TIME AND MEMORY

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A Thesis

Submitted to the School of Graduate Studies

in Partial Fulfilment of the Requirements

for the degree

Master of Arts

McMaster University

July 1982

MASTER OF ARTS (1982)
(Philosophy)

McMASTER UNIVERSITY
Hamilton, Ontario

TITLE: Time and Memory

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NUMBER OF PAGES: vi, 207

ABSTRACT

A critical study of both scientific and philosophical approaches to understanding memory shows that there are serious deficiencies in such theories. Presupposed by all such theories is the identity of the person over time. The deficiences in theories of memory are diagnosed according to the view that exclusive adherence to the cosmological conception of time demands a formulation of such theories which cannot provide a coherent or adequate understanding of memory. The aim is then to provide a metaphysical principle concerning time which can serve as the starting point for the explication of what is presupposed in theories of memory.

PREFACE

The frayed thread that winds its way through this treatise is that the concept of an enduring person is fundamental. This seemingly simple claim emerges first as that which is presupposed in the fact of memory, whether remembering is understood according to common sense or according to more sophisticated philosophical and scientific frameworks. However, a presupposition, taken to be either a tacit premise or a statement the truth of which guarantees the meaningfulness of other statements, requires explication: the philosophical task cannot be said to be complete through having identified what is presupposed in common by a diverse number of views.

To this end, a diagnosis of the failings of several theoretical explanations of memory has been offered. The aim in this has been to test the claim that there is a certain preconception with respect to the nature of time which colours even apparently disparate conceptions of how memory is possible. This preconception, which has been called the cosmological conception of time, is responsible for the failings in the theories of memory which are reviewed and the fact that an explication of what is presupposed by those theories remains elusive.

Having reached this point, the suspicions raised concerning exclusive adherence to the cosmological conception of time in conjunction with the main requirement of scientifically directed theories of memory, namely, causal connection, necessitates a clarification of how the term

"cause" (and "events" conceived to be the relata of causal relations) is to be understood in the context of memory. Prefaced to this is the outline of a conception of metaphysics which is consistent with the direction being taken in the clarification of terms.

As regards the context of memory, two main conclusions are drawn for any occasion of remembering: that it makes no sense to speak of the occasion being either subject to law or not subject to law; that there is a certain sense in which the remembering is date (time-label) independent. The former result is related to the uniqueness of the event as opposed to the event description. Conjoining this to the latter result, one must then speak of an entity which is unique and still date independent. The entity to which these results apply cannot be understood as the compact succession of physical states correlated one to one with the real numbers, but the principle involved is what has been called temporality in the instant. This is the sense in which what is presupposed in theories of memory is explicated, at least in so far as it is one formulation of a principle which is relevant for such an explication.

My friends, teachers, and family have been the backdrop for this thesis, and an extended feeling of appreciation is reserved for them. I am especially grateful for Professor Shalom's painstaking and invaluable commentary; I am mindful of his tolerance of the use made of a number of ideas which I have borrowed from him. I thank Professors Noxon and Georgiadis for acting as second and third readers. McMaster University and the Ontario Government provided the material conditions that proved essential for the completion of this thesis.

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McMaster University

July 1982.

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MODES OF REMEMBERING

1. Introduction

What is memory? To solicit unphilosophical opinions about this question is quite revealing. When I confronted a group of persons with a statement which I thought was patently absurd, namely, that remembering lunch was like re-tasting it, I was met with strong opposition. There seems to be a common opinion which considers memory to be a sort of sixth sense. However, once the difficulty of this conception is exposed, showing that memory is not the same as hearing, seeing, and so forth, nor is it even necessary to involve anything like sensation in some manifestations of memory (for instance, language use), then the difference is commonly attributed to the fact that memory forms a kind of bridge with the past: I hear now, but I have a memory of hearing what I heard.

Once the idea of a past and the idea of a separation between the past and the present are introduced, theories of memory then aim precisely at explaining how it happens that memory informs us of what is no longer the case. However, we must bear in mind that "information" is frequently used ambiguously to mean either (1) a statement about an event once witnessed or (2) a mapping of one form of representation to another form of representation (such as when the light received by the scanning device on a satellite is reconstructed as a photograph once certain corresponding impulses reach the receiving station).

Theories of memory attempt to explain how memory is possible. (Such theories are the subject of chapter II.) But the problem of how memory is possible at all is separable from the description of the phenomenon which the theory attempts to explain. Hence, it is reasonable that we should attempt to understand what it is that we are dealing with before embarking on an explanation of how it is possible. So, again, we must ask the question, What is memory? In other words, let us first restrict ourselves to inquiring into the ways or modes in which one can speak of memory, letting our common sense direct us to the elements which appear most important to its investigation.

I believe this program can best be followed under three headings: recollection, recognition, and retention. Roughly, the distinction is that between those manifestations of memory which refer to unique experiences in the past, those actions and statements which are necessarily conditioned by several experiences and make no specific reference to any single experience, and that sense in which the past can be said to persist or carry over into the present. These distinctions are, or course, meant largely for the purposes of exposition. In so far as we are dealing with human memory, there are never any actual and pure instances of one or the other. The distinctions are cognitive, and in due course it will be shown that a distinction must be made between a description of the manifestation of memory and the manifestation itself.

Before beginning this analysis, an obvious and yet important clarification should be made concerning the use of the word "memory" as a substantive in the question, What is memory? Generally, one speaks of a person <u>having</u> memories, but it is clear that one does not <u>have</u> a memory

in the way one has change in his pocket or has a broken nose. Moreover, when we speak of a person being capable of memory, we do not expect a surgeon to find the person's capability of memory somewhere inside his body. Fortunately, language possesses the resources for dealing with such possible sources of confusion. We are said to have memory in virtue of remembering. That is, memory is more like something performed as opposed to being possessed. Hence, employing the verb "to remember" encourages us not to confuse the use of the word "memory" as a substantive with its use as a general term. The use of "memory" as a substantive leads to the confusion pointed out above. However, as a general term, the word "memory" can be used legitimately to mean "take any instance of remembering you like." Notice that verbs, unlike substantives, are tensed; so from a purely grammatical point of view there is already something peculiar about treating memory, which refers to the past, as if it were a substantive.

Another preliminary point regards method. Surely we cannot ignore entirely that the claim that memory somehow bridges the past, concerns the question of time. Possible questions are: What is the "past" such that we require memory to give us access to it? Even if memory is defined as giving access to the past, why should it do so? and why should it do so correctly? What is the temporality of the person who conceives objects to be in time—if he also wants to think of himself as being merely one of those objects? This last question is quite an important one; for as will be shown in Chapter II, any sort of trace or computer model for memory will prove incoherent, in which case there seems to be a causal gap between the remembering and what the remembering is about. This has

prompted one writer to suggest that normal memory may indeed be a paranormal phenomenon.[1] This explains nothing, however. In my opinion it is profitless to consider such questions directly without first taking a neutral an approach as possible to the question of memory. Once this is done, then the question can be posed as to whether a certain interpretation of the temporality of remembering is merited or not. This does not mean that the question of memory and that of time are unrelated. It only means that we can discuss memory, bearing in mind that time is involved, without committing ourselves to questions of time *per se*, the very expression of which may be motivated by a preconception concerning it. The first part of Chapter II endeavours to disclose such a preconception.

