, the epistemic theory fails. I analyse the justification condition and the belief condition in the epistemic theory of memory. My conclusion here is that it is possible for one to remember that p, without believing that p. One can also

remember that p, without having justification for p. In sum, one can remember that p, without knowing that p. I conclude that epistemic theory of memory fails.

My final section summarises the conclusions of the earlier chapters. I also try to spell out the wider consequences of my conclusions. That is, whether and how it will have an impact on habit memory. For example, relation between knowledge and habit memory is an interesting problem. Even if we can successfully argue that propositional memory does not entail knowledge, this argument will fail in the case of habit memory. For, in habit memory, remembering is giving a successful performance. I will also attempt to explain how we can see the distinction between imagination, recollection and remembering in a better light, based on the analyses.

Chapter 2

THEORIES OF MEMORY

2.1 Introduction

A philosophical theory of memory attempts to answer the question, what happens when we remember something? This is different from the question about the neurological process that is involved in recollection. Neurologists have their explanations about the internal processes that happen in one's brain when one recalls something. A philosophical theory of memory is different from this. It is primarily concerned with the *mental occurrences* that happen when one remembers a past event. These mental occurrences might be connected to or rooted in the neurological changes in one's brain. In philosophy, however, *remembering* and *memory* are the terms primarily used to denote the mental occurrences that happen when one remembers something.

When we examine remembering, there are a few prima facie observations we can make without much difficulty. While remembering, one calls back something from the past to one's mind. Both in experiential memory and propositional memory, this recall has a number of similarities with the original events and thoughts. In experiential memory, recalling is similar to the original experience from the past. While experientially remembering, in a sense, we are re-experiencing the past event and the remembering might accompany the past feelings and emotions. In propositional memory, the content of the recalled thought is similar to the content of the original thought. The recall is also different from the original experience in a number of ways. The recalled experience is weak, vague and less vivid than the original experience. When one recalls a headache one had on the previous day, the recollection is completely different from the actual headache that one had. Nevertheless, there is something that the subject is aware of, when he recalls something from the past. These are the basic observations that we can make about memory. From these obvious and straight-forward observations, come two major theories of memory; Representative Realism and Direct Realism. Both these theories hold that:

1. There is something that the subject is aware when he remembers.
2. What the subject is aware of is the object of memory. Representative realists argue that when one remembers, the object of memory is an image (or an 'idea', in Humean terms) of the past. The image re-presents the past to the subject and the subject's awareness of the past is through this image. In contrast to this view, direct realists hold that, what the subject is aware of when he remembers is the past itself and there is no image or representation that mediates his awareness of the past.

I will start with two major arguments for representative realism in perception. These are important in memory too. I will then analyse representative realism in memory and will examine the arguments raised against this theory. The direct realist theory of memory and the problems in this theory will be examined next. After this, trace theory of memory will be examined. Strictly speaking, trace theory is not a philosophical theory. But this theory has a few interesting observations which are philosophical in nature. In this chapter I do not argue for or propose a new theory. The point I am trying to make is that both the theories - representative realism and Direct Realism - are flawed and cannot satisfactorily reply to the arguments raised against them.

2.2 Argument from Illusion and Argument from Hallucination

Representative realism is by far the most widely held theory of memory. One of the first advocates of representative realism was Aristotle. In his *De Memoria* Aristotle says that "memory, even the memory of the objects of thought, is not without an image" and that such images are "a sort of copy and a reminder" of another thing [449b30]. This "mental image" one has while remembering, is given central importance in the analysis of memory by David Hume to Bertrand Russell. In many ways this view is similar to the sense-datum theory of perception. In perception, according to the sense-datum theory, when a subject perceives a worldly object which has a certain sensible quality, he is aware of something which possesses that sensible quality. This awareness is his

object of experience. The object of experience is distinct from the worldly object. Representative realists say that the object of experience (that which is *given* to the senses) is sense-data. Sense-datum theory is motivated by two important arguments, the argument from illusion and the argument from hallucination. It would be helpful to explain these two arguments briefly here, as these arguments are important in memory in many ways. Firstly, in memory, there are cases which are similar to hallucination and illusion. Secondly, the difficulties that these arguments raise are important in memory too.

Illusion is defined as a "perceptual situation in which a physical object is actually perceived, but in which that object perceptually appears other than it really is" [Smith 23:2002]. Here, the object is incorrectly 'seen' by the subject. For example, if a red coloured ball is seen as an orange coloured one, it is a case of illusion. Hallucination is when "it seems to the subject as though something is seen but where in fact nothing is seen" [Fish 3:2010]. An example would be Macbeth's hallucination of a dagger.

The arguments from illusion and hallucination attempt to endorse the Common Factor principle, which says that phenomenologically indistinguishable perceptions, hallucinations, and illusions have an underlying mental state in common. To take an example from HH Price [3:1932], suppose the subject sees a tomato. There are a lot of things that he can doubt. What he sees might be a reflection of a tomato or might be a piece of wax resembling a tomato. Consider all these three possibilities: The subject is seeing a real tomato kept in front of him; the subject is seeing a piece of wax resembling a tomato; the subject is hallucinating that he is seeing a tomato. According to the common factor principle, no matter in which category the visual experience falls into, the underlying mental state is the same.

When the subject perceives, he is aware of something. This principle is the first premise of both the arguments. Robinson calls this the *phenomenal principle* and defines it thus: "If there sensibly appears to a subject to be something which possesses a particular sensible quality then there is

something of which the subject is aware which does possess that quality" [32:2001]. While having a visual experience of a tomato, there is something that which the subject is aware of. He can doubt many things about what he sees. What the subject cannot doubt however, is that "there exists a red patch of a round and somewhat bulgy shape, standing out from a background of other colour patches, and having a certain visual depth, and that this whole field of colour is directly present to [his] consciousness." [Price, 3:1932]

The subject is aware of something in illusion and hallucination too; there sensibly appears to him to be something which possesses a particular sensible quality. If it is a case of hallucination, there is no worldly object for the subject to perceive. If it is a case of illusion, the subject is seeing the object *incorrectly* or '*as it is not'.* That is, in both these cases, it is not a worldly object that the subject is aware of as it is. But there is something that the subject is aware of as it is. Thus this awareness seems to be of a non-physical mental-object. This non-physical object is commonly referred to as sense-data. This, along with the common factor principle, gives us the conclusion that in veridical perception the subject is aware of sense data.

The argument is summarised by Robinson[56 -57:2001] as follows:

1. In some case of perception, physical objects appear other than they actually are - that is, they appear to possess sensible qualities that they do not possess.
2. Whenever something appears to a subject to possess a sensible quality, there is something of which the subject is aware which does possess that quality.

Therefore

3. In some cases of perception there is something of which the subject is aware which possesses sensible qualities which the physical object the subject is purportedly perceiving does not possess.

4. If *a* possesses a sensible quality that *b* lacks, then *a* is not identical to *b*.

Therefore

5. In some cases of perception that of which the subject is aware is something other than the physical object the subject is purportedly perceiving.
6. There is such continuity between those cases in which objects appear other than they actually are and cases of veridical perception that the same analysis of perception apply to both.

Therefore

7. In all cases of perception that of which the subject is aware is other than the physical object the subject is purportedly perceiving. [What the subject is aware of, is then called sense-data.]

Coming back to memory, consider the cases of false memory and incorrect memory. Incorrect memory is similar to illusion. Illusion is where the subject sees the object incorrectly or 'as it is not.' If a red wax model is incorrectly perceived as an apple, it is a case of illusion. In memory, if I recall some of the details from the past incorrectly, and still claims remembering, I am remembering 'as it is not.' It is a case of incorrect memory. Incorrect memory is different from false memory. False memory is similar to the cases of hallucination. In hallucination, subject is seeing nothing though it seems to him that he is seeing something. There is nothing in the outside, mind-independent, world that resembles his visual experience. In false memory, there is nothing in the past that resembles the subject's recollection. Norman Malcolm explains the difference between both these types of memory thus: "If a man told us that once he lunched with Winston Churchill, and then it turned out that it was breakfast, not lunch, his memory was incorrect. […] If he had never met Churchill at all, and had indeed never encountered any of the great ones in the world, and always took meals with his wife only, then there seems to be *no respect* in which his alleged memory of having lunched with the Prime Minister is *incorrect.* And also there is no respect in which it is

correct" [190:1963]. In the former case the subject is *incorrectly* remembering and in the latter case, he is *falsely* remembering. The common factor principle of perception is applicable in the case of memory too. That is, the cases of incorrect memory, false memory and genuine memory have an underlying mental state in common.

The theory of sense-datum is motivated by the phenomenological considerations. It concludes that while having a visual experience, the subject's immediate awareness is of a non-physical private thing called sense data. In memory however, it is indisputable that, in memory, the subject's focus is turned inwards. In memory, the subject's focus is not towards his environment, nor is there a question of mind-independent entities. Memory-experience is a mental event and while remembering, the subject's attention is directed towards his own mental event. The representative theory of memory aims to explain this mental event.

The object of memory, the mental event that we attend to when we remember, refers to the past[5]. Yet this mental event is happening now, in the present. A layman's view would be that, while we remember, the actual event that had happened in the past is the object of memory. That is, if I am remembering a wedding party that I had attended last year, what is immediately before my mind is that very same event. This ordinary view raises some difficult questions. Firstly, how can an event that occurred in the past and concluded in the past, be present to my mind now, at the time of remembering? How can the past which does not exist at the time of remembering, be the object of remembering? Secondly, if my immediate awareness is of the actual event in the past, then how do I explain incorrect remembering? Sometimes incorrect memory and false memory are indistinguishable from genuine memory. While remembering the wedding party, I might

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[5] In propositional memory, it seems possible that one can remember propositions about the future, (S remembers that his birthday is coming up next week) or tenseless propositions (S remembers that the value of *pi* is 3.14). But even such propositions contains a reference to the past. It refers to the time in which S has learned the proposition. Woudenberg [119:1999] writes that when S says "I remember that next year will be election year", it is a shorthand for "I remember that I learned [and I have or have not completely forgotten the occasion on which I learned it] that next year will be election year".

misremember the suit I wore to the party or the people I met in the party. This cannot happen if the actual event is present to my mind. These problems with the ordinary view motivate a representative realist to hold that, while remembering, the subject's immediate awareness is not that of the actual event in the past, but an image which represents the past event. The object of memory is an image of the past.

However, we know that sometimes it is difficult to distinguish memory from imagination. We find it hard to distinguish genuine memory from incorrect memory or false memory. The mental-event that happens in these three cases, genuine memory, false memory and incorrect memory, seems to be the same. In all these cases, we are aware of something, and we take it to be something from the past. That is, mental-image is not a feature exclusive to memory-experience. We have images of a lot of things that we do not remember too. Thus, to make the theory feasible, a representative realist will have to find a way to distinguish genuine memory-images from other images. I will come back to this shortly, but before that I will explain the notion of *representation* involved in the representative realism.

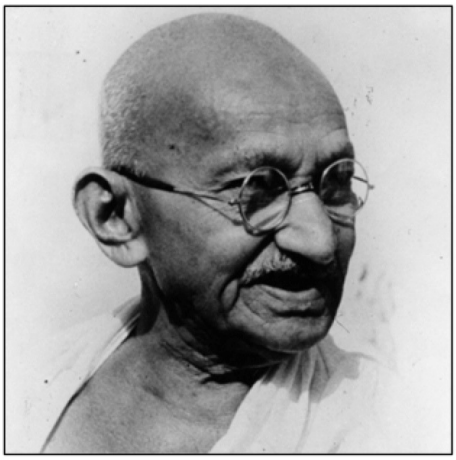

Fig 1.

Mohandas K Gandhi
(1869 – 1948)

Gandhi was a political leader who was in the forefront of the Indian Freedom movement. Employing non-violent civil disobedience, Gandhi led India to independence and inspired movements for civil rights and freedom across the world. He is also known as Mahatma Gandhi
(The great-souled Gandhi).

Fig 2.

Consider the above two images. Both fig 1. and fig 2. 'tells us' something about Gandhi. Fig. 1 does it by using a photograph, and fig 2 does it by using words and language. Both these images *represent* Gandhi. These two images tell us different things about Gandhi. The first image, the photograph, tells us that he wore spectacles, that his head was shaven and that he had a moustache. The second figure, tells us that he was a political leader who took part in the Indian freedom movement. The first figure does not tell us anything about his political views and the second figure does not tell us anything about his appearance. We can say that, the *content* of the first figure is Gandhi's appearance, and the *content* of the second figure is about his political leadership. Representation's *content* is the information that the representation provides us with. It is what the representation 'tells us'. Sometimes the representation can also misinform us. For example, if the second figure had said that Gandhi was the prime-minister of India, it would still inform us of something - but the information is wrong. In that case, it would be a misrepresentation.

One can also say that the first figure is a bunch of colours and shades presented in a certain way. If we show the first image to someone who has not seen the images of Gandhi, he might take it to be the image of a smiling old man. Similarly, we can show the second figure to someone who is not familiar with any forms of written language and can tell him that this is how words are written. For him then, it will *represent* written language. When we say that the image represents Gandhi, it does not mean that it is a feature of the image itself. It is something that we interpret. When we see

the first figure as that of Gandhi, we take the image to be in a certain way. The point is that, strictly speaking the image is not representational. It does not represent anything. When we take that to be representing something, it is a way in which we interpret the image rather than that something being a feature of the image itself.

2.3 Representative Realism

I will now turn to the accounts of representative realism in memory. According to David Hume, *perceptions of the human mind,* or the mental entity to which our focus of attention turns when we think, can be classified into two. Impressions and Ideas. Impressions are those that enter with strength and intensity, under which all our perceptions or sensations belong. The reappearance of impressions are called ideas. Ideas are faint *images* of impressions, which lack strength and intensity. If the reappearing impression loses its entire strength and intensity, it is a perfect idea. The reappearing impression can also retain a considerable degree of its vivacity, and can be between a perfect impression and a perfect idea. If the impression reappears without any of its strength and intensity, it is imagination and if the reappearance retains some of the strength and intensity, it is memory. This account, where an *idea* or an *image* that re-appears in the mind represents an event that has already happened, acts as the basis of representative theory in all the later philosophical analyses. In his analysis of memory, Don Locke summarises Representative Theory thus:

“To remember is to undergo a certain sort of mental experience. In particular, it is to experience an image, a memory-image, which reproduces some past sense-experience. The image might even be said to be literally a reproduction of the original sense-impression, which has, in the meantime, been stored away in the mind. This image provides us with the information we are then said to remember; it is because we have and experience the image that we have the particular piece of memory-knowledge” [3:1971].

There are a number of questions that need to be examined here. Firstly, what is the nature of this image? Secondly, in what sense is awareness of the past indirect? Thirdly, how can we be aware of this image or representation? Fourthly, how can an image or representation that happens now, in the present, give us the awareness of the past, something that does not happen now, that is not present now?

2.4 Memory-Images in Representative Realism

It is important to note that the 'image' that we talk about need not be something similar to a photograph. It need not necessarily be a visual one. Suppose I remember a song.. My focus here is not on the visual details, but on the song. I can remember hearing the song without any of the visual details. That is, the image that I would have here would be an auditory image. Similarly, if I remember running my hand over the surface of the table a while ago, my focus is not on the visual details, but how I felt while running my hand over the table. The image here would be a tactual image. When Hume, and other representative realists, talk about an image, they mean an image in this general sense.

We saw that the representative realist holds that in memory-experience, it is an image that one is immediately aware of. This image is the *object* of one's experience. The past determines the memory-image and one's relation to memory-image constitutes one's memory experience. While remembering, we are aware of this image and this image gives us information about the past. We are in contact with the past *via* this image, and it is in this sense the awareness of the past is indirect. But if what we are aware of is the image that occurs in the present, that would mean that our awareness is not of the past. The awareness is not of what has happened in the past, but is of what is happening in the present.

One way to reply to this objection is by treating the image as a reproduction of the original impression. If the memory-image is something that is stored away in a mental repository and if it is something that can be called back when needed, then the reappearance and subsequent awareness of that image, even if it occurs in the present, can bring awareness of the past. This metaphor of a store-house or repository is widely popular among the philosophers who analysed memory. Endel Tulving quotes Fenaingale's model of memory and says, "The memory may be compared to a warehouse stored with merchandise" [5:1983]. Tulving further comments that the "Spatial Analogies of memory are still popular in our day and the successful operation of memory is greatly dependent upon the organisation of the material in store" [Tulving and Donaldson, 1972]. Gruneberg and Peter Morris [1978] compares memory system with a tape recorder. Other comparisons include archives, libraries, wine cellars, warehouses, palaces, treasure chests and vaults, mystic writing pad, conveyor belt, dictionary, garbage-can etc. ([Draaisma 3:2000], Roedigar [233:1980]). St. Augustine says "when I am in this storehouse [of memory], I ask that it produce what I want to recall, and immediately certain things come out; some things require a longer search, and have to be drawn out as if it were from more recondite receptacles" [185:2008]. According to John Locke "for the narrow Mind of Man, not being capable of having many *Ideas* under View and Consideration at once, it was necessary to have a Repository, to lay up those Ideas, which at another time it might have use of" [150:1979].

2.5 Memory-Markers in Representative Realism

A store-house, or any other spatial metaphor is an attractive metaphor, but it will not help much to explain memory. One cannot explain where exactly these images are stored when we are not examining them. While introducing the metaphor John Locke says that the metaphor "signifies no more but this, that the mind has a power, in many cases, to revive perception it has once had, with this additional perception annexed to them-that it it has had them before." One objection raised here is that an event that has already happened cannot be revived. This was initially pointed out by

Thomas Reid. Reid says, “it seems to me as difficult to revive things that have ceased to be anything, as to lay them up in a repository, or to bring them out of it. When a thing is once annihilated, the same thing cannot be again produced, though another thing similar to it may” [284:2002]. This means that the memory-image is not a revived image, but a wholly new one which resembles the original experience. The question then is how to tell that an image resembles or represents the original experience. We saw that the image is not a feature that is exclusive to genuine-memory. An image is possible in the case of imagination or in the case of incorrect memory. This means that we need something to tell us that a particular image is a memory-image and not an instance of imagination. There should be a mark in the image, a memory-indicator to distinguish it from the other images.

Hume’s criterion of vivacity of the image, was an attempt to answer this question. This criterion, helps us to distinguish the ideas of memory and the ideas of imagination. Those images that appear in the mind with force and vivacity are that of memory and those without the force and vivacity, which are perfect ideas, are imagination. But such an introspective criterion alone is not enough for the subject to determine whether an experience is a memory experience or not. In a lot of instances our imagination about a particular experience might be a lot stronger and livelier than our remembering. Hume is aware of this and he introduces a second criterion, the order and form of the original impression: “the imagination is not restrain’d to the same order and form with the original impressions; while the memory is in a manner ty’d down in that respect, without any power of variation” [12:2000].

There are various problems with these criteria. Firstly, our imagination-image could be much stronger than the memory-image. I can imagine a character from a novel I read far more vividly and intensely than a memory-image of a person whom I had met in my early childhood. The memory-image can be faint and languid. The imagination-image could be strong and intense. The second criteria of order and form will not help either. While I remember an event, I can bring back the event to my mind in any order. When I remember a play that I had seen, I might at first

remember the last act of the play and then might remember the beginning of it. From the memory-markers that Hume suggests, we cannot decide whether an image is a memory-image.

Hume's account of memory is heavily criticised for these memory-markers. John Passmore while analysing Hume's account of memory says that the inconsistencies of these memory markers "reach epic proportions" [2013:94]. Similarly James Noxon says, "there is no need of an extended argument merely to prove that [Hume's theory is] defective" [271:1976].

Another important attempt to distinguish a memory-image from other images, was by Bertrand Russell. According to Bertrand Russell [163:2007], two characteristics of an image makes an image a memory-image. First, is the feeling of Familiarity. Familiarity gives the feeling that "*this has happened*". But the feeling of familiarity alone cannot provide one with knowledge of the past, as this is a feeling, which is capable of existing without an object. For example, we might often find a situation familiar, but might fail to recognise exactly what is familiar about it. Thus, Russell introduces the second characteristic of a memory-image: a feeling of Pastness. This is the characteristic, which makes the subject regard the image as referring to the past, so that the subject can assign places to the image in the order of time. That is, it is from this feeling of pastness that one gets the knowledge of the temporal relation of the event to the present, and to the other events in the context, the events remembered. Thus, to remember 1) one should have an image and 2) the image should be marked with the feelings of familiarity and the feelings of pastness. From these feelings, one formulate a belief that *this* belongs to the past, where "*this*" is a vague term which applies to both the remembered event and to the memory image. But even these feelings are inadequate to distinguish memory image from other images. If we vividly imagine an event - say dining with a celebrity - very often, and after a few years confuse this imagination with memory, chances are that the image that we bring to mind will have 'feelings of familiarity' and 'feelings of pastness.'

Memory-markers are an inadequate way to distinguish memory-images from other images. In fact there is no way in which we can distinguish a memory-image from other images, from the characteristics of the image alone. We saw that, strictly speaking, the representational characteristic of an image comes from the way we interpret the image and that this is not a feature of the image itself. This means that, the image alone, does not help us much. We need information beyond the image to conclusively determine whether the said image is a true representation of the past. To check the accuracy of the memory-image, one will have to step out of the image and then reflect upon the image. If remembering is simply a matter of having an image, as Russell and Hume claims, this is not possible.

A second objection to the image-centric view is that, there are reported cases of experiential remembering which are completely devoid of any images. One of the early studies on this was done by Francis Galton in the 1880's. Some of the subjects reported that their mental events are "clear and bright". One of the subject is reported to have said that "I can see in my mind's eye just as well as if I was beholding the scene with my real eye." Another subject says, "My impressions are in all respects so dim, vague and transient, that I doubt whether they can reasonably be called images." Some, however, have no images at all. One of them says, "To my consciousness there is almost no association of memory with objective visual impressions. I recollect the breakfast table, but do not see it." (As quoted by Schwitzgebel, [40-41:2002]). It is not right to say that the subjects in Dalton's study cannot have experiential memory. Even without an image, one can remember something. For example, suppose I spent some time sitting in a large, silent, dark room. I can at a later time remember sitting in that room and form a (visual) image of myself sitting in that room. But this image will be imaginary, for I was sitting in a silent room, in darkness.[6] Image, as argued by a representative realist, is not necessary in such cases of experiential remembering.

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[6] This is an example from John Pollock [187:1974] His argument is that in the cases where image is absent, experiential memory consists in having very detailed propositional memory. His example is his memory of developing a photographic film in a darkroom. Pollock goes on to say that "my remembering developing the film consists simply of my remembering in considerable detail what happened, and that is propositional memory." But here, there can be other images - tactual or auditory ones. It need not be a propositional memory.

2.6 Direct Realism

The above difficulties with a representative theory of memory, motivate some philosophers to argue for a theory where an intermediary is not required while remembering. According to them, we can have a direct access to the past while we remember. What appears in the mind is not a representation of the past, but the past itself. In representative realism, to distinguish memory-image from other images, we will have to go beyond the image. Only then can we conclusively determine whether the said image is a true representation of the past. Direct realists attempt to do this. According to them, while remembering, the subject's mental entity is something *about* the past. That is, the mental entity is not an intermediary, but is intentional. the recollection is *about* the past: it is a representation of some past fact or event. Many questions that a representative realist encounters will disappear in this view which holds that we have a direct awareness of the past. There is nothing that mediates one's access to the past, which means there are no questions about the nature and characteristics of an intermediary image representation, and the relationship between this image and the past.

Among early modern philosophers, Thomas Reid argued for such a direct realist view of memory. Rejecting Hume's and Locke's representative claims, Reid says that we have "an immediate knowledge of things past" by memory. "Suppose that once, and only once, I smelled a tuberose [and] next day I relate what I saw and smelled. When I attend as carefully as I can do what passes in my mind in this case, it appears evident that the very thing I saw yesterday, and the fragrance I smelled, are now the immediate objects of my mind, when I remember it. Upon the strictest attention, memory appears to me to have things that are past, and not present ideas, for its object" [28:2000]. According to J Laird, another direct realist, "memory does not mean the existence of present representations of past things, it is the mind's awareness of past things

themselves" [56:1920]. Here, we are bringing back the past event to the abstract space of mind. Mind is seen as a boundless expanse, where a past event can be brought back and examined.

It is to be noted that the direct contact one has with a past event is different from the direct contact one has with an event while perceiving it. The relation one has with an event while perceiving that event is not the same as while remembering that event. Perception is public and neutral. While we remember, memory reveals things that are public and neutral too. But it can be said that the object of memory is a little more personal and private than the object of perception.

Firstly, in perception, one is *not* aware of the intrinsic features of one's experience, whereas, in memory, one is aware of such features. In perception, it is generally held that when you perceive X, you do not experience any features of X as intrinsic features of your experience. You are never aware of features of your own perceptual experience. This view, 'transparency of perceptual experience' as it is commonly called, is held by those who argue against sense-data. Harman says, "when Eloise sees a tree before her, the colors she experiences are all experienced as features of the tree and its surroundings. None of them are experienced as intrinsic features of her experience. Nor does she experience any features of anything as intrinsic features of her experience" [39:1990]. Similarly, Michael Tye says, "Focus your attention on the scene before your eyes and on how things look to you. […] In seeing these surfaces, you are immediately and directly aware of a whole host of qualities. You may not be able to name or describe these qualities but they look to you to qualify the surfaces. You experience them as being qualities of the surfaces. None of the qualities of which you are directly aware in seeing the various surfaces look to you to be qualities of your experience. You do not experience any of these qualities as qualities of your experience" [137-138:2002]. In memory however, we are aware of the intrinsic features of the experience. Experiential memory involves qualitative experiences. One of the defining characteristics of experiential memory is that, the remembered experience comes back with the past emotions and feelings. The rememberer relives/re-experiences the past while remembering. The point is that, in perception, one is not aware of the intrinsic features of the experience and in

memory, one is aware of the intrinsic features. In perception, all that one experiences is the publicly observable qualities of worldly objects and events. In memory, one experiences the qualities as qualities of one's own experience. In this sense, perception is public, and memory private.

Secondly, memory is a private and subjective experience. Paul Ricoeur asks, "why should memory be attributed only to me, to you, to her or to him, in the singular of the three grammatical persons capable of referring to themselves, of addressing another as you (in the singular), or of recounting the deeds of a third party in a narrative in the third person singular? And why could the attribution not made directly to us, to you in the plural, to them?" [93: 2004]. There is nothing incoherent or paradoxical in a statement like "we are watching a film" or "we are listening to the radio". But in memory things are different. When the remembered event is from the past, (consider the statement "we remember watching a film last year") one cannot say that without verifying it from the other person. The correctness condition for the statement like "We remember watching a film", is not the same as the correctness condition for the statement "we are watching a film." Memory is a private possession, the features of which are intrinsic to the experience, which cannot be shared. This tradition which Ricoeur calls the "tradition of inwardness", finds its first expression in St Augustine. In his Confessions, St Augustine writes, "Mind is the very memory itself" [191:2008]. It has not only influenced the philosophical discussions on memory, but also the psychological discussions on memory. Schacter, for example, says that "Our memories belong to us, They are uniquely ours, not quite like those of anybody else" [15:1996]. Paul Ricoeur lists three features which emphasise the private character of memory. Firstly, the memories of one person cannot be transferred into the memories of another. My memories and what I remember are not your memories or what you remember. Secondly, memory links one's consciousness with one's past. By this feature, memory assures the temporal continuity and the personal identity of a person. Thirdly, a sense of orientation in the passage of time is linked to memory. These are the features exclusive to memory.

While attempting to fill the explanatory gaps in a representative theory of memory, Direct realism comes with its own set of problems. The chief questions a direct realist will have to answer are: 1) How can the subject have an immediate knowledge of a past event *now*, at the time of remembering as the past event cannot exist *now*. 2) The subject cannot remember more than what he perceived. In this sense, memory is restricted by perception. If the subject can have a direct access to the past, how can it be restricted by perception? 3) Direct realists do not reject "memory images" altogether. (Woozley, Broad, Russell[7]) They interpret "images" in a different way. What is the status of "images" in a direct realist view? Can we compare this image with the past? I will analyse the above questions. My conclusion will be that direct realism fails to convincingly answer these problems.

2.7 Immediate Knowledge of Past

While analysing Reid's views on memory, Sir William Hamilton writes, "An immediate knowledge of the past is a contradiction. For we can only know a thing immediately, if we know it in itself, or as *existing*. But what is past cannot be known in itself, for it is *non-existent*" [211:1855]. Hamilton's point is that one cannot have immediate knowledge about a thing that does not exist. What is immediately known while remembering is not the actual event, but something numerically different from it. About mediate-immediate distinction, Hamilton says: "A thing is known *immediately* or *proximately* when we cognise it in *itself*; *mediately* or *remotely*, when we cognise it *in or through something numerically different from itself"* [488:1855]. Because an event in past do not exist *now,* we cannot have an *immediate knowledge* of that event *now*.

But Reid was aware of this. While analysing Locke's views on memory, Reid says, "But it seems to me as difficult to revive things that have ceased to be anything, as to lay them up in a repository or

[7] In *The Problems of Philosophy* [1912] Russell held a direct realist view. Later in *The Analysis of Mind* [1921], he changed his position to a representative realist view.

to bring them out of it. When a thing is once annihilated, the same thing cannot be again produced, though another thing similar to it may." Clearly, the mediate-immediate distinction, as explained by Hamilton, was different from the one Reid had in his mind.

We can approach the mediate-immediate distinction in another way. According to René van Woudenberg, "mediate knowledge involves reasoning (or argument), whereas immediate knowledge does not. Knowledge of the Pythagorean theorem, for instance, is mediate; for, in order to "see" (and hence to know) that the theorem is true, one has to engage in reasoning. We don't immediately "see" its truth. Memory knowledge, by contrast, is immediate; in the typical cases of memory one doesn't engage in reasoning (inductively, deductively, etc.)" [119-120:1999]. It is safe to assume that Reid had this distinction in mind when he spoke about immediate knowledge. Reid was aware of the mediate-immediate distinction held by Hamilton as he uses that distinction to argue against Locke's views. In this view, one can have an immediate knowledge about the past while remembering, as one is not engaged in reasoning. If S sees a birthday gift that he got two years back, and remembers the birthday party he had two years back, his knowledge about the party is not based on any reasoning. In this sense his memory knowledge is immediate.

But this will not solve the problem. According to a direct realist, the knowledge of the past is not only immediate, but it is direct too. If the past is directly present to the mind while remembering, then the question remains, how an event, which has ceased to exist, can directly present itself before mind while remembering. AD Woozley, John Laird and CD Broad have attempted to explain this.

How can one have an immediate and direct awareness of something that does not exist *now*? John Laird, held a direct realist view of memory, and he tries to answer this question. Laird does not see any contradiction in holding that we can have a direct acquaintance with a time which is beyond the present. Laird rejects the claim that there is any contradiction in having an immediate knowledge of the past. According to Laird, there are two reasons for this. Firstly, one can

immediately apprehend a statement “good differs from bad as heaven from hell”. Immediate apprehension is possible even in the case of things that do not exist at all. Goodness and badness are universals and universals do not exist, they only subsist. Secondly, existence is not confined to the present existence. Existence means the whole of existence and not just the present existence. Past events have their determinate place in the series of existence. Laird proceeds to say, “we must refuse to be deluded by the fable that the past *cannot* be directly discovered because it is dead, or that there is any contradiction in holding that direct acquaintance extends beyond the present” [50:1920].

AD Woozley, another direct realist, held similar arguments. According to Woozley, the argument that what is past cannot be directly known in the present is not based on empirical facts. No cases can be cited which suggest that the immediate object of remembering is clearly not the object remembered. Woozley says that this theory, the theory that the past cannot be directly known in the present, is a theory about the nature of time. “It is supposed that when something happens, it has then happened, and is thereafter as unavailable for subsequent observation as it was for previous observation before it happened, just as if I do not see lightning flash when it occurs I cannot hope to see it afterwards (for it is no longer there to see)” [58:1949]. Even in the case of perception, what is perceived is not contemporary with the act of perceiving it. An astronomer, using his telescope might see an explosion of a distant star as happening in the present, an event which is clearly not contemporary with the act of perception.

Thus, the argument that one cannot have an immediate knowledge of past is seen as an argument regarding the nature of time. Firstly, if this is a theory about the nature of time, then the same argument should extend to the future events too. That is, if one can have a direct access to a past event, if a past event is available thus, then the future events should be available too. If a present event can fall outside the present, and if one can have an immediate knowledge about such events, then, logically, one should have immediate knowledge about future events too. In his analysis of memory, Reid is aware of this difficulty. But Reid cannot give a satisfactory answer and

says that “I can give no reason why I should have the one [immediate knowledge of past] and not the other [immediate knowledge of the future] but that such is the will of my maker” [255:2010]. Woozley’s account too does not explain how one is possible and the other is not.

Secondly, Woozley rests his argument on the views held by CD Broad. In his *The Mind and its place in nature,* Broad says: “It appears to me that, once an event has happened, it exists eternally; all that happens henceforth to it is that, as more and more events occur and take their permanent place in the ever-lengthening temporal order of the universe, it retreats into the more and more distant past. If an event ceased to exist as soon as it ceased to be present it plainly could no longer stand in any relations to anything” [252:1925]. Two objections can be raised against Broad’s argument. Firstly, an event is a changes. To say that an event happened, is to say that something changed. What changed might exist eternally, but the change itself cannot exist eternally. A change is having a certain duration and a certain position in time. To say that someone retired from his office is to say that someone went through a change or changes that retirement consists in. He was in his job, and then he was not. It would be nonsensical to say then that after his retirement, the event of retirement exists eternally. Secondly, Broad suggests that if an event ceases to exist, it cannot stand in any relation to anything. This is wrong. When we say that an event ceases to exist, we do not mean that the event, or the changes that happened, has disappeared altogether. It just means that the event has happened and thus it ceases from the present existence and that we cannot reproduce the same event anymore.