Having mentioned these preliminaries, a description of the modes of remembering follows. This description proceeds, in part, through contrast with other positions. Therefore, criticisms are involved. For instance, in the section that follows on recollection, comparisons are drawn with behaviouristic, psychoanalytic, and phenomenological positions.

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[1] John Beloff, "Is Normal Memory a 'Paranormal' Phenomenon?" *Theoria to Theory*, XIV (1980), 145-162.

2. Recollection

This discussion of recollection begins by considering a seemingly unrelated topic, namely, forgetting. As will be shown, however, forgetting, which is a necessary condition for remembering, leads to a discussion of reminders; reminders, in turn, lead to a discussion of imagery. Finally the discussion of imagery, along with a rejection of several approaches to imagery in memory, will lead us to make the common sense claim that what marks recollection from other forms of remembering is that imagery is possible in principle of whatever is recollected.

We may begin very simply by considering the situation in which I am asked whether I remembered to bring a sweater, considering how cold the weather is. It can be seen that a misappropriated use of the word "remember" has been employed. For if it were not a misappropriated use, then it could be said that I have failed to remember in all those cases about which I have not taken the least care to have expectations: whether it will be cold, whether it will rain, whether the car will continue to operate, whether tomorrow's events will prove depressing, and so forth. We can modify this misappropriated use in the following way: If I plan to do or say something, and then I fail to do or say it, either I have failed to remember, or I am not acting on what I remember. Yet to act immediately upon what I am planning is not an instance of remembering. If, for example, I tell myself that I will visit the zoo, and no sooner have I told myself this, I am on the bus headed for the zoo, I could perhaps say that I have acted on impulse, but not that I

have remembered to go. Thus, in the situation in which I plan to do something in certain circumstances, the side of the disjunction which expresses the possibility that I fail to act on what I do remember (in contrast to not remembering) can only be an instance of remembering if it does not coincide with the planning: thus a certain period during which I fail to remember is presupposed. That is, remembering in the above sense has forgetting as a condition for the remembering.[2]

Even when I do not recall the occasion of my planning a particular action in particular circumstances, it is possible for me to be remembering. I may plan to give so-and-so a piece of my mind; I give him the lashing which he deserves; and yet it is possible that I do not recall the occasion of my planning. This variant form of remembering also has forgetting as a condition for the remembering.

However, not all instance of remembering refer to possible circumstances which one plans to react to in a particular way, and which one does react to in that way when the circumstances obtain. Even those

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[2]Aristotle's treatment of memory, De Memoria et Reminiscentia, is quite clear on this very point: ". . . none the less remembering itself, does not occur until time has elapsed. For a person remembers now what he saw or experienced earlier. He does not now remember what he experienced now" ($451^{a}18$). Translated with commentary by Richard Sorabji, Aristotle on Memory (London: Duckworth, 1972), p. 53.

Regarding the use of the word "forget", one should note that "forgetting that x" is a statement operator which could be translated as so-and-so has made and may again make a judgement about the truth or falsity of statement x, but he is not making such a judgement now. As can be seen, forgetting refers to the absence of judgement (or conditioned action). This is the sense in which I have used the word. The strained locution, "At two o'clock I forgot that the CN Tower is in Toronto because I was not thinking about it at the time," should be translated as "I just did not make any statements related to the true statement that the CN Tower is in Toronto at two o'clock." The truth of the statement about the CN Tower is independent of the forgetting.

events which are attended to only passively can later be remembered. Most frequently such cases of remembering involve cues or promptings which lead us generally to give more information about what is prompted than what can be said to be contained in the prompting itself.[3] Two persons discussing an exciting journey which they have taken together is an example of being prompted to remember many things which were experienced only passively. In such cases, we are able to remember what we were unconcerned about forgetting. In fact, it seems reasonable to say that whenever there is forgetting, there must be a cue or prompting for there to be any remembering.

Sometimes, persons try to ensure that they remember that which they have experienced by having reminders: photographs, striking special coins, preserving wedding dresses, and so forth. These examples correspond to at least three types of reminders (those things which prompt remembering): facsimiles, symbols, and artifacts. A behaviourist might hold that such reminders serve no other purpose than to elicit an overt response. For example, the old wedding dress in the attic may stimulate a certain absence of focal acuity, perhaps a limpness of the muscles, or even angry tenseness. It seems rather incredible, however, that one would make an effort to remind one's self with the sole purpose of promoting a certain condition of the musculature. What reason could there be for promoting a certain condition of her own musculature rather than someone else's? And if the aim is merely to promote a certain condition of

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[3]See C.B. Martin and Max Deutscher, "Remembering," Philosophical Review, LXXV (1966), 161-196. I have adopted the notion of "prompting" from this discussion.

the muscles, would it not be much more efficacious to re-marry? Should I treat a person who has a wistful look in her eye as if she has an eye disease?[4] Rather, reminders are significant for us because we are attempting (metaphorically) to "recapture" the occasion of the experience referred to—obviously, however, not in the sense of experiencing again the experience. The point to bear in mind is a distinction drawn by Wittgenstein in regard to terms expressing a subject (for example, "I"). Such terms are used in at least two senses, one of which has nothing to do with possession.[5] Being reminded, by the feel of the lucky rabbit's foot that I have in my pocket, may make me remember that rabbit to which the foot belonged; but "I" do not possess the remembering as in some way separate from the manifestation of remembering, nor, consequently, is the rabbit's foot undergoing any kind of second chopping. The possible confusion lies in the fact that although I do not possess memories when I remember, I can possess reminders.

It will be noticed that I have been endeavouring to direct the discussion in a certain way. "Recapturing" the experience is a metaphor meant to suggest that the reason why reminders are so important for us is because persons are capable of imagery. Admittedly, imagery is an unpopular topic in discussions of memory since it is quite clear that an

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[4] Compare with G.E. Moore's report of Wittgenstein's 1933 lectures: "when we pity a man for having a toothache, we are not pitying him for putting his hand to his cheek" (p. 301). See Moore's "Wittgenstein's Lectures in 1930-33" in his Philosophical Papers (New York: Collier, 1962), pp. 247-319 (especially Section III (D)).

[5] Ibid., pp. 302 ff.

image is neither a sufficient nor a necessary condition for remembering. Ryle is quite right when he says: ". . . nothing forces me to do any picturing at all, or to do my picturing in this way rather than that; but if I am recalling how the scene looked when I witnessed it, then my picturing is not arbitrary."[6] For Ryle, imaging is no more than one of the many ways of utilizing knowledge, whose chief origin is experience.[7] There is no reason to dispute this, but my inclination is to lay greater emphasis on imagery than is ordinarily done.