2.8 Memory and Perception

Memory of an event is restricted by the perception of that event. I cannot now remember something about an experience, which I had not perceived in the past. Memory’s direct acquaintance with past cannot explain this limitation. If I am once again being acquainted with the past, such a limitation cannot be explained.

Among those philosophers who held a direct realist view, CD Broad discusses this point. According to Broad, when I perceive an event, I can perceive only those things that produce sensations in me. What is perceived is being determined by the factors that are personal to the one who is experiencing the event. In this sense, perception is essentially private in character; not public and neutral. The fact that we can remember only the things and events, which we perceived, is a similar restriction. “In each case the *class* of objects perceived or remembered is determined by factors which are personal to the experient; but each of the individual *members* of the class may still be of such a nature that a number of experients could perceive or remember it” [228:1925].

This explanation, that the perception itself is restricted by personal factors and hence private in character, will not solve the problem. All that this would say is something about the private character of the perceived or remembered event. There is something personal about perceiving an event, and that personal factor will not bring in any special privacy in the perceived event. Similarly, such a personal factor will not bring in a special privacy into the object of memory too. This is what Broad suggests. But this will not explain how the subject can have direct awareness of a past event, but still cannot access those characteristics that he had not perceived in the past. i.e, Broad’s views will not explain why memory is restricted by perception.

According to an externalist view of direct realism, when we perceive an event, “external objects and their properties shape the contours of the subject’s conscious experience.” [MGF Martin, 64:2004]. “They shape the contours of the subject’s conscious experience, by actually *being* the contours of the subject’s conscious experience” [Fish, 6:2010].

Often, when we remember an event, we might get a few things about the past event wrong; the details which we had not perceived during the event. For example, when I remember a cricket match, I might remember that the umpire was wearing a pair of brown shoes and a white coat but might not remember the colour of his bow tie. The “image” that I have in my mind might come with

a red bow tie, but I can truthfully say that the colour of his bow tie was not red. If I have a direct acquaintance with the past, and if past perception of the event does not shape my experience, in such cases, I should be able to examine the event, and come up with the correct details. i.e, my memory object should come with the right colour of the tie.

Woozley is aware of this problem. His solution is that “although the materials of remembering are always originals, they do not need to be the originals which I think they are” [63:1949]. That is, when I am remembering the cricket match and the umpire, I am mixing up two different originals, the umpire and another man who wore a red bow tie, “who on that or some other occasion associated with [red bow tie] in my mind” [63:1949]. This argument is unconvincing. If when I remember a particular event, what comes to my mind is a collage of various things that I had seen in the past, then the word “original” becomes corrupt. I am then not having a direct acquaintance with that particular past event and my mind is conjuring up an image (image in the representative sense) which is similar to that of the particular event that I am trying to remember.

John Laird’s views are similar. Laird says that “remembered things are not apprehended so fully as things perceived, but, on the other hand, the scope of memory is wider than the scope of perception.” It is probable that some reconstruction accompanies the subject’s recollection and blend with it. If while remembering the cricket match, the umpire appears in my mind with a red bow tie, it is because my mind reconstructs the colour of the bow tie and this reconstruction is blended with my recollection of the cricket match. Here again, the problem is that one cannot say what are the details that are reconstructed by the mind, and what are the details that are directly apprehended. It would be problematic to say that memory always involves reconstruction, and that the subject cannot say what is reconstructed and what is directly apprehended. The subject can “reconstruct” a whole cricket match, with very little details that he remembers about the match. Would it still be right to say that he remembers the match? I think not. Both Woozley and Laird fail to explain why memory of an event is restricted by the past perception of that event.

2.9 Memory Images in Direct Realism

A direct realist view of memory does not reject images altogether. According to Woozley, images are not things which are different from their originals. The puzzles that a representative theorist tries to solve arise because he is treating them as different. The “images” are past experiences and to treat them like the reflections in a mirror is a mistake. When we examine those “images” that appears in the mind when we remember, we can see that they are quite different from those images that we see in our daily life, i.e., images/reflections in water, mirror or glass. These images/ reflections appear in the exact same way as their originals, but the objects in these cases are of a different kind, they are numerically different, and they have different spatial locations. The relation between the original and the image in such cases are completely different from the relation between the past event and what appears in our mind when we remember. We are having a direct contact with the original when we remember. In this sense, to treat images as a present entity is a mistake. G.F. Stout says, “In remembering a past experience, I do not, normally, discriminate the memory-image from the experience remembered” [9:1905]. Similar views are expressed by Don Locke, in his analysis of realism. “[…] What we call the memory-image is not a present existent at all, but is the past event or experience itself as it appears to us in our remembering” [23:1971].

But there is another sense in which some direct realists treat images. Bertrand Russell and H.H. Price, while analysing a direct realist view, talks about images in the representative sense, i.e., something that *re*-presents the past. Bertrand Russell says that “there is some danger of confusion as to the nature of memory, owing to the fact that memory of an object is apt to be accompanied by an image of the object, and yet the image cannot be what constitutes memory… Moreover, we are certainly able to some extent to compare our image with the object remembered, so that we often know, within somewhat wide limits, how far our image is accurate; but this would be impossible unless the object, as opposed to the image, were in some way before the mind” [66:1998]. HH Price expresses a similar view when he writes: “if we can detect [the inadequacy of memory

images] and correct it, surely we must have some direct acquaintance with the past events themselves" [309:1969].

Price's view that we can compare and correct a memory image is based on the 'negative-memory-situations' discussed by EJ Furlong, in his work *A study in Memory*. The case that Furlong presents is this:

Let us take an example of the situation to which I refer. Suppose that our neighbour has acquired a new garden-gate which we are invited to examine. We notice various things about it; its colour, shape, material, height. Later on, when we remember the gate, we find that there are certain details we can recall, and certain others we cannot. We can recall, say, the colour and the height, but if we are asked how many vertical bars the gate contained we may at a loss for a reply. Still, if someone were to suggest that there were three bars we might well repudiate this answer, declaring, No, the number certainly wasn't three. We might similarly refuse to accept twenty. Thus we do seem to know what the number was not. Now how do we know this? It would seem that we must have some kind of contact with the past: we must in some way know what the details of that past situation were [32-33:1951]. The suggestion is that, though we do not know the number of bars in the gate, we know what the number was not. This means that apart from the image and the details provided by the representation, we have some other contact with the past.

It is a fact that in this case, we will be able to say what the number was not, though we might not be able to give the correct number. But then to suggest that we are able to do this because we have some other contact with the past, would be going too far. We reject the numbers three or twenty because these numbers do not fit with the image we have with us; not because we have some other contact with the past. We might not be able to reject a number which is close to the actual number of bars that the garden-gate had. If someone were to suggest that there were ten bars in the gate, we might not be able to accept it or reject it. Surely we will be able to say that the image that we have is inadequate, but the inadequacy is drawn from the image itself, and not

through another contact with the past bypassing the image. We are able to say that the image is imperfect by focusing on the image itself, not by comparing it with another entity. If there is an image, and if we can compare that image with another entity, that means memory is split into two. However, this is not possible. Moreover, there is no need to look into an image while remembering if we have access to something else which is more reliable.

2.10 Memory Traces

The trace theory tries to answer the question, how does recollection physically operate. The motivation for this theory is not philosophical in nature. Nor is the theory trying to answer philosophical questions about memory. They are mostly, scientific questions. However, it will be helpful to go through this theory, as it has some interesting observations about some of the questions raised against representative realism and direct realism.

Trace theory investigates how information is stored in one's brain. The widely advocated view among neurologists is that the encoding and storage happens via engrams or memory traces. Engrams are "sum total of changes in the brain that first encoded an experience and that then constitute the record of an experience" [Squire & Kandel, 78:2009]. The changes that happen in the brain are changes in the nerve cells. The changes are the "structural modifications at synapses (i.e., the area where the axion of one neuron connects with the dendrite of another neuron) that affect the ease with which neurons in a neural network can activate each other" [Bernecker, 179:2001].

The existence of traces are important to philosophy in more than one way. Firstly, it will help us explain the nature and status of the representations. Traces can be treated as representations - something that tells us about the past. Secondly, and more importantly, this will help us explain the causation involved in remembering. (Explained in Chapter 4.)

In representative view, there are two steps involved in the process of remembering. Firstly, the rememberer is conscious of the image. Secondly, the rememberer then interprets the past event from this image. This motivates some philosophers to claim that the representative view is a form of dualism [Woozley, 40:1949]. This dualism poses another problem. To become aware of the image as an image, to describe the image and to determine the characteristics of the image, we will have to step out of the image and reflect upon the image. Sartre, in his work *The Imaginary*, says that "the image as image is describable only by a second-order act in which the look is turned away from the object and directed at the way in which the object is given. It is this reflective act that permits the judgement, 'I have an image'" [5:1940].

In remembering, however, we do not engage in such a second-order act. When I remember a parade that I saw earlier, I do not look inside, see an image and then consciously interpret that image to give the description of that parade. There is only one act, and that is being aware of the parade itself. I am not giving a description of the image when I give a description of the parade.

There is one way to overcome this objection. The argument that the representative theory is a form of dualism is raised against the form of representative view where the nature of the representation or the image is ambiguous. That is, these are mental items of which the ontological status is unclear. [Sutton: 282:2010]

If we treat the representations as actual physical items that we are just not aware of, then many of these questions will disappear. Consider memory-traces as representations. For the rememberer, there is no need to go beyond this representation to be aware of the past. That is, memory involves a representation of the past, but it need not involve an awareness of the representation itself. We are not conscious of the traces when we remember an episode from the past. The 'interpretation' of these traces and the translation of these traces to the information about the past event, happens unconsciously. We need not go beyond 'the given' and in this sense, remembering is direct. Since

we are not aware of the representations and since we are not consciously interpreting the representations, this view is similar to the direct realist position too. In this sense, it can be treated as an alternative to both representative and realist theories. (For a similar view on perception, see Schwartz, 1996)

2.11 Conclusion

Both representative realism and direct realism have its own set of problems and do not convincingly provide an explanation as to why, from a subjective point of view, it is difficult to distinguish between memory and imagination. The theories that are examined are primarily theories that attempt to explain experiential memory. No event or experience is called back to the mind in propositional memory or habit memory. In the case of propositional memory, remembering consists in a successful performance. A theory which tries to include propositional memory - copy theory - will be examined in the next chapter.

Chapter 3

COPY THEORY OF MEMORY

3.1 Introduction

We saw that representative realism and direct realism primarily deals with experiential memory. In the case of propositional memory, one is not re-experiencing anything. As Ayer remarks, success of propositional memory consists in getting the answer, getting the remembered proposition right [137:1990]. It will not be correct to say that the subject is having an image in his mind while remembering a proposition. Nor will it be correct to say that the past appears in the subject's mind while remembering *that* p. We also saw that one cannot *remember* something, just by having a representation or an image in his mind. Images are not an exclusive feature of memory. The image has to faithfully copy or reproduce the past, for it to be a memory image. In both representative realism and direct realism, the subject stores information in a mental storehouse, and later, while remembering, retrieves the information. That is, memory is treated like a passive device. In contrast to this view is 'activism' which says that memory is a reconstructive process. In this chapter, I will analyse these views.

A statement "S remembers that p" implies that p. Remembering that p entails that p. Memory is factive. One cannot remember that p, without p being the case. This is true not just in the case of propositional memory, it is true in the case of experiential memory too. Someone cannot remember his birthday party and the songs that were played in that party if there was no birthday party at all. This motivates some philosophers to claim that memory is much like a device that copies and reproduces the information that was acquired in the past. In this chapter I would like to examine this model of memory and the arguments given for and against this model. Recent discussions in

psychology have come to argue against this model of memory and do not see memory as a merely passive device anymore. However, in the philosophical discussions, passivism is deeply entrenched and advocated. I examine some of the arguments presented against the model which consider memory as a passive device and examine the flaws of such arguments.

3.2 Memory is Factive

One cannot remember that p, unless p. Similarly, one cannot remember an event unless that event has in fact happened. One can only remember those experiences or facts which form part of one's own previous experiences - facts learned or events experienced in the past. Yet we think that we often wrongly *remember* a past event or a fact. Such wrong memories can happen for a number of reasons. Sometimes it can happen through no fault of memory at all. An example suggested by GEM Anscombe is the case of someone who mistakes a wax figure for a person, and later claims that he saw a person. A similar example is suggested by Von Leyden, where the subject sees a crowd panicking in the street and believes it to be a part of film shooting. He later claims that he saw the shooting of a film in the street. In both these cases the subjects are wrong in their claims. Yet, in both these cases, their memory is not at fault. But this is not the only reason for a false memory.

Memory states are not transparent to the subject. One cannot, by introspection alone, determine whether one is having an episode of memory. One needs information beyond what is available through introspection to distinguish memory from imagination.

That one's memory state is one of remembering is not transparent from a first-person perspective. Knowledge is not transparent from a first person perspective either. In the case of knowledge, the subject cannot always distinguish between belief and knowledge from introspection alone. One needs to know that the proposition he believes is true. That is, one needs to have more information

than that is available through just introspection. In the case of visual perception, to *know* that one is seeing x, one needs more information than that is available through introspection. One needs to know that it is in fact x that one is seeing.

Because memory cannot be distinguished from imagination from introspection alone, one may run into many problems while appealing to memory of past experiences. Bernecker [11:2008] lists the following risks that one might encounter while doing this:

1. Fault of the past perception: The subject may *remember* having seen a dog on the sofa; but what he in fact saw was a cat. Here memory is not at fault. The cases suggested by Anscombe and Leyden fall into this category.
2. Fault of the memory: The subject may *recollect* having thought he saw a dog on the sofa; but what he really thought he saw at the time was a cat. Here, memory is to be blamed and not the past perception.
3. Fault of the memory and perception (i): The subject may recollect having seen a dog on the sofa, but what he really thought he saw at the time was a cat and the perception at the time was false for there was no cat but a squirrel on the sofa.
4. Fault of the memory and perception (ii): The subject may claim to remember having seen a dog on the sofa, but what he thought he saw, at the time, was a cat but the perception at the time was false as in fact it was a dog that he saw on the sofa.

3.3 Copy Theory of Memory:

A memory claim has to satisfy the truth condition to become genuine memory. At t_2 S remembers that p only if p was true at t_1 and p is true at t_2. As memory is factive, and as one cannot remember something which is not true, some philosophers hold a view that memory is a passive input-output device, which reproduces a copy of the past thoughts and experiences. Philosophers who take

memory to be a passive device for storing and retrieving information holds that the present thought content should be type-identical with the past thought content. This model of memory has been called “Xerox model of memory” [Bernecker, 144:2008], “passivism” [Casey, 15:2000] and “copy theory” [Brewer, 26:1988].

An early version of the copy theory of memory was first proposed by Aristotle in his *De Memoria.* Aristotle compares a memory image with the image sealed by a signet ring in hot wax. From there emerged an entire tradition in which memory is reduced to a process of registering and storing impressions. This tradition is still very much alive.

Some philosophers say that the past thought content is the same as the present thought content. It is stored in a repository and retrieved later. This is evident in Plato’s metaphor of aviary, where we search for memories of our past. St. Augustine says “when I am in this storehouse [of memory], I ask that it produce what I want to recall, and immediately certain things come out; some things require a longer search, and have to be drawn out as if it were from more recondite receptacles”. [185:2008]. According to John Locke, “for the narrow Mind of Man, not being capable of having many *Ideas* under View and Consideration at once, it was necessary to have a Repository, to lay up those Ideas, which at another time it might have use of” [150:1979]. This would mean that the past thought content and the present thought content are essentially the same. That is, the content is not duplication but the original past thought content itself. An objection to this, first raised by Thomas Reid, is that the same things, ideas, thoughts that have ceased to exist cannot be brought back.. As Reid puts it, “When a thing is once annihilated, the same thing cannot be again produced, though another thing similar to it may” [284:2002]. One answer to this objection would be that the past experience/thoughts are stored in the repository and later revitalised/brought back. But then, the “store house” will not be a metaphor, and one will have to explain the storage process. Locke himself says that the repository is a metaphor [151:1979]. When the storage process/repository is seen as a metaphor, we will have to agree that the present thought is not the same as the past thought, but a reproduction of it.

The idea here is that the information that one learned in the past is the same as the information recalled in the present. Malcolm makes this explicit. Memory, says Malcolm, “is the retention of knowledge. One knew something and still knows it. The present knowledge in memory is the same as previous knowledge.” Such views also echo copy theory as, here again, memory is seen as a passive device which registers and retains incoming information and later makes this information active. Here, memory is a reappearance or a revitalisation of an existing thought. But again, memory’s function is like an input-output device. Once the information gets in, it persists throughout and appears at a later time when the subject remembers.