To begin with, it may be said that imaging is not at all, strictly speaking, like copying. A photograph of a photograph is a copy. A map is a miniature copy of the shores of the earth's continents. A bust is a copy of a persons's physiognomy. A painting is a copy of a person's expression, figure, dress, etc. The first case is perhaps the strictest sense in which we can speak of copying; indeed, one photopgaph is a replica of the other. The other cases can be said to be representations, where varying degrees of resemblance are possible. For some objects, for instance, two pebbles which we find on the beach, we can speak of them as resembling each other, but we do not ordinarily say that one is a representative of the other although it would not be surprising to hear someone say: "Look at this! We could take one pebble to be the copy of the other." Since copying has all these perfectly legitimate uses, it is understandable that we should be ready to admit the term "copy" when referring, for instance, to after-images or hallucinations. Uncritically,

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[6] Gilbert Ryle, The Concept of Mind (Peregrine, 1963), p. 262.

[7] Ibid., p. 257.

we could say that the after-image is a "lingering image" and the hallucination is "perception-like." It is quite sure, however, that in such cases we cannot lay the copy alongside the original for comparison; we cannot perform optical experiments on the "perception-like" qualities of the hallucination. Moreover, an image is incapable of resembling something in the way that there exists a one to one correspondence between two physical objects composed of different materials, as with the cut marble and the physiognomy of the person who posed for the artist. It would be quite absurd to set up an experiment to measure the physical composition of the image. So, it cannot be too far off the mark to claim that imaging is not, strictly speaking, at all like copying— if, indeed, the image is anything at all.

Nevertheless, the puzzling thing is that ordinary language shows clearly that perceptual terminology is applied readily to imaging. I might say: "I can see him now the way he was then: he was tall, having a ruddy complexion and a booming voice. . . ." It is true, of course, that I cannot let my companion inspect my image of so-and-so (although we can together come to a conclusion as to whether my image is reliable). It is also, I think, evident that I cannot bring the image closer, checking, perhaps, for how well a scar has healed; and I cannot walk to the other side of the image in order to assure myself that I am not looking at a life-size placard. Yet, even this negative characterization of images does not seem to make complete sense, for one is still compelled to use a language in regard to imaging ("bring closer," "look," "walk to the other side of") which seems hopelessly misapplied.

a. Options: Behaviourism, Psychoanalysis, Phenomenology

Caught in this kind of perplexity, several options are open to us. One option is to say that the image (inner state, mental process, and so forth) has no useful, that is, scientific, place in any explanation which we may wish to give. This is the direction taken by behaviourism in abandoning introspective psychology. Skinner, for instance, writes:

> The objection to inner states is not that they do not exist, but they they are not relevant in the functional analysis. We cannot account for the behavior of any system while staying wholly inside it; eventually we must turn to the forces operating upon the organism from without.[8]

For Skinner, this functional analysis is quite simple. He means nothing more by it than an analysis based on stimulus and response:

> . . . (1) an operation performed upon the organism from without—for example, water deprivation; (2) an inner condition—for example, physiological or psychic thirst; and (3) a kind of behavior—for example, drinking. . . .[9]

Step (2), the inner condition, is added by Skinner merely for theoretical completeness; for any explanation which ends by prescribing an inner state as a cause of behaviour is incomplete since no scientifically acceptable cause has been given for the inner state.

The curious thing about Skinner's views is that he admits openly that it is difficult to say exactly what is to count as behaviour:

> Behavior is a difficult subject matter, not because it is inaccessible, but because it is extremely complex. Since it is a process, it cannot easily be held still for observation. It is changing, fluid, and evanescent, and for this reason it makes

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[8] B.F. Skinner, Science and Human Behavior (New York: Macmillan, 1953), p. 35.

[9] Ibid., p. 15.

> great technical demands upon the ingenuity and energy of the scientist. But there is nothing essentially insoluble about the problems which arise from this fact.[10]

The problem is, I believe, much more serious than simply technical. To say that one is not quite sure what is to count as behaviour, insisting as well that this is no bar to a scientific explanation of behaviour, exposes, in fact, the central error in behaviourism. Behaviourism does not quite know what is to count as behaviour; so it is decided that, say, the physical movements of an organism are what count. This pre-judgement as to what is to count as behaviour leads to the mistaken view that criteria for "imaging," such as verbal reports, are illegitimate indicators, incapable of any scientific validity. The philosopher is taken to be doing bad psychology when, in fact, there is good reason for rejecting the presuppositions upon which the behaviourist disavows the importance of imagery in memory. The behaviourist seems to hold that (1) what is private is incommunicable and that (2) images are copies in the sense of being pictures. It is no wonder that the behaviourist rejects the existence of pictures that are not and can never be seen. And if he does not reject their existence, a course such as Skinner's is taken, in which they are omitted from any explanation.

Many behaviourists, intuiting some inadequacy in their account of human psychology, now consider an image to be a hypothetical construct which is defined according to operational procedures; thus they are able still to adhere to behaviouristic principles, still making "a clean sweep

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[10] Ibid., p. 15.

of all the rubbish called consciousness," to use Watson's vituperative phrase. The idea that an image can be construed to be a hypothetical construct can be criticized briefly: Behaviourism's "clean sweep" relegates the image to the hypothetically constructed, based upon what can be measured in an experiment. But this means that an image is always inferred in the sense of never being measured directly in operationally appropriate terms such as mass, charge, brain waves, twitches, etc. Thus the image is held to have a rather spurious status, when really this is like using a candle to help us get a closer look at its light. What the behaviourist fails to discern is that there are adequate though not necessarily repeatable criteria for imaging: certain uses of language and other forms of expression are such criteria.[11]

Recall that our difficulty was to make some progress on understanding the nature of imagery in memory, which at once is unlike perception and yet seems indescribable except in perceptual terminology. Behaviourism appears not to produce a credible solution. Another option is to take a psychoanalytic approach. In this approach, the fact that there is imagery remains unquestioned. Ideas, inclinations, and images reside, as it were, in our unconscious. Some unconscious images, ideas, etc. come easily into consciousness. In other instances there are mechanisms for repressing some of these memories or ideas, such as

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[11]Part of the preceding commentary and criticism is motivated by the first three chapters of John T.E. Richardson's, Mental Imagery and Human Memory (London: Macmillan, 1980). The quotation attributed to Watson is also from Richardson (p. 28). Needless to say, Richardson bases the clarifications of the third chapter of his book on distinctions drawn from Wittgenstein.

through ostensible forgetting or the replacement of an unobjectionable memory for another related but uncomfortable one. Freud calls the latter "screen memories."[12] To the obvious objection that an unconscious image or idea is not an image or an idea at all, not being a proper object for psychological discussion, Freud replies that this criticism is based on a prejudice which seeks to equate the whole of our mental life with consciousness, ". . . denying psychology the right to account for its most common facts, such as memory, by its own means."[13] He goes on to say:

> Now let us call 'conscious' the conception which is present to our consciousness and of which we are aware, and let this be the only meaning of the term 'conscious'. As for latent conceptions, if we have any reason to suppose that they exist in the mind—as we had in the case of memory—let them be denoted by the term 'unconscious'.
>
> Thus an unconscious conception is one of which we are not aware, but the existence of which we are nonetheless ready to admit on account of other proofs or signs.[14]

Freud gives two reasons for supposing that unconscious ideas, etc. exist: post-hypnotic suggestion and the analysis of hysteria. The idea is that we cannot explain such psychological phenomena without an unconscious; in fact, we must suppose an unconscious which is nonetheless active, that is, in producing certain characteristic behaviour.[15]

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[12] Sigmund Freud, "Childhood and Screen Memories," in the Standard Edition of Freud's works, Vol. VI (London: Hogarth, 1960), pp. 42-53.

[13] Sigmund Freud, "A Note on the Unconscious in Psycho-Analysis," in the Standard Edition of Freud's works, Vol. XII (London: Hogarth, 1958), p. 260.

[14] Ibid., p. 260.

[15] Ibid., p. 262.

In practice, psychoanalytic interpretations tend to be extravagant, licensing wild interpretations of neurotic behaviour, which often have much more mundane explanations. Behaviourists frequently cite the example of a woman who exhibited excessive broom-holding behaviour. Psychoanalysts were asked to interpret the cause of such behaviour. Their answers ranged from analogies with child-like behaviour to considering the broom to be a phallic symbol. In fact, the woman had been conditioned to hold the broom by giving her cigarettes when she did and witholding them when she did not.[16]

Such extravagant interpretations by psychoanalysts are not so important, I believe, since what the experiment is intended to show is also a matter of interpretation. The more serious claim is that the unconscious is active in influencing behaviour. For once this is accepted, then the question that seems most pressing is how this is possible: What _is_ the unconscious such that it _causes_, for instance, compulsive wringing of the hands. This might be answered by saying that what the "unconscious" _is_ falls outside the explanatory system of which "unconscious" is a basic concept, as Freud seems to hold when he urges that psychology should be entitled to account for psychological phenomena "by its own means."[17] Let us grant this. Then, should it not be asked what the mechanism is, given the "means" open to psychology? We can

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[16]Recounted in W.E. Craighead, A.E. Kazdin, and M.J. Mahoney, _Behavior Modification_ (Boston: Houghton Mifflin, 1976), pp. 11-18. In fairness to the authors of this text, they do indicate that there are ethical considerations in such an experiment.

[17]_Op. cit._, Vol. XII, p. 260.

imagine an answer such as the following: The person who wrings his hands compulsively was forced as a child to scrub his hands repeatedly both before and after each meal. His mother had an unstable personality, compensating for her unfaithful husband by symbolically cleansing her son. Hence, the idea of his conflicting feelings towards his mother, which is in his unconscious, causes the compulsive wringing of the hands.

Given an explanation such as that above, it appears that the unconscious must be understood to be a store of memories, which may become conscious, or which may in fact cause certain manifestations of behaviour without one's being conscious of the motivating causes. Thus we could say that the entire history of a person's experiences are retained and may be operative in influencing behaviour.

The problem now arises as to how a distinction is to be made between external stimuli and the data of the unconscious, such as for example mnemic images. Desiring, wishing, inhibiting, reacting all presuppose the ability to distinguish between that which does and that which does not satisfy the drives for sex, food, or respiration. Thus the interaction between external stimuli and the unconscious store of experiences must result in an overt response directed towards the environment, and this response seeks to satisfy the drives and to avoid painful and potentially painful situations.[18] Freud postulates the ego to perform this function. The ego does the "reality-testing" which

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[18]Freud formulates this physiologically in his "Project for a Scientific Psychology," Standard Edition, Vol. 1 (London: Hogarth, 1966).

discriminates "between what is internal and what is external."[19]

Freud has postulated the ego in order to complete his psychological model. And so far as scientific practise goes, it is perfectly legitimate to postulate an entity for theoretical reasons. However, Freud's conception of the ego is problematic. Consider first that this ego be conceived physiologically. It is implausible to ascribe the functions of the ego (that of discrimination and choice) to a set of neurons without making that set of neurons co-extensive with all the neurons in the person. For a set of neurons which are connected to another set of neurons (the memory-image set to the decision set) is just another set of neurons. Understood in this way, the conception of a special set of neurons which is the ego and which discriminates between external and internal stimuli is no longer significant. The ego loses the character and function it was intended to have. If the concept of an ego is required, then it must be presupposed, and it must be understood in a sense which does not make it a special set of neurons.

Leaving physiology aside, there is also the need to distinguish between those discriminations by the ego which are unconscious and those which are conscious. For one may act in a way which is systematic, and one may not be aware of one's motivations; and also one may act and be aware of one's motivations. Thus Freud would be required to bifurcate the ego in order to explain ordinary sorts of behaviour. In the former case, where we are dealing essentially with instinctual or neurotic behaviour, the fact that one reacts a certain way to a stimulus presupposes that the repetoire of experiences in the unconscious form a history of experience belonging to the very same person. The ego is being

presupposed. In the latter case, where a person draws consciously on a set of systematically ordered experiences which constitute the person's unconscious, the conscious ego cannot be equated with any one of those unconscious experiences, for the purpose of the ego is to compare the data of the unconscious with external stimuli. Thus the ego is distinct from any particular experience, and so it is being presupposed in that the conscious ego has a certain set of experiences at its disposal and not any set at all.

In short, it is not that Freud has postulated the ego for theoretical considerations, but he has presupposed it all along in that the interaction between the external stimuli and the contents of the unconsciousness are presupposed to be systematically continuous. My preference is to say that they chronicle the history of the experience of a person. To switch to the language of mnemic images, there are no mnemic images in themselves: there are only persons who are said to have mnemic images. The merit of Freud's theory as a clinical tool lies in its emphasis of the history of the patient, which is basically what is meant by his term "unconscious." My reason for turning away from Freud's approach is that so far as memory is concerned, he simply presupposes an ego which acts on stored menemic images. A scientific postulate can, by contrast, be put to the test; whereas, Freud's "ego" implies nothing more than that stored images are activated systematically. This, however, is just the question which requires examination. Attempting to understand

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[19] "A Metaphysical Supplement to the Theory of Dreams," Standard Edition, Vol. XIV (London: Hogarth, 1957), p. 233.

the nature of such an ego is, I believe, impossible given Freud's framework; and the storage metaphor which he seems tacitly to employ in regard to memory is itself implausible, if only because it leads to a regress in which an inspected memory store must presuppose memory.

We could develop the idea that the history of the person is important, by making a claim which seems nearly incontestable, namely, that remembering is autobiographical, as the phenomenologist Straus suggests.[20] Hence, we are led to a third option for understanding, say, imagery in memory,[21] a phenomenological approach.

It is best to understand first what phenomenology's complaint against psychology is. Essentially the complaint is that psychology has not recognized that it needs phenomenology. Whereas psychology attempts simply to use experience as data for making empirical judgements (that is, obtaining psychological knowledge, making judgements about what exists), phenomenology recognizes that this is naive.[22] The psychologist fails to recognize that the psychical and the physical (phenomenon and nature) have entirely different structures.[23] Therefore, it is absurd to naturalize the psychical. Accordingly, the only rational approach is to "take

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[20] E.W. Straus, "Phenomenology of Memory," in E.W. Straus and R.M. Griffith, eds., Phenomenology of Memory, Third Lexington Conference on Pure and Applied Phenomenology (Pittsburgh: Duquesne, 1970), p. 51.

[21] Imagery is a typical form of recollection, but is not the only form.

[22] Edmund Husserl, "Philosophy as a Rigorous Science," in Quentin Lauer, ed., Phenomenology and the Crisis of Philosophy (New York: Harper, 1965), p. 98.