There is data from empirical experiments to support the copy theory. Analysing memories for surprising or shocking events (flashbulb memories), which the subjects experienced, shows that we have an ability to retain such memories with detailed clarity and vividness. Livingston [576:1967] calls this model “Now Print!”. When a trigger occurs, the subject recognises the novelty of the past event that is remembered and tests for the consequentiality of that event (or ‘biological meaning’), and gives a “Now Print!” instruction to his memory, after which the events and conduction activities are ‘printed’ in his mind. Livingston goes on to suggest that memory of an event of this nature copies details of the past in a photographic precision. Livingston says that if you have lived through the times of Kennedy assassination you can remember exactly where you were when you heard the news first, “with whom, and very likely whether you were sitting, standing, or walking - almost which foot was forward when your awareness become manifest” [576:1967]. Brown and Kulik [83:1977] backs this view and says that the clarity of the memory image is directly proportional to the degree of consequentiality and covert/overt rehearsals of the experienced event. Covert rehearsals refer to those kind of rehearsals one perform in one’s mind. The subject might call back the event to his mind many times, if it seems *important* for him. Overt rehearsals refer to those kind of rehearsals one perform while describing it to others. If the event seems *important,* chances are that the subject will share it with someone by verbally describing it.

This model of memory stands against the model of “activism” where memory-image and memory as such is not a duplication of the past thought, but an active reconstruction of the information. That is, memory reconstructs the past experience or thought and does not merely *copy* the past thought content. [Bartlett (1932), Janet (1928)[8], Bernecker (2008:144)] This reconstructive nature of memory, they claim, is the reason behind the difficulty in distinguishing memory from imagination or confabulation.

A reconstructive model of memory was first discussed by Frederic Bartlett in the 1930s. He argued that memory was fundamentally reconstructive. According to his model, people register and retrieve events and experiences in accordance with schemas, or general default features. When I think of a classroom, I tend to think of students, a teacher, chairs, tables and books. When I think of a forest, I tend to think of plants and trees, animals and birds. When we remember an event, we filter that event through these general impressions, and omit incompatible features and add details which are in accordance with the schema. Memory of an event will thus have a structure which it shares with the schema we possess. We combine the fragments that we remember with the schema and come up with a detailed, coherent picture of the event. This will help one to structure one’s memory in a better way for future cognitions. This will also help one to condense one’s memory and come up with a short summary of very large information.

3.4 Arguments against the Copy Theory:

If memory alters information received from the past, and if the reproduction of a past event is in any way different from the original event, it can be argued that the copy theory is incomplete. Some philosophers believe that memory changes the information it has received. One way in which memory alters the encoded information is by the way what David Kaplan calls Cognitive Dynamics.

[8] As quoted by Casey [15:2000]

According to this view, a person needs to change his judgements to continue to believe the very same thing. That is, suppose if I see Bert being drunk in a party, my initial thought would be, “Bert *is* drunk”. However, the next day, I cannot remember “Bert *is* drunk”. My memory of the event would be that “Bert *was* drunk.” That is, one needs to vary one’s judgement so as to manifest the same belief. It is evident that such a variation will alter the thought content. My past thought content was “Bert *is* drunk” and my present thought content is “Bert *was* drunk.” My judgement about the event should be varied as I move in time, in order to keep my belief about the event.

This argument is backed by Bernecker to refute the copy theory and Bernecker concludes: “With the passing of time, a propositional content changes like this: “S is F now” (original thought); “S was F a moment ago” (memory shortly after the original thought); “S was F a while back” (memory long after the original thought). If memory were purely a passive repository - as the xerox model maintains - it would not be allowed to adapt the tenses of verbs and the demonstratives included in the original thought contents an absurd conclusion” [148:2008].

If the memory is preserved with some sort of a chronological index, this is still possible. The terms “a moment ago”, “a while back” and “a long while back” points to a certain time in the past, and all these terms refer to that time in the past. While retrieving a certain event from memory, it is not just the details of the event that is retrieved, but also the contextual information of that event which includes the temporal relation of that event to other events and the present time. Locke says that memory images come to the mind with an additional perception attached to them that, “it has had them before.” However, whether such additional perception or contextual information contains the exact time and place of the event, is a controversial issue. Some scholars argue that the date and time is automatically tagged while the event is encoded in memory. (1979: Hasher and Zacks, 1984: Zacks, Hasher, Alba, Sanft, and Rose, See also Tulving: 385:1972). But we often remember events from the past while having difficulty in judging the time at which they occurred. This motivates some to say that the contextual information that comes along with the retrieved event, does not include time and place of the event. (1993: Friedman, 1988: Davies and Thomson). But

even if the specific time at which the past event occurred is not part of the information retrieved, we treat a past event as having happened at a particular time in the past. The temporal relation of a particular event with other events some times help us in placing the event in its position. David Hume had this in mind when he says that the "chief exercise of the memory is not to preserve the simple ideas, but their order and position." The terms "now" or "a while back" or "a long time back", all refer to the same position in the time, just like a photograph (or a copy of that) represents a certain time and place in the past. My judgement need not vary to keep my belief intact. Thus, this objection is not a threat to the copy theory of memory.

Summarised Memories: Another objection to the copy theory is the presence of summarised memories. We often remember summarised events from our past. For example, when I remember my past year in Sheffield, I might not remember the exact specific events. When I remember last year's weather and say, "I remember last year's weather was good", I am not remembering a specific day's weather. My memory is about events which extend over a period of time. Marya Schechtman observes that the summarised memories are of two types. There are summarised event memories of lifetime periods, wherein one's memory summarises a certain period of one's life. I can remember the weather was good last year or my childhood was happy or I was lonely last year. These memories may include specific events but their relation to the past is much more complicated than the memory I have of a specific event, say my last birthday party. There are also summarised event memories of a certain event. I can remember the meeting I had with my friend last week, or a holiday I had, and can come up with condensed version of the event. These are summarised memories of particular events. In both cases, a one-on-one connection is almost impossible. Schechtman says,"how much similarity must there be between the two moments [the event and the subsequent memory of it] in order for the one to count as a memory of the other? How much of the content of the experience must be reproduced and how accurately? How many portions of the past is the present connected to in a condensed memory, and how is this determined? These are not easy questions to answer […]" [10:1994].

Bernecker argues that this poses a problem to the copy theory, as according to the copy theory memory output has a specific one-to-one connection with the inputs. The present memory of an event has a one-to-one connection with the past time in which this event was registered. Summarised memory does not have such a one-to-one connection with a specific past event.

But this objection is weak if we treat memory summarisation as an inferential judgement that one makes. When I remember my favourite restaurant or that the weather was generally good, I make an inference based on specific events. The memory claim “the weather was generally good” is possible only if I remember some of the specific days, events or time in which weather was good. I remember that weather was good on these days, and I infer that weather was generally good. This does not pose a great difficulty for the copy theory of memory. A specific example that Bernecker makes is this: “I remember having disliked eating vegetables as a child. Though it is true that I used to dislike vegetables, at no time in my childhood did I (dispositionally) believe that I didn’t like vegetables. Rather that entertaining this general idea,what I thought was that I don’t like Brussels sprouts, that mangel is too bitter, carrots too sweet, that spinach has a disgusting texture, etc. The content of my comprehensive meta-representational memory, though no doubt correct, has no single counterpart in the past and therefore cannot count as a replica of a previous thought content of mine. It stems from amalgamation of a whole host of past thought contents” [148:2008]. Here, my thought that “I disliked eating vegetables as a child” is an inferential judgement. I remember, as a child I thought carrots are too sweet and mangel too bitter, and from there I infer that as a child I disliked vegetables. My memory about carrots and mangel still hold a one-to-one relationship to the past. The inference is based on these memories. This objection doesn’t pose a major threat to the copy theory.

Bartlett raises another objection based on one of his experiments. A story about the native americans was told to a group of Cambridge students, and later when they recalled the story many details of the original story was omitted and some details were added to the story. As time passes by, the subjects omit more and more of the details and reconstruct many details. These details,

Bartlett concluded, was systematic, and comes from the cultural stereotypes the subjects are familiar with. For example an event of “hunting seals” was later recounted as “fishing” and “canoe” was changed to “boat.” Bartlett concludes that “remembering is not the re-excitation of innumerable fixed lifeless and fragmentary traces but an imaginative reconstruction or construction”. Barclay and DeCooke (1988), in one of their experiments, asked the subjects to keep a journal of their day-to-day experiences. They noted that the subjects later found it difficult to distinguish between their own experiences and those false notes added by the researchers. From the experiment, it was concluded that “Autobiographical recollections are not necessarily accurate, nor should they be; they are, however, mostly congruent with one's self-knowledge, life themes, or sense of self” [92:1988, Barclay & DeCooke].

Such reconstruction, again, is not a threat to the the copy theory. One can still defend the copy theory by saying that, while parts of the recalled event are genuine in nature, the parts that are reconstructed are ostensible memory rather than genuine memory. The minor events and images that are reconstructed to get to the major events do not constitute genuine memory. But then, this would have the consequence that the mechanism of recollection is more fallible than we thought.

Marya Schechtman writes, “Memory […] is not always, or only a reproduction of past experiences or a simple connection between two discrete moments of consciousness. It is also a way of weaving the facts about ourselves and our histories into a coherent and intelligible story, expressive of the overall contours of our characters and our lives; our autobiographical memory is, that is, more like a biography than a photo album. like a scientist who creates a continuous graph by drawing a line close to, but not necessarily in contact with, all the data points, our autobiographical memories draw a smooth storyline among the various experiences we have had - a storyline which is constrained by the bulk of those experiences, but which need not contain them exactly, and which gives our lives a narrative unity” [12:1994]. This narrative unity of one’s life in memory is the reason why one is able to look back into his past and come up with a short condensed version about a certain past event. When I remember a certain event, say a certain

meeting I had with a friend, I will not recall the entire meeting or the entire conversation we had. I will remember just the important points. The topic that we discussed, the drink we had and maybe the duration of the meeting. This condensation is a necessary feature that helps us to make sense of a remembered event.

Barclay and DeCooke write, “As with allegory, autobiographical memory often is a *constructive* and *reconstructive* process used to condense everyday memories of events and activities, extracting those features that embrace and maintain meaning in one's self-knowledge system. In turn, seemingly unconnected episodic recollections become allegorical in that particular events can be remembered and used as instances of generalized life experiences to convey one's sense of self to an audience” [92:1988]. This would mean that remembering an event is not a matter of reproducing a copy, but a matter of weaving out a story from the things that were copied in the past. Schechtman makes this clear. Defending Barclay and DeCooke’s views, Schechtman writes, “If our autobiographical memories are the way we tell ourselves and others the story of our lives, a consideration of the way these memories really work suggests that we are rather subtle authors. We do not need to resort to crude, literal reproduction of our physical and psychological histories, but pick and choose the important elements, use sophisticated representational devices, and shape a story that can express what we take to be the basic and essential information about our lives” [12:2008].

Note that such condensation of an event is different from the summarisation of a time period. In the case of a summarisation of time period, we are making an inferential judgement from a lot of remembered events. In the case of condensation of an event, we remember various facts and experiences from the past, filter it, and present a short version of the event. Such short versions of the events, help us to make a coherent life story, and a sense of self. Barclay and DeCooke remark, “Autobiographical recollections are not necessarily accurate, nor should they be; they are, however, mostly congruent with one's self-knowledge, life themes, or sense of self” [92:1988]. The

point is that such a memory summarisation is part of the function of memory. Remembering involves summarisation of the past information.

Another objection against the copy theory is from Bernecker. He argues that in order to avoid cluttering our minds with redundant pieces of information, we need to avoid unimportant details of an events or experience, and compress the available information. “Since there is a limit to what one can remember and a limit to what one can retrieve from memory, it is vital to condense and compress the incoming information” [153:2008]. There are a lot of experiences that we go through, events witnessed and facts learned on an average day. This information has to be structured, compressed and summarised for memory to function smoothly. Like memory condensation, avoiding clutter is also a feature of memory.

3.5 Conclusion

According to Copy theory of memory, memory’s function is to reproduce information that it once acquired. If the information reproduced varies from the information acquired, even slightly, then it will not be a case of genuine memory. It will mean that memory malfunctions. But summarisation of past events and avoidance of clutter is a part of the function of memory as shown above. These are compatible with the truth conditions of memory too. This would mean that copy theory is incomplete. Remembering involves summarisation and avoiding clutter.

Chapter 4

CAUSATION IN MEMORY

4.1 Introduction

We saw that everything about a memory-experience is happening now, in the present. Yet the memory-experience refers to the past. It is through our present experiences that we access our past. To access the past through a present experience, there has to be a correspondence between the past and present cognitive states. This connection is necessary for the present state to be an instance of genuine memory. We know that it is sometimes difficult to distinguish memory from false-memory or imagination. A suitable connection between the past and present cognitive states will ensure that the present cognitive state is a case of genuine memory, and that it is not a case of imagination or false-memory. A connection between the past and present cognitive states is also necessary to distinguish relearning from remembering[9], and to guarantee that the present representation is a case of remembering. There are various attempts to explain how the present cognitive state is connected to the past. Among these, the causal theory of memory, which holds that the representation of a past event is causally connected to the past, is the most widely held and the most prominent view.

Most philosophers have now come to advocate a view, which holds that remembering implies an appropriate causal relation to the past. Contemporary philosophers claim that causal process is indispensable in memorial representation. Le Poidevin, for example, declares: “It would be hard to

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[9] One can reduce learning to remembering. Plato in his work *Meno* holds that knowledge as such, is grounded in recollection. In daily life, and in common sense notion of memory however, there is a sharp divide between remembering and recollection.

take seriously a theory of perceptual and memorial representation that did not assign a central role to causation" [20:2007]. However, as with any philosophical view, there are considerable arguments raised against a causal process in memory. Also, there are disagreements among philosophers about how the causal process in memory should be construed. This has resulted in various versions of causal theory. The purpose of this chapter is to examine the notion of causality in memory. The questions discussed will be: Whether a causal process is necessary to connect a past representation with the present representation? What are the arguments for and against causal theory of memory? Are the arguments presented for a causal process good? Can memory traces act as causal intermediaries between a past experience and the subsequent recall? I conclude that the chief arguments for causal theory of memory come with certain difficulties. I also conclude that the alternate accounts to the causal theory are flawed. A causal account, even with difficulties, has a clear explanatory advantage over the alternate accounts. I will start my paper by explaining the causal theory, and will then go to these questions.

4.2 Memory Causation

During most of the first half of the 20th century, many philosophers held a view that our concept of memory did not require a reference to the cause of that which is remembered, much less to a causal connection between the past experience and the present recollection. This was partly because of the views that denied causality propounded by Russell (1921) and Wittgenstein (1953). The prominent view on memory in this period was that causal connection is neither necessary nor sufficient for an account of remembering. This was the view held by Ryle (1949), in his analysis of memory, and Malcolm (1963). Munsat (1966) and Zemach (1968) advocated this view. In his work, *Knowledge and Certainty*, Malcolm said that "our use of the language of memory carries no implication" [237:1963] about the causes of our remembering or about the causal mechanisms.

One of the earliest proponents of a causal view was BS Benjamin. In his paper *Remembering,* published in 1956, Benjamin writes, "…it would be true to say that the everyday view of remembering is simply that it is the final stage of a causal process and that the memory is some sort of causal device or mechanism" [323:1956]. Similar views are held by W.Von Leyden when he says, "it is part of the meaning of memory that, when it is correct, it is causally dependant upon a previous perception" [31:1961]. After Martin and Deutscher published their seminal paper on the causal theory of memory in 1966, most philosophers have come to accept a view that the connection between past and present representation of an event involves a causal process. This includes Alvin Goldman (1967), Sydney Shoemaker (1970), Andrew Naylor (1971) and G.E.M. Anscombe (1981). The notion of causal connection is not only popular among philosophers, but also among empirical psychologists. ("*Encoding and Retrieval of Information*," 2000: Brown, Scott C.; Craik, Fergus I. M., 1998: Sutton, John.)

4.3 Martin & Deutscher on Remembering:

Martin and Deutscher's paper brought the causal condition to the forefront of the philosophical and psychological discussion on memory. In their paper, Martin and Deutscher argued against the claim that a causal process is not required for the concept of memory. Their argument is based on cases where the subject had a particular experience at a certain time, t_1. The subject then forgets this experience during an arbitrary interval of time, $t_{1.5}$. However, at a later time, t_2, the subject has a certain something, a certain experience, "for which the only reasonable explanation" is that they experienced something at t_1 [176:1966]. Martin and Deutscher note that the subject's behaviour at t_2 as a result of his experience at t_1, can be explained only by invoking a causal claim. They proceed to say that "if a person's account of what he saw is not due even in part to his seeing it, it cannot be said that he remembers what he saw" [175-176: 1966]. As the cases discussed fall under our everyday concept of remembering, the analysis concludes that the recollection of an experience must be due to him having experienced that in the past.

The argument that Martin and Deutscher reject, the view that memory does not involve a causal process, was initially championed by Gilbert Ryle in his work *The Concept of Mind*. According to Ryle, “remembering something means having learned something and not forgotten it” [248:2009]. Prima facie, this description will suit propositional memory better, even though Ryle does not present this as an explicit definition of propositional memory or any other type of memory. The description assures that the proposition remembered is not a relearned one. Ryle’s view finds its clearest expression in Holland (1954). Holland’s analysis is not limited to propositional memory. He argues that three conditions are adequate for remembering something. First, what recounted did, in fact, happen. Second, the subject is not being currently informed about what happened. Third, the subject observed what he now recounts.