[23] Ibid., pp. 105-107.

phenomena as they give themselves, i.e., as this flowing 'having consciousness,' intending, appearing. . . ."[24] From this it would follow that a phenomenological investigation into essences and essential relations in experience is the only way in which to understand correctly empirical cognition.[25] In short, psychology treats the psychic (experience) as if it were a natural object, or it correlates experience to psychophysical explanation, little realizing that such judgements presuppose a separate structure for the psychic (experience; consciousness, intending, expecting, etc.) Hence, what should first be understood, if we are to give our empirical judgements any kind of foundation, is the essential structure of consciousness in general.[26]

How, then, does phenomenology deal with memory? For reasons of clarity, consider Straus instead of Husserl for a moment. It is not surprising, since we are interested in the essential structure of consciousness, that Straus presents us with a maxim. It is not unfair, I believe, to interpret Straus as giving us what he considers to be the essence of remembering:

> I shall lay down the basic maxim: In remembering we turn to the past—and I hurry to qualify this apparently trivial statement: in remembering we turn to the past as past, and that will say we turn to it at and from the present. There is a dual aspect of time in remembering; present and past are entwined. The act of remembering belongs to my actual present; the events remembered belong to the past. Experiencing, there-

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[24] Ibid., p. 108.

[25] Ibid., p. 116.

[26] Husserl frequently uses the expression "pure consciousness" by which he means, I think, consciousness in general. Needless to say, the Phenomenological reduction aims to "bracket" all judgements about existences, freeing us from the naive naturalistic attitude.

> fore, cannot be understood as a mere sequence of particular impressions and ideas following each other in clock time. Our experience has—it must have—an intrinsic temporal structure of time lived and experienced in a state of becoming. Days and events remembered have a peculiar negative character: they are no longer. Yet this "no longer" is not a total negation. True, remembered events are not actually present, not present in person. But they are sometimes represented in the actual present through effigies, a term which I would like to introduce and to use instead of the overworked word "image."[27]

In a way, Straus is quite right in saying that remembering comes marked differently from perception, that is, as past. Husserl holds the same view when he speaks of a "modification of experiences," namely, "that of 'having been perceived' which lies in every memory."[28] But does this explain anything? Elsewhere Husserl writes:

> Memory in its own essential nature is in fact a "modification of" perception. Correlatively that which is characterized as past presents itself in itself as "having been present," as a modification therefore of the "present," which in its unmodified form is the "primordial," the "corporeally present" of perception.[29]

Husserl takes memory to be a modification of presentation in perception; thus it is a multi-leveled form of representation, as is evidenced by our having memories within memories. Recollections, as representations, have an immediate weight or right to being evidence for our beliefs, but this is imperfect until the recollections are fitted into an entire context of recollections, which finally "terminate

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[27] E.W. Straus, "Phenomenology of Memory," op. cit., pp. 47-48.

[28] Edmund Husserl, Ideas, W.R. Boyce Gibson, trans. (New York: Collier, 1962), sec. 77.

[29] Ibid., sec. 99.

in actual perceptions, in the actual 'hic et nunc.'"[30] Thus reliability is conferred on recollection if it terminates in a actual preception. As Husserl says, "something of the light of perception and its self-evidence shines back along the whole series of recollections."[31]

The first striking thing about Husserl's (and Straus') views is that remembering seems a tremendously laborious exercise. Every memory comes as a modified perception, and then all these modified perceptions, or representations, are again modified in the process of filling out a context of recollections for each recollection, which in turn are bound together to terminate ultimately in a present perception, from whence derives their "rightness," as Husserl calls it, with respect to commanding our belief.[32] It appears that the complications which Husserl is led to are the result of confusing the act of remembering with confirming that remembering is reliable. In fact, it is understandable that Husserl should fall prey to this confusion because the phenomenological reduction ensures that facts and justifications are treated solely as modifications of consciousness.

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[30] Ibid., sec. 141.

[31] Ibid.

[32] Ibid.

There is another difficulty, however. How can one postulate giving a context to recollections, ordering them in a series terminating in perception, without presupposing memory as part of the scheme? The phenomenological solution to this is as Straus suggests: "Our experience has—it must have—an intrinsic temporal structure of time lived and experienced in a state of becoming." Straus is echoing Husserl's distinction between "phenomenological time, this unitary form of all experiences within a single stream of experience (that of one pure Ego), and 'objective,' i.e., 'cosmic' time."[33] The implication appears to be that it is the very temporality or structure of perception which ensures the continuity of experience. As Husserl says, he means by "temporality" "a necessary form binding experiences with experiences."[34]

Oddly, Husserl attempts to explicate the temporality of perception by making it supervenient to the objective or cosmic conception of time. There is an important passage in the Ideas which merits being quoted in full. Basically, the passage is a distillation of the fuller account which Husserl works out in the Phenomenology of Internal Time Consciousness.

> The actual now is necessarily something punctual and remains so, a form that persists through continuous change of content. It is the same with the continuity of the "just vanished"; it is a continuity of forms with contents ever new. And it also comes to this: the enduring experience of joy is "consciously" given in a consciousness-continuum of this constant form: an impressional phase as the limiting phase of a continuous series of retentions, which, however, are not on the same level but

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[33] Ibid., sec. 81.

[34] Ibid.

> constitute a continuous succession of intential relationships—a continuous chain of retentions of retentions. The form receives a continually fresh content; thus to each impression united with the experience of "now" a new impression, corresponding to an ever-new point of the duration, is continually "annexing itself"; the impression continuously transforms itself into retention and this continuously into modified retention, and so forth.[35]

Straus must have something such as this in mind when he says that the "present and past are entwined." Husserl's explication is that in a succession of "nows" the form remains the same while the content changes. The form of the succession is that of a succession of intentional relationships or a continuous chain of retentions of retentions. The perceptual content is continuously modified: perception into retention, retention into modified retention, and so forth. Since the content undergoes continous modification, the continuity of experience is attributed to the presisting form of the "now," namely, that there is always retention of what was preceived irrespective of what was preceived. However, this account of the continuity of experience does not address itself fully to the central question: How does one explain the fact that a memory is taken to be in the past, as part of the history of my personal experiences? We are not so much speaking of the continuity of experience as we are the fact that each experience supposes the totality of experiences of which it is a part.

If the totality of experience is understood formally, simply as continually modified "nowness," it seems we have no justification for speaking of a totality at all. A "now," a set of "nows," even an infinite sets of "nows" infinitely modified is meaningless unless contents such as

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[35] Ibid.

actions, emotions, things, events are specified. The only solution seems to be that the contents of experience must also be constitutive of the continuity of experience understood in its totality. Accordingly, the content of experience cannot really be separated from its form, or at least it is unmeaning to do so in actual experience. I can only conclude that every actual experience, form and content, presupposes the continuity of experience in its totality, and this contradicts directly Husserl's constructivist attempt to adjoin a succession of "nows" into continuous experience.