Though this account assures that the event or proposition remembered is not a relearned one, these conditions are too liberal, as this will include the cases where the remembered event was told to the subject at a later time. Imagine the case where the subject recounts an event from his childhood but can do so only because his mother told him. All the three conditions are satisfied in this case, but we cannot say that the subject is remembering the event. As these conditions are not sufficient for remembering, Martin and Deutscher reject this view. With Ryle’s view, there are other difficulties too which are not mentioned by Martin and Deutscher. Firstly, this account will not adequately explain the cases where a fact is learned, forgotten in between and remembered later. That is, Ryle’s description of memory is incapable of explaining a temporal gap, a gap where the subject cannot remember the proposition he learned. Secondly, there is a vicious circularity in this account of memory as the notion of remembering is defined by the way of appeal to notion of not forgetting.

Martin and Deutscher present three cases to support their argument. First is the case of a painter who paints the detailed picture of a farmyard, which he takes to be an imaginary scene. The onlookers however note that the painting is an accurate representation of a scene that the painter

had seen during his childhood. Martin and Deutscher say that the painter in fact remembers the scene from his childhood, for “What other explanation could there be for his painting being so like what he has seen?” [168:1966]. In this case the painter is representing now what he had observed in the past. The only explanation that one can give for the similarity of the painting to the scene that the painter saw in his childhood is that he was remembering the scene, that his past experience was operative. The recollective experience that the painter has becomes a case of remembering, as it is causally connected with the painter’s previous experience. This case, according to Martin and Deutscher, shows that causation is a sufficient condition for a recollective experience to be a case of remembering.

The second case that Martin and Deutscher presents is the case of Kent, who was in a car accident and sees the details of it. Later, Kent is involved in another accident because of which he forgets a certain section of his own history, including the first accident. Some time later, a hypnotist makes Kent believe that he had been in an accident, and the details the hypnotist provides about the accident give him all the details of the accident, which out of sheer coincidence matches with the first accident he had met with. Even if Kent can later describe the first accident in detail, we will not say that he remembers. Kent represents what he had observed in the past. But his past experience, the experience he had when he met with the accident, is not operative in producing his later claim. The current experience is not *caused* by the past experience and thus, Kent’s current experience is not a case of remembering. The case shows that causation is a necessary condition for a recollective experience to be a case of remembering.

The third case is where someone wonders whether he really remembers a certain incident from his childhood or not. Even if the incident had happened, he might not be remembering it. Whether his parents told him that or whether he underwent similar experiences, watched similar incidents at many other times are all relevant in deciding if he really remembers the event. “These facts are the same as those which are used to decide whether or not he would have given the story if he had not

witnessed the event in his childhood. To decide that he would not have done so is to decide that his past witnessing is causally necessary for his present account" [176:1966].

Martin and Deutscher [166:1966] summarise their version of Causal Theory of Memory as follows:

If someone remembers something, whether it be "public," such as a car accident, or "private," such as an itch, then the following criteria must be fulfilled:

1. Within certain limits of accuracy he represents that past thing.
2. If the thing was "public", then he observed what he now represents. If the thing was "private", then it was his.
3. His past experience of the thing was operative in producing a state or successive states in him, finally operative in producing his representation.

One of the assumptions made here is that belief is not a necessary component of memory. In the case of Kent, he believes that his recollective experience is a case of memory, but we saw that it was not a case of genuine remembering. In the other two cases, the subject remembers, but does not believe. This brings up an important question. Is belief necessary for remembering? Can one remember something that one does not believe? There is an incoherence in the statement "I remember but I do not believe." Martin and Deutscher attempt to explain this incoherence without assuming that to remember is at least to believe. (The details of this argument and how it fails is examined in the chapter *Memory and Knowledge.*) This incoherence can, however, be explained in a different way. Sven Bernecker develops such an argument. According to Bernecker, when I claim to remember that p, I am convinced that p is the case and hence believe that p. Yet, the second part of the statement denies that I believe that p. "'I remember that p; but I don't believe that p' is incoherent not because one cannot remember that p without believing that p but because one cannot claim to remember that p while claiming to not believe that p" [146:1966]. As the conditions for claiming to remember are distinct from the conditions for remembering, it does not follow that

remembering that p implies believing that p because claiming to remember that p implies claiming to believe that p. But even if this is explained, and even if it can be argued that memory is possible without belief, there are other problems with Martin and Deutscher's account.

Firstly, the structure of the argument can be said to be flawed. The examples that Martin and Deutscher suggest fall in the everyday notion of remembering. "If a person's account of what he saw is not due even in part to his seeing it, it cannot be said that he remembers what he saw" [174:1966]. From this, they conclude that the subject's remembering must be caused by his past experience. That is, the premise implies its own counter-positive. The premise suggests that *if S's cognitive experience amounts to remembering, then it is caused by* E_1*.* But then, this is exactly what the argument is trying to prove. Secondly, the causal condition as formulated above will not take care of deviant causal connections.

Consider Kent's case again. Suppose Kent had described the event he observed in detail to the hypnotist, before he met with the accident. Suppose that, it is this event that is hypnotically suggested to Kent and the event that Kent later 'remembers.' In this case, Kent's later recount of the event is still causally connected to his past observation. Still, we cannot say that he remembers. Martin and Deutscher are aware of this problem. They try to overcome the problem by invoking the notion of memory trace, a permanent structural modification of synapses in the brain. A further clause is added to their third criterion.

Clause 1: The state or set of states produced by the past experience must constitute a structural analogue of the thing remembered, to the extent to which the subject can accurately represent the thing.

However the mere existence of a trace does not warrant that the subject's recollective experience has it's origin in, or is related to, trace. Psychologists and neurologists suggest that even with the traces preserved intact, the subject sometimes might be unable to retrieve his past experiences.

[176:2009, Squire & Kandel: *Memory: From Mind to Molecules*, Also see 54-155:1996, Scahcater: *Searching For Memory*]

Thirdly, Martin and Deutscher's argument is from counterfactuals. It suggests that if S had not experienced E_1 in the past, S will not remember E_1 now. The problem with an argument from counterfactuals is that, a counterfactual statement is not equivalent to a causal statement. In his paper, *Causes and Counterfactuals,* Jaegwon Kim writes: "…the sort of dependency expressed by counterfactuals is considerably broader than strictly causal dependency and that causal dependency is only one among the heterogeneous group of dependency relationships that can be expressed by counterfactuals" [570:1973]. A statement like "If George had not been born in 1950, he would not have celebrated his 63rd birthday in 2013" is a counterfactual statement. But from this statement we cannot conclude that George celebrating his 63rd birthday was caused by his being born in 1950. Bernecker says that "even if one's present retelling of a past event is counterfactually dependant on one's previous having witnessed that event, this doesn't have to mean that the witnessing is the cause of the retelling" [21:2008:21].

4.4 Personal Identity and Memory Causation

Sydney Shoemaker presents another argument for causality in memory in his paper, *Persons and Their Pasts*. Shoemaker's argument is from personal identity and he rests his argument on a hypothetical case:

"Let us suppose that the brain from the body of one man, Brown, is transplanted into the body of another man, Robinson, and that the resulting creature – I call him "Brownson" – survives and upon regaining consciousness begins making memory claims corresponding to the past history of Brown rather than that of Robinson… I think that most people would want to say that Brownson is (is the same person as) Brown" [282:1970].

The claim here is that, analysing the personal identity by a non-causal notion of retention of past thoughts is circular. A non-causal notion of retention of memories will presuppose personal identity. We can say that Brownson is Brown, as Brownson retains Brown's memories. But this "presupposes the identity of Brownson and Brown, and cannot without circularity be offered as evidence for it" [282:1970]. As a non-causal notion cannot be applied without circularity, we will have to resort to a causal notion of memory to explain Brownson's identity.

An objection that can be raised against this analysis is that personal identity cannot be defined in terms of memory connectedness. This objection was initially raised against John Locke by Bishop Butler. The argument is that, one must already have a criterion of personal identity in order to define memory. Real memories are apparent memories, in which the person remembering is the person who actually had the experience. (Butler: 2006, See also Schechtman: 1990) Since the fact of identity is prior to the distinction between real and apparent memory, personal identity cannot be defined in terms of memory connectedness.

Shoemaker develops an idea of *quasi-remembering* to overcome this objection. Quasi-remembering is the kind of knowledge of past events "such that someone's having this sort of knowledge of an event, does involve there being a correspondence between his present cognitive state and a past cognitive and sensory state that was of the event, but such that this correspondence, although otherwise just like that which exists in memory, does not necessarily involve that past state's having been a state of the very same person who subsequently has the knowledge" [271:1970]. In effect, the notion of *quasi remembering*, unlike remembering, does not imply personal identity. It is this notion that Shoemaker uses to define personal identity. Using this notion, Shoemaker argues that while the non-causal theory of memory presupposes personal identity, a causal theory of memory (or *quasi memory*) does not presuppose personal identity.

There are two problems with this account. First, the claim that a non-causal theory of memory should be rejected because it presupposes personal identity is problematic. Just like the idea of quasi-memory which does not presuppose personal identity, one can define non-causal retention which does not entail personal identity. Delmas Lewis, in his paper *Dualism and the Causal Theory of Memory,* develops such an idea and calls it *quasi-retention* [29:1983]. S *quasi-retains* a past experience, iff: a) there is a correspondence between his present cognitive state in which he represents the experience, and the past state in which the said experience was acquired and b) the past state need not have been a state of S. (See also Ginet, 170:1975)

Second, Shoemaker's analysis is based on counterfactuals too. Brownson cannot make memory claims pertaining to Brown's past history, without such statements being directly connected with Brown's past actions and experiences. Shoemaker writes he can see no reason for doubting that such counterfactuals assert causal connections. But as we noted in the above section, counterfactuals are not equivalent to causality.

4.5 Retention Theory: Malcolm on Connection with the Past

Arguments for a causal connection with the past that are examined above come with certain difficulties. There are alternate accounts which attempt to explain the connection with past without assuming a causal connection. After Norman Malcolm's influential *Three Lectures on Memory* (1963), many philosophers held a view that memory is retention of knowledge, and that it can be explained without invoking a causal connection condition. E.M. Zemach (1968), Alan Holland (1974), Andrew Naylor (1971) and David Annis (1980) are some of the philosophers who held views that did not assign a role to causation in explaining memory.

Rejecting a causal process in memory, Malcolm holds that memory is retention of knowledge. There are three arguments Malcolm raises against causation. Firstly, in experiential memory,

remembering is logically connected with the past. Malcolm raises this logical dependency as an objection. Malcolm says, “One might object to the idea that the supposed effect is *causally* dependant on the supposed cause, for the reason that the “effect” is logically dependant on the cause” [231:1963]. The relation between cause and effect cannot be that of logical dependency. If all one knew was the effect, one cannot infer the cause. But this is not so in remembering. When I say that I remember having seen *Queen Mary* in drydock, it logically implies that I have seen *Queen Mary* in drydock. It is logically impossible that one remembers having seen something unless one saw it. From the supposed effect (remembering), we can infer the supposed cause (experience in the past). Secondly, Malcolm says that the nomological character of causation is absent in memory. Malcolm’s objection is inspired by Hume. Hume defines cause to be “an object, followed by another, and where all the objects similar to the first are followed by objects similar to the second” [76:1975]. Memory is not such a law-governed process, as we cannot commit ourselves to the general proposition that “In like circumstances, whenever a person has previously known that p then he knows that p.” Thirdly, our everyday notion of remembering carries no implication of an unbroken causal connection. Malcolm agrees with Von Leyden in his view that the process of retention is itself unobservable. One of the sceptical observations Malcolm makes is that a causal process or a continuous connection is never there, and occurrences of the so called “recollections” are never manifestations of a *process* of remembering. Rejecting a causal process in memory based on the above three arguments, Malcolm defines memory thus: “A person, B, remembers that *p* from a time, *t*, if and only if B knows that *p, and* B knew that *p* at *t, and* if B had not known at *t* that *p* he would not now know that *p.*”

As with the causal theory of memory, Malcolm’s definition excludes relearning and assures that the representation one has in remembering is a retained representation of the past. But this definition is problematic. Malcolm’s definition presupposes an epistemic view of memory, where to remember something is to know it. Memory is retention of knowledge. Given that knowledge implies true belief and justification, to remember that p: a) one must belief that p, b) p should be true *and* c) one should be justified in believing that p. An objection that can be raised here is that the epistemic

theory of memory is flawed and that belief is not a necessary component of memory. One can remember that p, without believing that p. Consider a person who gets a thought that, as a child he met with an accident.[10] He does not believe that he had such an accident. However, unknown to him, he had in fact met with an accident as a child. The thought that comes to his mind is then an instance of factual memory. He does not believe, and so he does not know, yet he remembers.[11] Malcolm's definition is insufficient because one can remember that p without knowing that p. (This is examined in detail in the next chapter.)

Further, Malcolm's arguments against the causal theory of memory are problematic. Malcolm's first objection was based on the logical dependency of the supposed effect over the supposed cause. It is logically impossible that S can remember having seen X unless S had in fact seen X in the past. The problem with this objection is that logical implication essentially depends on the content of sentences. Malcolm's objection is a difficulty that arises from the notion of sentential description of an event. We usually bring an event under the purview of logic by talking about its description. If this description includes the causally relevant properties of the event, the logical dependency that Malcolm mentions is inescapable. "The ground is wet due to the rain yesterday", logically implies that it rained yesterday. However, this does not mean that there is no causal relationship between yesterday's rain and the ground getting wet. Yesterday's rain is the cause of ground being wet today. Jaegwon Kim examines the implication of description operators in the sentential description of an event in detail, in his paper *Causation, Nomic Subsumption, and the Concept of Event*. (See also Bernecker [19:2008]) Kim writes, "Once the description operator is available, we can pack as much "content" as we like into any singular sentence, and this can likely be done without changing the identity of the event described. Obviously, this is bound to cause trouble for any account of causation or nomic subsumption based on the relation of logical implication" [219:1973].

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[10] A similar case is presented by Malcolm [213:1963]. It is a case of experiential memory. Malcolm says that we cannot conclusively say whether the person experientially remembers or not, if he does not believe what appears in his mind.

[11] Sven Bernecker, in his paper, *Remembering without Knowing* presents a detailed argument against the epistemic theory of memory, and the notion that remembering implies believing. [146-151:2007]

Malcolm's second objection is regarding the nomological character of causation.[12] This is also flawed. The view that it is not possible to have laws of memory is mistaken. After the German psychologist Hermann Ebbinghaus brought the study of memory into laboratory in 1880s, psychologists and neurologists have framed many "law-like regularities" in memory. Karl Lashley, Wilder Penfield and Edward Thorndike came up with such laws in learning and memory [Squire and Kandel: 2009]. Martin and Deutscher, in their paper, have examined Malcolm's third objection, that our concept of memory carries no implication of an unbroken causal connection. Dialling a number will make the phone ring on the other end. It would be absurd to suggest that one should know the process involved. Likewise the unbroken causal connection need not be known while we remember.

4.6 Retention Gap and Causal Connection: Squires on Memory

In his paper *Memory Unchained,* Roger Squires criticises the notion of a causal process in memory. Squires's views are in response to Martin and Deutscher's version of causal theory. Rejecting a "forced reference to causal connection" in memory, Squires says that all three cases presented by Martin and Deutscher can be explained without invoking causation. According to Squires, a person's present representation of an event is connected to his past witnessing of that event not via a causal connection, but via a certain ability that he acquired and retained in virtue of having that experience in the past. He exercises this ability while remembering the past event. Memory is essentially the retention of knowledge.

"We can sometime explain the fact that someone who had a car last year has a car now by saying that he must have had it all along. But this is not a causal explanation. Similarly, when we explain that someone must be remembering we are, in general, either pointing out that what he did was a

[12] Same objection is raised by Carl Ginet [167:1975]

display of knowledge (rather than an accident, say) or we are saying that he has had the knowledge all along" [191: 1969].

Squires says that causal connection is a "superfluous piece of philosophical engineering" and that philosophers are forced to invoke a causal connection to explain the retention gap; instances of temporal forgetting. Causality is invoked by philosophers, as there is an ambiguity in the notion of retained ability while explaining temporal forgetting. He illustrates his point by an example. Suppose, a teddy bear kept in the attic has the ability to squeak when pressed. In winter, because of the dampness in the attic, it does not squeak. In summer we try again and find that it squeaks. One will say that the teddy bear has retained its squeak, though this ability was discontinuous. Squires notes that the discontinuity that one might see in this case is the result of an ambiguity from the use of the phrases "in winter" and "in summer". The *ability to squeak in winter* is not the same as *ability to squeak in summer.* The toy has retained its ability, as even in winter, it had *the ability to squeak in summer.* The ability that it lost (ability to squeak in winter) is not the ability it retained (ability to squeak in summer.) Applying this idea to memory, Squires claims that the ability we lose when we forget something is not the ability we retain. "[…] we need to specify exactly what has been forgotten. When we forget something, and then remember it, the capacity we lose is not the capacity we keep" [186: 1969]. The idea here is that, there is a difference between forgetting something forever, and forgetting something temporarily. When we forget an experience forever, we lose the capacity to represent that experience *in any circumstance*. When we forget an experience temporarily, only to remember it later, we retain the capacity to represent that experience *in particular circumstances*.

Squires applies this argument to the cases suggested by Martin and Deutscher. The case where an artist paints a farmyard,, which he takes to be imaginary, is a case of remembering, because the painter, unknown to him, acquired and retained a capacity from his childhood to represent this farmyard. The second case is that of a person who, after hypnotic suggestion, recounts the details of an accident which he witnessed. Here, the subject is not remembering because there is no

continuous possession of knowledge. That is, the possession of knowledge is not dated from the event itself. The ability that he exercises is not dated from the car crash, but from the hypnotic suggestion. The third case, the case where a person cannot decide whether he is remembering an incident from his childhood or has been told about it, can be accommodated too, for we can decide whether he is remembering the incident or not by considering whether his ability to recount the event dates from the time he witnessed it.

Apart from the difficulties that come with an epistemic view of memory, there are three further problems with Squires's account of memory. Firstly, his theory will not account for the cases where one has temporarily forgotten something and remembers that something only after a complete prompt. Don Locke points out this difficulty with Squires's account, in his essay on memory. "[…] if someone reminds me of some fact I had completely forgotten, and would not have remembered if he had not reminded me, it does not seem correct to say that I possessed that knowledge continuously" [63:1971]. Secondly, Squires's view that, in temporary forgetting we lose the capacity to retain information about a past experience in only *particular* circumstances is hardly informative. All our abilities can be exercised only in particular circumstances. Since none of our abilities are such that we have them in any circumstance, we never forget anything permanently [Bernecker 25:2008]. All cases of forgetting are cases of temporal forgetting. Empirical psychologists who subscribe to the Interference Theory of memory hold that memory never fades and, once encoded, is stored in brain forever. According to the interference theory, it is the learning of something else that causes forgetting - the original memory is difficult to access because of the learning of other memories that compete with each other during retrieval. [Schacter: 1996, Tomlinson et al. 2009: 589, Bjork, 2011: 2]. What is experienced is always there, and we cannot permanently forget anything. Squire's differentiation of temporary forgetting and permanent forgetting is thus wrong as, in principle, any memory can be retrieved given the right cue, and all instances of forgetting are temporary forgetting. Thirdly, Squires says that memory is retention of knowledge but says nothing about the process involved in this retention. This problem is relevant for all accounts of retention theories, including Malcolm's account. In the case of a causal theory, this retention process is

explained by invoking the notion of memory traces. If we leave the retention process unexplained, it will make memory something like fortune telling, a magical faculty.

If memory is to be defined as retained knowledge or ability, one will have explain the process of retention. None of the retention theorists have come up with a theory which explains this process satisfactorily. Here, a causal theory has a clear explanatory advantage. Casual theorist can explain how one retains a past experience.

Consider the second case presented by Martin and Deutscher, the case of Kent who meets with an accident and forgets about it after a second accident. Now, suppose that soon after his first accident, Kent describes his experience in detail to his cousin. Later, after the second accident, under hypnotic suggestion, Kent's cousin gives Kent a complete description of the first accident. Suppose that, Kent is able to describe the first accident in detail after the hypnotic suggestion. In this case, Kent's recount of the accident is causally connected with his experience. But it would still not be right to say that Kent remembers. The causal chain that connects his present recollection with his past experience is *deviant.* To exclude such causal connections, and to explain the process of memory retention, causal theorists subscribe to the idea of engrams or memory traces. There is growing empirical evidence of the existence of memory traces. Philosophers, psychologists and neuroscientists alike have come to accept the notion of memory traces, and this notion has now become an indispensable part of any important theory of memory.

4.7 Memory Traces

What sort of changes occur in us, in our brain, while encoding an experience? According to trace theory, there occurs a structural modification at synapses, the area where the axion of one neuron connects with the dentrite of another neuron, that affect the ease with which neurons in a neural network can activate each other. This encoding does not happen in a specific location. That is,

there is no separate memory center in the brain where memories are stored. Squire and Kandel write that Information is stored as memory in the same distributed assembly of brain structures that are engaged in initially perceiving and processing what is to be remembered. The connectionist approach in trace theory has it that remembering is realised by patterns of activation in a network of model neurons and the memorial process consists of the spreading activation of such patterns. Engrams or memory traces are “the sum total of changes in brain that first encoded an experience and that then constitute the record of an experience.” (Squire and Kandel; [78:2009])

This view explains some interesting facts about memory. Firstly, it explains why a brain damage will not cause a sudden loss of one’s history. It has been observed by neurologists that after brain damage, the memory system slowly becomes worse. This phenomenon is called ‘graceful degradation.’ The view that a number of brain regions are involved in representing a single event, helps us understand this gradual worsening of memory. Secondly, the theory explains reconstructive process in memory. As there is no single memory centre, we do not go to a discrete location to find something. While remembering an event, only some fragment of the engram may be activated. We engage in a reconstructive process and comes with an approximation of the past. As connectionist computers we don't need to perceive every letter in a string of words to be able to read it. Anderson writes, “To xllxstxatx, I cxn rxplxce xvexy txirx lextex of x sextexce xitx an x, anx yox stxll xan xanxge xo rxad xt— wixh sxme xificxltx” [62:1995].

4.8 Traces in Philosophy of Memory

The earliest reference to the idea of a trace can be seen in Aristotle’s *De Memoria*, where he says “[in remembering] the change that occurs [in soul] marks in a sort of imprint, as it were, of the sense image, as people do who seal things with signet rings.” (De Memoria: 450a-25) Locke too uses such metaphors, where he says that we forget our experiences because the pictures laid in

our minds are laid in fading colours and if that inscription moulders away, all that remains is brass and marble. [151-152: 1979]

The contemporary discussions on memory give vital importance to the idea of memory traces. Martin and Deutscher, in their paper, give a further clause to their third condition for remembering: “The state or set of states produced by the past experience must constitute a structural analogue of the thing remembered, to the extent to which he can accurately represent the thing” [191: 1966]. Philosophers who hold a representative realist view hold that the very idea of memory storage calls for the stipulation of memory traces. Some of the Direct realists, however, are hostile towards the idea of memory traces, as direct realist theory, in a strict sense cannot, in principle, accommodate the notion of a representation. Woozley writes that a representation will invoke dualism, as “a distinction needs to be made between the appearance given [tothe subject] and whatever object it is to which the appearance belongs” [22:1949]. But this worry is misplaced. Even though traces are representations, the subject is not aware of the representations themselves, nor does he interpret the past consciously from these representations. If we see traces in this sense, the immediate awareness is still that of the past and not that of a representation. Sutton writes, “when representations are thought ocas brain states, it is clear that they are not immediate objects of experience which a subject then consciously puts to use” [282:1998].

Though most of the philosophers think that an explanation of remembering will include reference to a trace acquired in the past, there are a few important arguments that are raised against the notion of a trace. Malcolm, for example, rejects the notion of a trace and says, “We can agree with Martin and Deutscher that the language of memory does, in a sense, require a “causal interpretation”, but not agree that memory as a causal concept entails the concept of causal process. Eliminate the assumption of a causal process, and the causal argument for a memory trace collapses. [185:1977]. ” Essentially, Malcolm says that one can accept that the subject’s experience of a particular event causes or, at least, is causally relevant to the subject’s recollection of the same event without having to accept the notion of a memory trace. According to Malcolm, one need not

be concerned about the temporal distance, and the past experience can be causally relevant over a temporal distance.

Malcolm seems to have been inspired by a version of causation in memory developed by Bertrand Russell. In his *Analysis of Mind* (1921), Russell proposes an account of memory causation which can manage without accepting the idea of a memory trace. He calls this mnemic phenomena. Russell says, the past can act upon the present experience, without directly modifying the brain structure. Russell writes, “This characteristic is embodied in the saying "a burnt child fears the fire." The burn may have left no visible traces, yet it modifies the reaction of the child in the presence of fire. It is customary to assume that, in such cases, the past operates by modifying the structure of the brain, not directly” [77:2007].

Further, Russell says, “In attempting to state the proximate cause of the present event, some past event or events must be included, unless we take refuge in hypothetical modifications of brain structure. For example: you smell peat-smoke, and you recall some occasion when you smelt it before. The cause of your recollection, so far as hitherto observable phenomena are concerned, consists both of the peat smoke (present stimulus) and of the former occasion (past experience). The same stimulus will not produce the same recollection in another man who did not share your former experience, although the former experience left no observable traces in the structure of the brain. According to the maxim “same cause, same effect,” we cannot therefore regard the peat-smoke alone as the cause of your recollection, since it does not have the same effect in other cases. The cause of your recollection must be both the peat-smoke and the past occurrence. Accordingly your recollection is an instance of what we are calling “mnemic phenomena” [78-79:2007].

Russell’s theory is primarily motivated by his hesitance to accept contiguous causation. According to Hume, whatever objects considered as causes or effects are *contiguous,* and nothing can operate in a time or place, which is ever so little removed from those of its existence. There are

cases which appear to be not distant in space and time. For example, setting an alarm clock now will make it ring after a while, or pressing a button on the remote-control will switch off the television. Cases such as these, where the cause and effect seem temporally or spatially distant, are linked by a chain of causes, which are contiguous among themselves. Here there is remote and proximate cause: remote cause is connected with the effect through a chain of causes, and the last link in this chain of causes is the proximate cause. Spatial and temporal contiguity is thus, an essential condition for causation. In the absence of such contiguity, anything can intervene and prevent the effect from occurring, even if the cause had occurred.

Russell, who in other cases is inclined to follow Hume, differs on the idea of contiguous causation with him. According to Russell, a cause cannot be temporally contiguous with effect. The real effect can take place only after the last link of the causal chain - the proximate cause-event - has taken place. Even if there is a slight interval between the proximate cause and the event, something can intervene which can prevent the event from occurring. This would mean that there cannot be even a slight interval of time between the cause and effect. That is, cause and effect have to be simultaneous. Illustrating this paradox, Russell rejects contiguous causation.

Trace theory, on the other hand, is designed to account for contiguous causation. The theory holds that the past event is the remote cause and the traces are proximate cause. Having rejected the notion of contiguous causation, Russell rejects trace theory and argues for mnemic causation, where the past experience is directly causally relevant over a temporal distance.

Here again, trace theory has a clear explanatory advantage over mnemic causation. Russell does not explain where and how information is stored, in the mnemic phenomenon. Previously, the difficulties with Squires's account of memory was discussed. Squires held that by witnessing an event, we acquire a certain capacity, a certain disposition, and that it is this capacity we are exercising while we remember a past event. Such a theory cannot explain how and where the

information is retained for us to exercise the said ability. This difficulty is relevant in Russell's mnemic causation too.

The second argument that Russell raises against trace theory is the limited evidence for memory traces. Russell says that traces are "in fact hypothetical, invoked for theoretical uses, and not an outcome of direct observation." Russell's sentiments are shared by Zemach (1983: 32, 33) when he says that causal theory of memory "cannot dictate to science what to discover in the human brain. It may be the case that, despite current popular notions, no such analogue will be discovered." This worry is misplaced. Though exact empirical proof is yet to come through, there is a growing body of evidence for memory traces and neurologists and psychologists alike have come to accept the existence of traces. (Squire and Kandel: 2009, Schacter: 1996).

4.9 Conclusion

An appropriate causal connection is needed between one's past and present cognitive states, for that state to be a case of remembering. Memory traces are indispensable for a decent theory of memory. Such a theory, which assigns a central role to traces, is not dictating to science what to discover in the human brain. A theory which fails to consider the existence of trace considers memory as a magical faculty like clairvoyance.

Chapter 5

KNOWLEDGE AND MEMORY

5.1 Introduction

Much of the knowledge that we have comes from memory. This motivates some philosophers to say that memory is a source of knowledge. They consider memory as a source of knowledge similar to perception and testimony. Others say that memory is a passive device, and memory cannot provide us with new knowledge. Their argument is that memory cannot provide us with anything new and that it can only inform us about previously acquired knowledge. The question here is about the relationship between memory and knowledge. This debate is still alive among contemporary philosophers. The widely advocated view that most philosophers have come to accept is that remembering entails knowledge. In his detailed analysis of memory, Norman Malcolm says, “A person B, remembers that *p* if and only if B knows that *p* because he knew that *p*.” [223:1963]. Similarly, Robert Audi states, “if you remember that we met, you know that we did” [67:1998]. Roger Squires and Michael Dummett viewed memory as retention of knowledge. Dummett says that “[memory is] the maintenance of knowledge acquired by whatever means” [421:1996]. Squires expresses similar views too [185:1969]. The received view in philosophy of memory is that, if one learns that *p* at t_1, and remembers that *p* at a later time t_2, one knows that *p* at t_2.

I will be discussing the relationship between memory and knowledge in this chapter. The two questions that I am going to examine in this chapter are: 1. How to distinguish between those memories that can be regarded as knowledge and those that can be regarded only as beliefs? 2. Does propositional memory entail knowledge? My conclusions are that: 1. There is an intrinsic

epistemic authority for memory, and one is entitled to hold memory at face value till one is presented with countervailing evidence. 2. Propositional memory does not entail knowledge, as belief and justification are not necessary conditions for remembering that p.

5.2 Reliability of Memory

While one remembers, it is in the character of one's present memory-experience that one finds the evidence of the past event. In this sense, memory is a source of knowledge. But how can one be confident that the information provided by memory is reliable? Suppose that I remember that the value of pi is 3.14. How do I know that this value, given by memory, is correct? We take such information that comes from memory at face value and we count this as reliable, because such information provided to us by memory, in the past, has been mostly true. This method is obviously problematic because it is by memory we are aware, that in the past memory provided us with correct information. Here the observations, which are used to check the accuracy of memory, are themselves based on memory. Alternatively, we can verify the value of pi by checking an elementary mathematics textbook. But still the problem remains. We will have to rely on memory, and it is by memory that we can be confident that the information provided in the textbook is reliable. Whatever be the method we employ to assure ourselves of the correctness of the information given by memory, at some point or other, we will have to rely on memory. At some point or other, it will involve the fact that we remember that something was the case. The problem with such an argument is that, it tries to defend the reliability of memory by relying on premises that are themselves based on memory. It is an epistemically circular argument.

Most philosophers who have analysed memory are aware of this problem and have proposed various solutions. GF Stout says that a memory-belief is self-evident and contains its own evidence [215-224:1931]. External evidence is unnecessary as such beliefs are self-evident. RF Harrod urges that we should treat the trustworthiness of memory as we would a scientific hypothesis

[57:1942]. If we examine what consequences will follow if the hypothesis be true, and examine whether the experience accords with these consequences, we can conclude that the experience does verify the hypothesis. But there are a lot of questions that come up with such arguments. The important question, how does one know what verifies a memory-belief without appeal to memory, is left unanswered. Similarly, according to EJ Furlong when we say that memory is not trustworthy, we are using memory to disprove memory [10:1951].

It has been argued that this circularity cannot be avoided entirely. In his seminal paper, William Alston [1986] examines these circular arguments. He concludes that without using such epistemically circular arguments, one cannot justifiably believe or know that our sources of beliefs are reliable. However, this circularity, according to Alston, does not disqualify an argument. Taking sense perception as his point, he says, “epistemic circularity does not in and of itself disqualify the argument[13]. But even granting this point, the argument will not do its job unless we are justified in accepting its premises; and that is the case only if sense perception is in fact reliable. This is to offer a stone instead of bread. We can say the same of any belief-forming practice whatever, no matter how disreputable. We can just as well say of crystal ball gazing that if it is reliable, we can use a track-record argument to show that it is reliable. But when we ask whether one or another source of belief is reliable, we are interested in discriminating those that can be reasonably trusted from those that cannot. Hence merely showing that if a given source is reliable it can be shown by its record to be reliable, does nothing to indicate that the source belongs to the sheep rather that

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[13] Here, argument is the track-record argument:

1. At t_1, S_1 formed the perceptual belief that p_1, and p_1.
2. At t_2, S_2 formed the perceptual belief that p_2, and p_2.

……

Therefore, sense experience is a reliable source of belief.

In this argument, the conclusion ‘sense experience is a reliable source of belief’, does not appear anywhere in the premises. Yet the argument is circular because in the premises, I am presupposing that my beliefs based on sense experience are generally true.

with the goats" [17:1993]. The point is that, we cannot remove doubts about reliability of the source of knowledge, even if we are to assume reliabilism.

There are two problems here. Firstly, in the case of those memories that we consider to be genuine, we take the output from our memory to be reliable and then we defend the reliability of memory by relying on premises that are themselves based on memory. Secondly, while we are presented with faint memories, those thoughts which we cannot distinguish from imagination, we are aware that memory has deceived us in the past and that the present memory-cognitions can be erroneous too. We reason that such thoughts could be cases of misremembering or false remembering. But even to reason this way, we will have to rely on memory. It is by memory we know that we have had episodes of misrememberings in the past. H.H.Price says, "… in order to assert that my memory has deceived me even once, I have to know a number of facts about the past. Unless some memory is knowledge, I have no ground whatever for asserting that some memory is only belief" [17:1936]. Similarly, David Owens states, "Any investigation into the reliability of memory will make use of beliefs about the past. […] So in any such enquiry, some memories must be taken at face value, at least to start with. An agnostic about memory could not even begin to determine which of his memories he should accept and which he should suspect" [314:1999].