It appears to me that the source of difficulties in Husserl's exposition stems from his failure to draw out the metaphysical implications of his subordination of objective time, thus falling back on a constructivist program which leads him ultimately to suppose a synthesizing ego.[36] Straus is also following in Husserl's footsteps when he comments that "remembered events are not actually present," but they are "represented in the actual present." So the problem is again to synthesize a set of representatives (modified perceptions) of the past. Therefore, the framework of phenomenology will be unable to provide an explanation of the apparent perplexitites which arise when we investigate, for instance, imagery in memory. For the image, construed to be a representation, will be imbedded in a system of thinking which, because of the phenomenological reduction, refuses to make any metaphysical judgements; yet is seems precisely such judgements which the phenomen-

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[36] Ibid., sec. 82.

ologist's intuitions about time should lead to.[37]

To summarize, it was found that behaviourism is simply mistaken in neglecting or relinquishing any interest in the role of imagery in memory. Pshchoanalysis seems to provide a theory of mnemic images which appears to introduce an ego for theoretical reasons, which is not in itself improper, but in fact it simply presupposes an ego as nothing more than a restatement of the claim that images are in fact activated systematically, and thus the question of how this is possible is being begged. Phenomenology, constrained by the phenomenological reduction, is unable to pursue the metaphysical implications of its intuitions concerning the temporality of remembering.

b. Further Considerations

In consequence, I believe it necessary to make a minimal claim, one which is neither adventitious nor restrictive. There is a mode of remembering to which we genuinely apply perceptual terminology, in a situation which is not perceptual, nonetheless, such that the remembering yields information. "Information" is here being used in the first sense that has been given, namely, as a statement about an event once witnesses.

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[37]Phenomenology, understood to be a presuppositionless science which leaves natural science alone (see Ideas, op. cit., sec. 76), providing natural science with a foundation from the side of consciousness, seems destined never to be critical of the metaphysical tenets which underlie the scientific conception of the universe. As such, it excludes itself from making any metaphysical commentary.

At this point we can only recognize, but not give an explanation of the nature of, the fact that some sense of enduring person is being presupposed given the sense in which "information" is being used. As regards the reference to a "genuine" use of perceptual terminology, "genuine" is meant to emphasize that those modes of remembering which are defined according to functional criteria (behaviour, language activity) do not exhaust all the modes of remembering, which is to say that, the kind of remembering which involves imaging cannot be reduced or eliminated.

The above claim is not deducible. Which first principles could be adduced for its support? However, it can be made plausible. First, the conceivable, but unlikely, attitude that imaging is nothing other then pure invention, a "hypothetical construct" based on an operational definition, perhaps a bad choice of word for something altogether different, cannot possibly explain why we have an entire mode of speaking coherently bent upon describing what we are presumably describing incorrectly. On the other hand, suppose we took the attitude that imaging were a "something" similar, in a sense, to the objects which we manipulate. It would seem reasonable that there should exist an entirely separate vocabulary for describing such things; yet no such vocabulary exists. Instead, we use the language of perception, in a transmuted sense, for imaging. For instance, I say, "I'm 'seeing' an image of her, but I am not really seeing! You know what I mean." Admittedly, although the existence of a transmuted use of perceptual language is not sufficient to establish the significance of imagine definitively, it is at least necessary for being able to communicate about imaging. It seems only

reasonable to suppose that what we communicate about successfully is not trivial. It should be emphasized that I have not proved that there is imaging and that it is particularly significant for remembering; in a way I have presupposed it. Asking for proof would be like asking the person who recounts his dream to prove that he actually had it.

Let us say then that there is a restricted sense in which we can think of imaging as a kind of "copying." It is restricted in the sense that I do not have sensations of the image in the way I have sensations of a photograph, nor in the way I have sensations of what the photograph is of. Think of seeing the Eiffel tower, seeing a postcard of it, imagining it. We could say that there is a correspondence of information between the sorts of things which a person is able to do; however, one must be careful as to how one is to interpret such a phrase. The correspondence has nothing to do with sensation: A photograph of the Eiffel tower is still a photograph of the Eiffel tower even if taken with a distorting lens. I can be placed in a sensory deprivation tank, and I am able still to imagine the Eiffel tower. The correspondence is not in the organization, shape, etc. of the parts, for a paraplegic may be able to use words only to describe his image; and those words can hardly be said to be shaped like the Eiffel tower. Rather, the image is a very special kind of reminder: it reminds me of the Eiffel tower which I once saw. Thus the image yields information or is informative in the sense that I make claims about experiences which I am not experiencing. Moreover, using our public conception of time, which is, I believe, a highly sophisticated intellectual achievement, we say that we remember what was experienced at a past time. The correspondence, soemwhat of a

misnomer, arises from the fact that we can corroborate the claims of memory with information drawn from other sources[38] (books, eye-witness reports, photographic records, and so forth), where "information," in this case, is even more sophisticated, having the sense, "What I could see, hear, smell, etc. If I . . . of if I trust so-and-so's report that . . . ." For instance, the correspondence between seeing and imagining the Eiffel tower lies in the coherence of claims about "experiences which I am not experiencing," and what I am experiencing.[39] The implications of this go beyond common sense, and are the subject of subsequent chapters.

The remainder of this section is devoted to refinements of my central position that imagery is particularly important for an understanding of human remembering. The first rather obvious point to mention is that not all imaging is of the "visual" sort suggested by the term copying. The term imagery applies to all the senses, using a vocabulary which is appropriate to the senses taken singly or severally. This is

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[38] I am thinking of "corroboration" in the way C.I. Lewis uses it in Chapter II of An Analysis of Knowledge and Valuation; reprinted in Ernest Nagel and Richard B. Brandt, eds., Meaning and Knowledge (New York: Harcourt, Brace, and World, 1965).

[39] Even this way of expression is approximate only. In fact, I must abstract even from thinking of this claim or report as something which is uttered; for, as uttered, I would be forced to remember remembering it in order for it to cohere with present experience, but this just leads to a regress.

best brought out in the case of the emotions.[40] For instance, when I experience a reminder of bygone days, perhaps a photograph, I experience certain emotions which are quite properly called remembering. The emotions are not in the photograph; so I am not copying or transferring what is in the photograph. Nor, however, is the photograph a copy of the emotions experienced at the time the picture was taken: the particular curvature of the lips of the persons in the photograph is not the same thing as happiness. Nonetheless, the emotions which I am now experiencing are taken to be an instance of remembering. Using some familiar examples: The person who is bemused by her old wedding dress is not being re-married, but she is certainly, in a sense, experienceing what she once experienced. Although I may be reminded of my trip to the zoo without thereby being there again, the horrific smell of the elephant compound is as striking now as it was then. It seems that we can apply the notion of "copying" intelligibly, the restriction being that we should neither hope nor expect to supply either a copy or an original. Such expectations lead to a regress which is, I believe, insurmountable.

Needless to say, the capacity for imagery, on which I have lain so much stress, is readily objected to. Let us consider one of

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[40]The importance of the emotions for understanding temporal experience, with implications, of course, for the nature of the world wherein this is possible, is paramount. Although, so to speak, at different ends of the experiential scale, compare: A.N. Whitehead, Adventures of Ideas, Chapter II, Section XIV (Pelican, 1942) and A. Shalom, "On the Structure of the Person: Time and Consciousness," Dialectics and Humanism, II (1975), 77-90.

Wittgenstein's analogies.[41] Suppose I train someone to distinguish yellow balls. I ask him to take a yellow ball out of a bag. Did he simply follow my order? We may be inclined to say that he imagined a yellow ball before picking one out, but to show that this is unnecessary we ask: "Imagine a yellow patch." Should we suppose that he imagines a yellow patch prior to imagining the yellow patch in order to ensure that he has understood the order? It would seem that the image is unnecessary for the explanation, although Wittgenstein is the first to admit that an image is possible.

As provocative and incisive as such criticism seems, I believe that it rather misses the point. If I be allowed to compound analogy with analogy, Wittgenstein's analogy is like saying that since all the books ever written could have been written with one hand, it is thus unimportant to describe the authors of books as having two hands. Consider for a moment the following three sentences: Ride the bicycle! Find a bicycle and ride it. What do you do with a bicycle? The point of my emphasis on imagery is not that there exist no persons who upon hearing the sounds "Ride the bicycle!" would not begin immediately to peddle the instrument that happens to be lying beside them; my point is that by and large the person who can respond to "Ride the bicycle!" also understands the question "What do you do with a bicycle?" even when a bicycle is nowhere to be found. With regard to our former analogy, the question is not that there is anything different between the authorship of one- and two-handed authors: it is simply that one cannot describe

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[41] The Blue and Brown Books (New York: Harper and Row, 1965), pp. 11-12.

both hands of a one-handed author. My purpose in all this has been to make it plausible that imagery is eliminable only if we end up doing violence to what we consider persons to be normally capable of. I wish to make this stronger, however, by saying that imagery is one of the principal distinguishing marks between persons and animals. This requires a little more discussion.

It will be recalled that the discussion of imagery digressed from an attempt to understand why reminders are significant for us (p. 8). I am claiming that it is precisely this capacity for imagery which makes reminders significant, significant in a sense which is not readily ascribable to other animal life. Let us take an example: The sign "Beware of Dog" is meaningless to an ape, and it is meaningless to someone who has never had contact with English speaking persons. One way in which it can be made "meaningful" to either an ape or a human is through operant conditioning.[42] For instance, if the reaction to the sign, of the person or ape, is one of curiosity, approach, investigation, and a menacing bark results; the ape or the person recoils. If, instead, the reaction to the sign is that of standing back, wariness, fear, and faint wimpering is heard; then the "standing back" is reinforced. Another way to render the sign meaningful, which is a possibility for the person but not the ape, is the learning of English. In this latter way, the words "Beware of Dog" are signals or reminders which are meaningful in virtue

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[42] It will be meaningful (without scare quotes) to an observer who watches the subject's repeated response to a stimulus.

of a person's capacity for imagery; or perhaps more accurately, it is the association of symbol and imagery which seems to be one of the most conspicuous aspects of human remembering. This point remains even if the distinction is phrased as that between one animal that reads and one that does not. (This does not disclaim that possibility that animals imagine; the claim is that persons have the capacity. If apes could learn English in the way I might learn French, I would conclude that the ape were like a person, not the person like the ape.)

It has been claimed that reminders are particularly significant in human remembering because persons are capable of imagery. The reason for this is that recollection, as was roughly characterized, makes reference to unique events in the past, specifically to unique events in the past experiences of a person. However, this characterization of recollection needs to be made more precise since imagery is, in a strict sense, not necessary for recollection. Reconsidering recollection will lead us to the sense in which imagery is not necessary.

Metaphorically, it was said that that form of remembering which seeks to "recapture" the experience is recollection, and recollection can be characterized more precisely as that form of remembering in which it is neither physically nor logically impossible that there be any associated imagery. By way of illustration, consider the statement, "I have an image of the Eiffel tower." On the one hand, the contrasting statement, "I have an image of the Eiffel tower as it was during the Paris exhibition of 1899," is a physical impossibility; I had not been born. On the other hand, the contrasting statement, "I remember the Eiffel tower although it has never existed nor been imagined to exist," is a

logical impossibility; for the implication is that the tower existed, while it is being posited that it never existed. In a way, all this can be summed up briefly by saying that recollection is possible of whatever is in living memory, which factually does not extend beyond about 100 years.

Nevertheless, to hold that recollection is possible of all that is in living memory is a principle only, having little practical application. Recently, I heard it claimed that by stimulating a person's awareness in some suitable fashion, each of us is capable of recollecting happenings which occurred even at the very moment of birth. This is not inconceivable provided that a newborn is equipped with a physiological apparatus which is capable of some rudimentary perception; but nothing indicates otherwise than that most persons are the same as I, having few memories of the first few years of life. In practice, then, recollection is rarely free of inferences to events capable of recollection in principle only. In a way, Proust was right when he referred to remembering as a form of research.

At this point it is possible to elaborate what was meant by saying that imagery is not necessary for recollection. The sense is that it is possible to make references to unique experiences in one's past, and thus be remembering, without having any associated imagery. Such remembering can be understood to be propositional or factual. Nonetheless, the condition for such remembering remains that recollection with associated imagery is possible in principle. Two persons can reconstruct, for example, the events of their lives during the Depression of the Thirties without having any imagery, and still there is no doubt that this

is a genuine instance of remembering, where references are being made to unique events in past experience. I have often met individuals who keep a "mental record," as it were, of the events in their lives according to date and the relation of one date to another. If you ask them a question about their past lives, they often respond with words to the effect that the event occurred in 1944 because it was two years after mother died in 1942, or some such similar set of eventful dates. In cases such as these, where inferences play a large role, I suspect that there is little imagery. Therefore, it is reasonable to make a distinction between recollection with associated imagery and recollection without imagery where, nonetheless, imagery is possible in principle. The latter is best named reminiscence, but we should remind ourselves that reminiscence, because it refers to unique events in past experience, is also a form of recollection.

The whole notion of inferring events in past experience from those events in past experience which are recollected with associated imagery needs to be sharpened somewhat. For that form of remembering which I have called reminiscence, the inferred event is capable, in principle, of being recollected with associated imagery. However, it is also possible to infer an event relative to an event that can be recollected with associated imagery, which is not itself recollectable with associated imagery. If common sense is my guide, then the first day of my birth relative to some notorious event in my childhood is an example of such an event: it is inferred, but no associated imagery is possible. In fact, I can infer an entire infancy of events that are recollectable by me in any obvious sense. It is at this point that

another inference is made, namely, that the events of my infancy are recollectable in principle, but they are not recollectable by me in principle. It just happens that I was too young to remember. (Actually, I tacitly assume that such events are recollectable in principle.) However, we must not think that such inferences are statistical inductions; they are simply the kinds of beliefs which it is unthinkable—at least so far as common sense goes—to question without shaking one's entire system of beliefs about the world. The supposition of common sense seems to be: what I remember, I have experienced; and what I experience, I could remember. As a corollary to this one might even say that imagining itself is inferential, being thought to be a kind of potential remembering (for instance, imagining what it was like to be six months old). Indeed, it is often impossible to dintinguish non-inferential imagery (in the sense of fancy or make-believe) from that which is inferential, without separate corroboration, just as when someone is sometimes unsure whether a report he just made has its origin in a dream or in waking experience.