We cannot assume that all that we remember is knowledge, as we are aware that very often our memory deceives us. A number of cases, where the subject *remembers* but does not *know*, have been examined by various philosophers (Martin & Deutscher [1966: 167], Boghossian [13:1989], Bernecker [151:2007], Bernecker [73:2010]). But these cases and the arguments presented do not explain why certain cases of remembering are cases of knowing and why certain cases are not. Just on the basis of introspection, the subject cannot distinguish genuine memory from false memory (or in some cases imagination). To make this distinction, a subject needs information beyond what is available through introspection. But even such information is ultimately dependent on memory. The question here is, how to make a distinction. How can we distinguish between

those memories that can be taken at face-value, i.e., memories that can be regarded as knowledge and those memories that can be regarded only as beliefs?

In our everyday life, however, we usually trust our memory-cognitions. We usually consult our memory and take our memory-cognitions at face value. We think that if we remember that p, we know that p. This motivated some philosophers to hold a view that propositional memory entails knowledge. According to them, the aforementioned cases (Martin & Deutscher [167:1966], Boghossian [13:1989]) are not cases of remembering, as the subject does not know. If I remember that p, I know that p.

The alternate view, the view that memory does not provide knowledge, is not a new one. In Plato's *Theaetetus*, Theaetetus says that the view, that remembering is possible without knowing, would be "monstrous". In the dialogue that follows, Socrates says that if someone has come to have knowledge of something at some time, and he still has, and preserves, a memory of that very thing, it is still possible that at the very same time he remembers it, he might fail to know it. The idea is that one must be directly acquainted with the object, to *know* that object. In the case of memory, such a direct acquaintance is impossible, and thus, it is impossible to *know* what is remembered. That is, memory, even when it is accurate, does not provide us with knowledge. [163d5]

The view that Theaetetus holds, and the view that is prevalent among the contemporary discussions on memory, is the epistemic theory of memory. This is also the common sense view. Bernecker summarizes the epistemic theory of memory thus. "To remember that p is to know that p, where this knowledge was previously acquired and preserved. A source other than memory is responsible for the original acquisition of knowledge that p. Memory preserves rather than generates knowledge" [67:2010]. According to the epistemic theory of memory, S remembers that p at t_2, if:

1. S knows at t_2 that p.
2. S knew at t_1 that p.
3. S's knowing at t_2 that p is suitably connected to S's knowing at t_1 that p.

An epistemic theory would be the simplest way to explain the relationship between memory and knowledge.

Since the three conditions, belief, justification and truth are individually necessary and jointly sufficient for the traditional concept of propositional knowledge, these three conditions have to be satisfied in propositional memory too. Among these conditions, the third condition, the truth-condition, is unproblematic. One can know or remember only what is the case. If the case is not-p, then S cannot remember that p. He might think that he remembers, or might even claim knowledge, but he cannot actually remember. The other two conditions, the justification condition and belief condition are not so. These conditions need to be examined and if it can be shown that one can remember that p though one did not justifiably believed that p in the past, or that one can remember that p though one does not justifiably believe that p in the present, the epistemic theory fails.

5.3 Accepting Memory-Judgements

For asserting the falsity of memory judgements, or even for doubting the falsity, we have to assume at first the reliability of at least some of the memory judgements. Price says, "[to assume some memory as infallible] is a way of stating that some memory is knowledge in the strict sense, i.e., that it is a direct or immediate apprehension of past events or situations" [24:1936]. There are cases where one learns about the past by using one's background knowledge. To bring out this point Daniel Dennett asks one to answer the questions, "Have you ever danced with a movie star?" or "Have you ever been introduced to a white-haired lady whose first name begins with the letter

V?" [147:1991]. Most of us would answer the first question in the negative and would draw a blank on the second question, even though we would not occurrently remember anything relevant to the proposition in both the cases. We treat these two cases differently, though in both cases we do not recall anything relevant to the proposition. Dennett suggests that this is because, we think that, had we danced with a movie star, we would now remember it. There is no reason to suppose the same with the second question. In the first case, we can unconsciously assess the likelihood that the failure of our memory to produce a recollection is a sign from which we can unconsciously "infer" the conclusion "I have never done that." Our memory provides inductive evidence for the answer to the first question. We accept this evidence and answer the question that 'I have not danced with a movie star.' Our default reaction to the memory judgement is acceptance.

This view, the view that our epistemic position towards memory is not neutral, is defended by the claim that memory has an intrinsic, prima facie epistemic authority. Pollock says, "we must start with the stock of beliefs we already have and then amend those beliefs in light of themselves" [83:1986]. According to this theory, we are entitled to hold a memory belief unless we have some positive reason for thinking we should not hold it. There are various accounts of this theory, which differ as to what can defeat the prima facie authority of such beliefs. We need not concern ourselves with this difference at the moment. The important point is that when we remember that p, memory provides us with some form of evidence that p and we can accept the proposition based on this prima facie evidence, unless there is some countervailing evidence. Harman [1986], Plantinga [1993] and Dummett [1996] endorse this theory, though they differ on what can defeat the prima facie authority of belief.

The problem here is that such a model would not fit propositional memory, though it would fit experiential memory. In the case of experiential memory, we have two components in an episode of recollection. We have a) the image, feelings and emotions associated with the image (qualia), and b) a belief about the past. The image gives evidence for the propositional belief associated with it. Same is the case with perception. There are two components in perception; the perceptual

experience and the belief associated with it. The perceptual experience gives evidence for the belief associated with the experience. In the case of propositional memory, we do not have such two components. The recollection that p, say remembering the value of *pi,* cannot be discerned into two elements.[14]

Pollock tries to overcome this objection by suggesting that propositional memory does have another element to it. The recollection that p, adds something to the belief that p. In other words remembering that p is a state which is different from believing that p. Suppose a physicist comes up with a complex theory after years of hard work, and that the scientific community finally accepts his theory. After the theory is a well-entrenched part of physics, one day, the physicist thinks back over his work, and recalls an early experiment by his assistant, which contradicts his theory. Though he recalls it, he mistrusts his memory with complete justification as it conflicts with a huge body of subsequent evidence. The case illustrates that one can recall that p, without believing that p, and that the two states are distinct.

David Owens objects to this distinction. Owen's take is that propositional memory does not involve something like a sensory impression, something which occurs irrespective of our acceptance. Owens is right in his objection that propositional memory does not involve a different component. If I am asked to answer a questionnaire on Indian history, and if I am set to rely on memory, I will come up with the answers whether or not I recall the event at which I learned. I might recall that I had read the answers in a history book, and might recall the author's name, but none of this is necessary for me to remember the answers. The details of the book and it's author might at best

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[14] Representative realism says that there is something that accompanies a memory-image, which tells us that it is a memory-image. Russell says that there is a 'sense of pastness' that accompanies the image. [162:1921] This 'sense of pastness' can be seen as the second component, but again, this will be suitable only for experiential memory. While propositionally remembering something, it is not necessary that the subject should have an image. Even if there is an image, that image is not a constituent of memory, it simply serves as an aid. The better I remember, the less likely it is that I will have an image. Ayer says that "[propositional memory] consists in nothing more than giving a successful performance. […] To remember a fact is simply to be able to state it. The power is displayed in its exercise." [137: 1990]

serve as aide-memoire. These are not indispensable for me to remember the facts. Ayer says, “a historian who remembers, for example, what the state of parties was throughout the reign of Queen Victoria, a biologist who remembers Lamarck’s version of evolution, a mathematician who remembers Pythagoras’s proof of the existence of irrational numbers, a jurist who remembers Lamarck’s a point of corporation law, need none of them be recollecting any past event; nor need they be having any images. Their remembering just consists in their getting the answer right” [137: 1990].

Further, Pollock’s case is not strictly a case of propositional memory. The scientist is episodically remembering, and infers that the earlier experiment conflicts with a huge body of evidence. To remember the earlier experiment, and to conclude that it contradicts his theory, is different from propositional memory, which consists in a successful performance without recalling the past consciously.

If memory is a different state from belief and if it consists in just having a successful performance, it would mean that memory cannot provide prima-facie justification for the proposition remembered.

Consider the case where I prove a long mathematical theorem. When I move step by step and reach step seven, I might not hold in mind the proof that I had for step three. I would still believe step seven of my theorem and will go ahead with the further steps. I am still entitled to believe step three without having in mind its proof. I will check that proof again, only if something makes me doubt that step. My memory preserves the force of the evidence, though it does not preserves the evidence itself. Even though the evidence is forgotten, the force of the evidence remains.

As in the above case, we remember many propositions, without remembering the evidence. Still, memory-beliefs come with a certainty, because beliefs preserve the force of evidence, though not the evidence itself. Owens says that if a proposition appears in the mind as a flashbulb thought, one would be checking one’s own past, or would be checking whether the proposition is true. We

do not normally do that when we seem to remember the proposition. The fact, that one seems to remember, is still relevant to the justification that one holds. We are entitled to hold a memory-belief if we seem to remember it, because memory-beliefs come with a certain force of the evidence though it does not preserve the evidence itself.

5.4 Epistemic Theory of Memory

According to the epistemic theory of memory, memory entails knowledge. Bernecker [67:2010] summarises the theory thus :

1. S knows at t_2 that p.
2. S knew t_1 that p.
3. S's knowing at t_2 that p is suitably connected to S's knowing at t_1 that p.

Going by the traditional view of knowledge, memory should meet the truth condition, belief condition and the justification condition. These three conditions should be met in the past, when subject acquires information, and in the present when the subject remembers the information. That is:

While S remembers, S's present knowledge implies:

1. S believes at t_2 that p.
2. p is true at t_2.
3. S is justified at t_2 in believing that p.

Similarly, S's past knowledge implies:

1. S believed at t_1 that p.
2. p was true at t_1.
3. S was justified at t_1 in believing that p.

If any of these conditions are not met, then the subject does not remember. To show that the epistemic theory fails, one needs to show that remembering is possible without meeting one or more of the above conditions. Remembering is factive and one cannot remember something that is not true. Thus the truth condition in the theory is unproblematic. If S remembers that p, p is true. The other two conditions, the belief conditions and the justification condition, are not so.

Epistemic theory assumes that memory preserves knowledge and that memory cannot generate knowledge on its own. Malcolm says, "… it may be misleading to speak of *two* elements of knowledge in memory, previous and present knowledge. There are not two pieces of knowledge, but one piece. Memory is the *retention* of knowledge. One knew something and still knows it. The present knowledge in memory is the *same* as the previous knowledge" [229:1963].

A stronger version of epistemic theory of memory is the evidential theory. According to evidential theory, memory should not only preserve the previous knowledge, but also the justifications that one had for those beliefs. It adds a further condition to the epistemic theory.

- S's grounds for knowing at t_1 that p are the same as his grounds for knowing at t_2 that p.

Apart from Malcolm, the evidential theory is advocated by David Annis [1980] and Andrew Naylor [1983].

5.5 Belief in Memory

In his analysis of memory, Malcolm holds that remembering is not possible without belief [213:1963]. It is incoherent and paradoxical to state that, “I remember that p, but do not believe that p.” The incoherence is similar to Moore’s paradoxical statement, “It's raining but I believe that it is not raining.” It can be argued from here that to remember is at least to believe. Martin and Deutscher give a different explanation to this incoherence. They attempt to explain the incoherence without assuming that to remember is at least to believe.

Martin and Deutscher write, “The incoherence of "I remember going for a walk, but I do not believe that I went for a walk" is quite straightforward. Only if X did happen can a person be right when he asserts, "I remember X." Only if X did not occur, however, can he be correct in his belief that X did not occur. Therefore it is impossible for a person to be right both in his claim to remember X and in his belief that X did not occur. Whatever the facts are he must be wrong” [170:1966].

The above argument fails because the statement “I remember going for a walk, but I do not believe that I went for a walk” cannot be translated into “I remember X, but I believe that X did not occur.” In the former statement I do not hold any belief about X, whereas in the latter statement I hold a belief that X did not occur. The incoherence of the statement is not a result of the subject holding a belief contrary to what he remembers. It occurs because there is no belief at all to support the subject’s claim.

The incoherence can be better explained if we treat the statement as a claim to remember, rather than genuine remembering. Sven Bernecker develops such an argument. According to Bernecker, when I claim to remember that p, I am convinced that p is the case and hence believe that p. Yet, the second part of the statement denies that I believe that p. “‘I remember that p; but I don’t believe that p’ is incoherent not because one cannot remember that p without believing that p but because one cannot claim to remember that p while claiming to not believe that p” [146:2007]. As the conditions for claiming to remember are distinct from the conditions for remembering, it does not

follow that remembering that p implies believing that p because claiming to remember that p implies claiming to believe that p.

5.6 Cases: Memory without belief

A case is presented by Norman Malcolm, where one gets a sudden thought that he was kidnapped as a kid [213:1963]. Unbeknownst to him, he was in fact kidnapped as a kid. He does not believe this and does not take this flashbulb-thought to be a case of remembering. The question is whether the thought that suddenly appears is a case of remembering or not. Malcolm says that there is no correct answer here. On the one hand, the thought is strikingly similar to what had happened to him the past, and hence is a case of remembering. On the other hand, the subject does not remember the kidnapping because “he does not even believe it.” Here Malcolm is examining whether all types of memory imply propositional memory or not. Malcolm concludes that the subject perceptually remembers the incident, but is unsure of the status of propositional memory in the case.

“Martin and Deutscher present a similar case in their paper. “Suppose that someone asks a painter to paint an imaginary scene. The painter agrees to this and, taking himself to be painting some purely imaginary scene, paints a detailed picture of a farmyard, including a certain colored and shaped house, various people with detailed features, particular items of clothing, and so on. His parents then recognize the picture as a very accurate representation of a scene which the painter saw just once in his childhood. The figures and colors are as the painter saw them only once on the farm which he now depicts. We may add more and more evidence to force the conclusion that the painter did his work by no mere accident. Although the painter sincerely believes that his work is purely imaginary, and represents no real scene, the amazed observers have all the evidence needed to establish that in fact he is remembering a scene from childhood. What other explanation could there be for his painting being so like what he has seen?” [166-167:1966].

In both cases, the subjects hold no belief that they have learned that p, or had an experience e, in the past. They take their thought, what appears in the mind, to be a figment of their imagination. The onlookers are aware that the instance, the painting/kidnapping, is a case of remembering as they are aware of the subjects' past. The onlookers say that the painter remembers because they have some evidence to show that he has learned that p in the past and that his current mental state is in some way causally connected to his earlier mental state when he learned that p. The painter says that he does not remember and that the painting is imaginary.

What will serve as a base for my statement - 'I know that I remember that p'? Can I know by introspection alone that, that what appears in my mind is a genuine memory-cognition and not an episode of imagination? The answer is no. Memory-cognition is not transparent to the subject. Subject needs information beyond what is available through introspection to *know* whether it is genuine memory or imagination. This opaqueness is true for all cognitive activities. All factive cognitive activities are opaque from a first-person perspective. Knowledge is not transparent, as the subject cannot always distinguish knowledge from belief just by introspection.

In the above cases, the subjects do not have a belief. Before they confirm their past from the onlookers, if we were to ask them about the kidnapping or the farm visit, they would reply in negative. This means that he does not hold a dispositional belief that p too. Thus the present belief condition, the condition that S believes at t_2 that p, fails when the subject remembers.

5.7 Knowledge without belief

Some philosophers are of the view that belief is not a necessary condition for knowledge. If knowledge is possible without belief, then showing that one can remember that p without believing that p will not defeat the epistemic theory of memory. Colin Radford says that "neither believing that P nor, *a fortiori*, being confident, sure, quite sure, or certain that P is a necessary condition of

knowing that P. Nor is it a necessary condition of knowing that P that one should have the right to be, or be justified in being, or have adequate grounds for being sure that P" [11:1966]. Radford presents a few cases to argue that knowledge is possible without belief. In an English quiz, Tom is asked a few questions on English history. Tom thinks that he does not know the answers, nevertheless he answers most of the questions correctly. Tom does not *believe* his answers, but he *knows* the answers. Timothy Williamson supports the view that knowledge does not involve belief. According to Williamson, instead of analysing knowledge in terms of belief, we should reverse the direction and analyse belief in terms of knowledge. Williamson [30:2000] argues that knowledge is an irreducible mental state.

More recently, an empirical study conducted by Schwitzgebel supports Radford's view. A set of cases similar to the case presented by Radford were given to a set of (non-philosophy) students and they reacted the way in which Radford suggests. i.e., the common notion is that one can know that p without believing that p. [Schwitzgebel & Myers-Schulz, 371:2013]

Two objections can be raised against Radford's case (and the study by Schwitzgebel). Firstly, Tom has no justification for p. He answers the questions correctly, without being sure of those answers. Thus, it can be said that Tom does not *know* that p, as he has no justification for believing that *p.* Secondly, according to Radford, for knowing that p, one need not be sure or pretty sure or confident. For believing that p, however, one needs to be sure, because belief is an attitude that we have when we take something to be true or accepts it. This poses a difficulty for Radford's thesis. The cases suggest that the subject needs to be sure about his belief that p and need not have such surety about his knowledge that p. Tom is not sure about his answers, and yet Radford claims that he knows these answers. This is peculiar. One can know that p without being sure that p. But one cannot believe that p without being sure that p. According to Radford then, true belief becomes epistemically superior to knowledge. To avoid this difficulty, we will have to accept that Tom does know that p, and he believes that p.

But even if such arguments are plausible, and even if it can be plausibly argued that knowledge does not involve belief, it will not help epistemic theory as one can remember without satisfying the justification condition that epistemic theory holds.

5.8 Justification in Memory

The justification condition in the epistemic theory of memory has it that one should be justified in believing that p while one remembers. When S remembers that p, what kind of justification does S have? A common answer by a layperson would be that his memories are most often reliable. The subject knows that in the past, when he seems to remember something, it was true. This makes him take his memories to be reliable. The obvious problem here is that of circularity. It is by memory one is aware that in the past, his memory beliefs were generally reliable.

Evidential Retention Theory says that, for one to remember, one should not only retain the known proposition but also the original grounds by which one acquired the proposition. Norman Malcolm says, “when someone remembers that p does he have grounds for being sure that p? The answer is that he has the same grounds, if any, that he previously had... If the ground of his previous knowledge was testimony then the ground of present knowledge is that same previous testimony... If a man’s previous knowledge that p had no grounds, then in remembering that p his present knowledge has no grounds” [230:1963].

While, Malcolm says that there are not two pieces of knowledge and that the present knowledge in memory is the same as the previous knowledge, it is the first step towards ruling out a causal connection. One may still ask whether the past acquisition of knowledge is causally connected with the present manifestation of knowledge. For this, an Evidential Retention Theorist’s reply would be similar to that of Roger Squire’s version of retention - that a certain process starts at the time of acquisition of knowledge which is in work during the retention of knowledge, and is exercised

during the manifestation of knowledge. Malcolm agrees that the nature of this process is unknown. As the nature of the process is not adequately explained, the argument against Simple Retention Theory is valid here too. Since the required process starts while acquiring the proposition, and is exercised during the manifestation of the knowledge, and since it is only through this process one can recall the previously retained knowledge, the process could very well be a causal one.

Another argument against Evidential Theory raised by Sven Bernecker is that it fails to filter cases of relearning. “The evidential retention condition doesn’t rule out instances where a person knew at t1 that p on some grounds and knows at t2 that p on the same grounds but fails to remember that p, since he had completely forgotten that p in the interval between t1 and t2” [106:2010]. According to the evidential theory we will have to treat such cases as memory.

To show that the justification condition of the epistemic theory is not necessary, Bernecker presents a case:

“Sometime in the past, at t1, S believed that something was occurring in front of him (e.g., the Loch Ness monster poking its head out of the water), something which he was, in fact, witnessing, but when he had plausible but misleading reasons to suppose that he had just been given a strong hallucinogenic drug. […] S wasn’t justified at t1 in believing that such a thing was taking place in front of him and thus he didn’t know that it was. At t2, S learns that, in spite of his past evidence, he had not actually been given a hallucinogenic drug but only a placebo. He had really seen what he had irrationally believed to be seeing while falsely thinking to be hallucinating. At t3 S is able to give an accurate account of what he witnessed at t1” [144:2007]. Bernecker proceeds to say that S may be said to remember at t3 though he was not justified in believing his eyes at t1. This case, according to Bernecker, shows that the past justification condition is not necessary and that the epistemic theory of memory fails.

The problem here is that there are two propositions that are remembered.

At t1,

1. S believes that he has a certain experience.
2. S believes that he has taken a hallucinogenic drug.
3. S believes that the experience he is having is an effect of the drug.

At t2,

4. S knows that the drug was in fact a placebo. (Past justification for this is falsified. Now this proposition is a case of elliptical memory. S remembers that he had taken a tablet and now knows that it was in fact a placebo.)

At t3,

5. S remembers that the drug was a placebo.
6. S infers from 5 that the experience he had at t1 was genuine. (Past justification for this is falsified. Now this too, is a case of elliptical memory. S remembers that he had an experience, and now knows that it is genuine.)

We can say that this is a case of impure memory, and is like the case presented by Malcolm. A person sees a bird and later learns that birds with such characteristics are cardinal birds. He says that “I remember that I saw a cardinal.” At the time of seeing the bird he did not know that it was cardinal. He had no justification to believe that that bird was cardinal. Malcolm says that he is still right in his claim because this is a case of elliptical memory. What he means when he says “I saw a cardinal”, is that “I saw a (bird and now I know that that bird was a) cardinal.” Similarly, in Bernecker’s case, when the subject says that “I remember that I saw a Loch Ness monster”, he means, “I remember (the drug I had taken was a placebo which makes my experience genuine and) that I saw a Loch Ness Monster.” This case is not enough to show that the past justification condition fails.

Consider a counter example for present justification condition. Suppose at t1, the subject watches a terrorist attack and sees people getting killed. He sees the explosion, chaos and the attack clearly. Because he saw the attack, at t2, he remembers everything about the attack, and knows that the attack was real. At t3, S is told by a newspaper, which he believes to be reliable, and an internet community that the attack was a staged one, and no one was harmed. He is also presented with misleading evidence to believe this idea. At t3, S does not *know* that the attack was real. He still remembers everything that he had seen,. He remembers the attack. S fails to *know* that the attack was real, despite remembering it. S knows at t1 that p, at t3 remembers everything that he knew t1, yet does not know that p at t3. While remembering, S lacks justification for his belief that the attack was real. Here the present justification condition is not met, S does not know, but he still remembers. It is possible to remember that p at t2, without having justification for p.

5.9 Conclusion

While there is an incoherence in the statement, “I believe that p, but do not remember that p”, it cannot be argued from here that to remember is at least to believe. Martin and Deutscher say, “If it were impossible to remember while believing one is not remembering, one would be saved the embarrassment of thinking that one is originating a tune or an argument when one is not” [168:1966]. While this case could be treated as a case with dispositional belief (if the subject hears the same tune in the radio, chances are that he might remember that he had heard it previously), it is still possible to remember without belief. Similarly, one can remember that p, without having justification for p. In sum, the belief condition and the justification condition are not necessary for remembering. One can remember that p, without knowing that p.

Chapter 6

CONCLUSION

In the introduction, I had said that this thesis was an attempt to consider the central question in the philosophy of memory, ‘what is memory’? To better understand the nature of memory, I looked into four sub questions. These sub questions are:

1. What are the accepted philosophical views on memory? Are these views problematic?
2. Is memory a passive device which merely registers and reproduces past information? What are the problems with such a view?
3. How should we construe causation in memory?
4. How does memory provide us with knowledge?

I have started my work by examining two major theories of memory, Representative Realism and Direct Realism. The debate between these two theories dates back to Aristotle’s times, and is still very much alive. In representative realism, while one remembers, one’s immediate awareness is that of a representation or image. To differentiate the memory image from other images - images from fantasy or imagination - a representative realist has to look for an indicator, a memory-marker, in the image itself. Hume differentiates a memory image from other images on two counts. First, memory-images appear with force and vivacity. Second, memory-images retain temporal order and form. These criteria are not enough, as images from imagination can be at times more forceful and intense than memory-images. Also, it is not quite right to say that memory-images preserve temporal order. Another attempt to find a memory-marker was from Russell. Russell maintained

that the memory-images come with feelings of familiarity and feelings of pastness. But these markers are inadequate, as an episode of imagination, if entertained very often, can come back to the mind with feelings of pastness and feelings of familiarity. The problem with memory-markers is that, they try to look for a characteristic in the image itself to differentiate memory-images from other images. One needs information beyond what is available from the image, to conclusively say whether the image is a memory-image or not. Features of the image do not determine whether it is a memory-image or not. The fact that it represents a past event makes it a memory-image. Whether it represents a past event or not cannot be a interpreted from the image itself.

Direct realism attempts to avoid these questions by arguing that, while remembering one is directly aware of the past, without image as an intermediary. The question then is, how can the subject have an immediate awareness of a past event *now*, at the time of remembering, as the past event cannot exist *now.* One reply to this is that the past exists at the time of remembering. The view is that, 'existence' does not mean present existence. In the series of existence, past events have a place too. That is, direct awareness extends beyond present existence. AD Woozley and John Laird support this view. When it is seen thus, it will become an argument regarding the nature of time. But then, the problem is that, a direct realist will have to explain why such an argument fails to deliver us with an awareness of the future. Direct realism cannot explain the cases where some of the details from an event are incorrectly remembered. If the subject's awareness is direct, if the subject has a direct access to the past, incorrect remembering seems impossible. Both representative realism and direct realism come with their own set of problems, and both theories find it difficult to distinguish memory-experience from other similar experiences.

Memory traces or engrams are changes in brain that constitute the record of an experience. Though memory trace is a neuropsychological postulate, this has its implications in philosophy. If we take traces to be a form of representation, many of the arguments raised between representative realists and direct realists will fail. John Sutton takes this position and says that "when representations are thought of as brain states, it is clear that they are not immediate objects

of experience which a subject then consciously put to use" [282:1998]. While remembering, one is not aware of these representations and hence it can be said that we are immediately aware of the past.

Both these theories primarily consider experiential memory in their analyses. These theories will not be adequate to explain propositional memory. Both representative realists and direct realists see memory as a passive device. The subject stores the event, and later retrieves or reproduces the event. Memory functions like a photocopier. One of the views that stems from this, is the copy theory of memory - memory acts as a passive device which stores and reproduces past information. In contrast to this view is 'activism', which holds that memory does not merely copy the past and that memory actively reconstructs the past. There is a longstanding debate among Cognitive psychologists on these two views, activism and passivism.

According to copy theory, while one remembers, there has to be a one-to-one connection between the past thought content and the present thought content. Remembering is a copy of the past. One of the problems that such a theory has is that it cannot explain condensed memories. There are two types of condensed memories. Firstly, there are cases where one recalls a certain period from the past and comes up with a summary of that period. For example, one can say something like, "the weather was bad last year." In the past one might not have entertained the exact same thought, that is, he might not have thought "the weather is bad this year". Based on this, one can say that as the remembered thought does not have a one-to-one relationship with the past thought, the copy theory is flawed. This objection is not enough to show that the copy theory fails. In this case, it is true that the present thought does not have a one-to-one relation with the past thought. One can say that the thought "the weather was bad lat year" was an inferential judgement. One remembers that there were many days where one thought that the weather is bad, and one infers from that that the weather was bad last year.

There is another sense in which we condense our memories. When one remembers the time one spent with one's friends, one will not recall the entire time or the entire conversation one had. What is remembered might be the topic discussed, the drink shared or the duration of the meeting. In such cases too, condensation happens. But here, it is not an inferential judgement. Rather, it gives the remembered thought a narrative unity. In our day-to-day lives, such condensation plays an important role. These condensations give our life a narrative unity. That is, memory is a constructive process. This view is supported by a growing body of evidence among psychologists. Defending this view, Schechtman writes, "there does seem to be good evidence for the intuitively plausible claim that a central function of our memory is turning the countless experiences with which we are bombarded into a manageable and comprehensible life history, that this will involve summarizing, condensing, and rewriting the facts remembered, and that such work is therefore pervasive in our autobiographical memories" [11:2008]. If such summarisation were not part of the function of memory, we will not be able to make sense out of the very large pieces of information that we encounter in our daily lives. That is, to avoid information cluttering, we will have to resort to a reconstructive process, whereby we weave out a story from the cues that are given by memory. In this sense, we are "subtle authors" when we remember our past.

If memory is not a passive device, one will have to explain the correspondence between one's past cognitive state and one's present state of mind. Only such a correspondence will ensure that the remembered event or proposition is from the past. This correspondence will also ensure that the subject's recollection is from memory and that it is not a relearned one. Most philosophers and psychologists have come to advocate the view that memory involves a causal connection, that the representation of an event in memory is causally connected to the past event.

It was Martin and Deutscher's influential paper *Remembering,* that brought causation in memory. Their argument is based on three cases. In two of them, the subject does not believe what appears in his mind. In one of the cases, under hypnotic suggestion, the subject believes what appears in his mind and mistakenly takes it to be memory. Using these cases, Martin and Deutscher go on to

argue that an appropriate causal connection is sufficient and necessary for a case of recollection to be a case of remembering. One can argue that Martin and Duetscher's argument is from counter-factuals. The suggestion is that if S had not experienced E in the past, S will not remember E now. A counter-factual statement is not equivalent to causal statement. Jaegwon Kim writes that "counter factual dependency is too broad to pin down causal dependency" [571:1973]. From the statement "if S had not experienced E in the past, he would not remember it now", we cannot conclude that S's remembering E was caused by his experience E in the past.

There are other arguments that are presented to explain the correspondence between one's past cognitive state and one's present state. One of them is the retention theory. According to this theory, memory does not involve a causal process. Memory is retention of knowledge. In virtue of having an experience in the past, the subject acquires and retains a certain ability to represent that event in the present. According to this view, a causal connection is invoked by some philosophers to explain temporary forgetting - cases where the subject learns something, forgets what he learned and remembers it later. A view that memory is retention of knowledge is often overlooked because philosophers think that it cannot explain temporary forgetting. If memory is just the ability to retain knowledge, temporary forgetting cannot be explained. Squires say that just like a teddy bear's ability to squeak may be temporarily lost during winter but regained in summer, our memory sometimes get discontinuous and we temporarily forget what we learned [186:1969]. This, however, is no reason to think that one lost his ability to retain what he learned in the past altogether. One argument against this view, originally motivated by psychological views on memory, is that, we never forget anything. That is, all cases of forgetting are temporary forgetting. In principle, given the right cue, one can remember things from the past. Another argument against this view is that the theory maintains that memory is retention of knowledge but fails to explain the process of retention.

Presence of memory traces can explain causation in a better way. Traces explain the process involved in the causal retention. Structural modifications in neurons are caused by the subject's

experience, and these neurons are stimulated again while one remembers. There is a continuous causal chain that extends from the time of the experience to the time of remembering here. One of the arguments often raised against traces is that there is little or no empirical evidence for the existence of traces. It is true that neurologists are yet to come up with conclusive evidence for memory traces. But the notion of existence of memory trace is indispensable among neurologists and psychologists alike, in the study of memory. Also, recent research have shown existence of such structural modification in the brain of simple organisms [Squire and Kandel: 2009].

As most of our knowledge comes from memory, some philosophers have argued for an epistemic theory of memory, according to which, memory entails knowledge. According to this view, if S remembers that p, S knows that p. Most philosophers have come to presuppose this epistemic theory of memory in their analyses of memory. The relationship between memory and knowledge is the last chapter of my thesis. Two questions are examined in this chapter. 1. How to distinguish between those memories that can be regarded as knowledge and those memories that can be regarded only as beliefs? 2. Does propositional memory entail knowledge?

If the epistemological theory of memory is true, it follows that memory must satisfy a truth condition, a justification condition and a belief condition. Among these, the truth condition is unproblematic. One can remember something only if it is true. The belief condition and justification conditions are however problematic. There is an incoherence in the statement “I remember that p, but I do not believe that p.” But this incoherence can be explained without assuming that to remember is at least to believe. One of the arguments to show that this can be done is from Martin and Deutscher. However that argument is flawed. The argument just shows that one cannot hold a belief that E did not happen while claiming that one remembers E. The incoherence does not stem from the subject holding a belief contrary to what he remembers. It stems from the subject not holding any belief at all. A better argument presented by Bernecker, says that one cannot claim to remember while claiming to not believe. The conditions for claiming to remember are different from

conditions to remember and thus, it can be shown that remembering that p does not imply believing that p.

The cases presented by Martin and Deutscher in their analysis of causation shows that one can remember p while holding no belief about p. But arguing that remembering does not imply believing is not enough to show that the epistemic theory is flawed. There are philosophers who hold a view that knowledge does not imply belief. Using this view, it can be argued that, even if the subject does not believe while he remembers, he knows. To show that the epistemic theory is flawed, then, one will have to show that one can remember even if the justification condition is not met. An argument presented by Bernecker to show that one can remember even if the justification condition is not met is analysed. I believe that this argument is faulty, and I have tried to show the problems with the argument. I have also presented a better argument to show that justification condition is not necessary for remembering. This shows that one can remember that p, and yet fail to know that p. The view that one can remember that p without knowing that p is not a new one. In Plato's *Theaetetus,* Socrates holds a view that memory does not provide us with knowledge.

Memory is an interesting topic because it is by memory we recall the past, form beliefs about the present and imagine tomorrow. But it is equally intricate and complex. Probably that is why in his analysis of memory, Thomas Reid often had to invoke the "will of the maker" and Russell had to end his lecture on memory by the note that his analysis of memory "is probably extremely faulty, but I don't know how to improve it" [187:2007].

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