To conclude, recollection, as ordinarily understood, appears to presuppose two things: (1) enduring self-identity and (2), as stated above, that what I remember, I have experienced; and what I experience, I could remember. I would prefer to call this a binary presupposition,[43] and what strikes one about it is that the question of temporality is

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[43] It is binary in the sense that either part seems to entail the other.

implied: the first part entails some kind of identity deriving from the very notion of a continuous series of experiences; the second part is obviously tensed. Furthermore, if we grant that perception is prior to intellection, then it goes without saying, on the strength of the second part of the presupposition, that imagery and the possibility of imagery are essential to recollection.

3. Recognition

a. Experience and Experiment

The word "remembering" has been used in a very wide sense. For instance, recollection is one sort of remembering. However, I must confess that my guide for the use of the word remembering has not been motivated strictly by the way the word is commonly used in language. I am motivated by a method which can provisionally be described as Augustinian. It is this: If present existence is privileged, perhaps even the only thing to which the predicate "exists" can be attributed, then whatever countervails this claim is what concerns me. Narrowing this to something more specific and manageable, I consider the person who says, "I recall such-and-such." I say of this person that he is remembering, remembering in a way that I have distinguished as "recollection." In addition, the person who sees two hands, using the one to relieve an itch, reacting towards the other with a handshake, "remembers" which hand is his. However, he recognizes it; he does not recollect it although he could recall that it is the hand which the cat scratched yesterday.

It should be pointed out that I am not asking an epistemological question: What evidence do I have for it being my hand? Nor am I asking a theoretical question: How is it possible that a person recognizes? That is, questions of justification or of the inclusion of recognition into a systematic theory of human nature are not the immediate concern. At this point, my concern is primarily to investigate the use of the term "recognition" in so far as it is commonly subsumed under the general term "remembering," in accordance with the distinction made in ordinary language between recollection and recognition. In short, my initial

concern is the proper usage of terms.

Let us begin with an illustration of a congenial sort. When I meet Professor X at the university pub, I say to him, "Hello, Professor X." There is no doubt that I remember who he is; for I have greeted him by name, and he has responded in a friendly rather than a menacing way. Could such a case be considered recollection? There are differences. First, it is not necessary that I should have forgotten Professor X in order to be able to greet him as Professor X. Second, when I greet him as Professor X, I am not relating him to some experience of Professor X which I once had. Third, whereas in recollection whatever reminds one of Professor X should be both qualitatively and numerically distinct from the Professor X whom I once met, this is not so in the present case of remembering. It would be quite absurd to take the present meeting of Professor X as but a reminder of the "real" Professor X that I once descried in a dimly lit lecture room. For in this example, although there may be qualitative differences between the occasions of my meeting him, perhaps he keeps changing his tie, it remains the same (numerically) Professor X whom I meet. Generally, we distinguish this kind of remembering from recollection by calling it recognition. Presupposed in recognition is learning: I have learned who Professor X is, and I am able to identify him. Often, learning requires several similar experiences such that on a subsequent experience I make a respone which is

similar[44] to the previous response, this time relinquishing any help which I may have had on the other occasions.

Before preceeding, however, we should ask whether anything hinges on the distinction between recollection and recognition. What is the import of the distinction? Surely we are all aware that our accustomed

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[44]Consider the following objection: How de we know that what we are remembering is similar to what we have before us? That is, how do I know that the "remembered X" is similar to this "X"? Is it not possible that I have never met this X before, and that I am now fantisizing that I remember X. There is no doubt that such deception sometimes occurs. Our remedy would appear to be that we would have to "remember that the 'remembered X'" is similar to this "X". But there is no end to this, for how can we know that the remembering of the remembered X is similar to this X except by again invoking another remembering which falls prey to the same inadequacy?

This problem can be avoided by showing that it can be restated without a sceptical conclusion. It seems that the conditions for the possibility of recognition are being overlooked whenever we admit arguments based on the fallibility of remembering. Suppose that the sceptical puzzle is restated in the following way: Imagine that I keep a diary and each time that I meet X, I write the date and "I met X" on a page in the diary. Later, I flip through the diary, and I ask myself, "How do I know that 'X', which occurs on pages a, b, and c, has the same reference?" I would like to say that I know because I remember, but I refrain because the least that I am quite certain about is that remembering is never entirely certain, in other words, is fallible. Therefore, I conclude that knowledge based on memory is impossible.

What is neglected is that the problem is much more basic than this. The question is not about whether I can be mistaken; that goes without saying. Rather, assuming that I have not made a mistake, what makes the X I met on date one, the same as the X on date two, the same as the X on date three? In a word, what constitutes the identity of X? In this way, a conundrum is recast as a genuine problem: What does it mean for there to be "things" in the sense of being integral? What does it mean for a thing to present itself one occasion after another? We could answer by saying that identity is a fundamental characteristic of Being; we might demand that identity is the result of an active synthesis by a mediating intellect (or even intellect in general); or we could claim that identity has an "active nature" which becomes apparent to us once we make the leap to understanding the "belonging together of man and Being." (See M. Heidegger, "The Principle of Identity," in Identity and Difference (New York: Harper, 1969), p. 36) Regardless of the option, these are not epistemic matters. The sceptical conclusion is the result of confusing a problem with a trivial statement of fact, namely, that judgements are fallible, concluding that the problem is unresolvable in principle.

actions are distinct from the particular occasions which we recollect as particular occasions. It just happens that we are confident that many other animals share our ability to recognize: the dog who wags his tail to welcome his master, and so forth. We are not so confident, perhaps, that animals other than humans recollect; but this may be an evolutionary difference only. Insofar as time is concerned, an explanation of recognition seems easy. Repeated learning causes quasi-permanent changes in the person or other animal, in virtue of which a certain behaviour towards an object or situation manifests itself.[45] Quite apart from the neurophysiology necessary for recognition to be possible, it would seem that the ability to recognize should be amenable to experimental investigation. For in recognition we are not dealing with the unique occasions which are the subjects of recollection. We can simply measure recognition ability relative to time used as a parameter. Ebbinghaus' celebrated memory experiments are the first instance of the use of quantitative techniques for the investigation of memory, and in fact they still form the basis for many memory experiments.[46] It seems that unless we wish to make a radical distinction between recollection and recognition for the purpose of endowing humans with souls and animals with mere bodies

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[45] I am using the phrase "in virtue of" technically in those cases where it is not clear whether one should say "is caused" or "is correlated with."

[46] Hermann Ebbinghaus, Memory, H.A. Ruger and C.E. Bussenius, trans. (New York: Dover, 1964). This report of experiments begun in 1879 was first published in 1885.

there is no reason to search for philosophical scruples to undermine such a fruitful experimental course.

Nevertheless, the distinction between recollection and recognition is important philosophically for the following reason. Concentrating on recognition directs one to give mechanical or empirical explanations of memory. This is not wrong except that it prompts us to exclude or make separable other aspects of the phenomenon of memory. The danger is then in reinterpreting recollection as a kind of recongition which gets dated somehow. I hope to show that the opposite is the case, namely, that in one sense recognition presupposes the possibility of recollection. Alternatively, where recollection is not supposed, then we can only speak of recognition in a different sense, as meaning a response to a stimulus. Intuitively we could distinguish these two senses by saying that there is a difference between recongizing and not having a conception of time, and recognizing and having a conception of time. Likewise, having a biological clock and having a clock are different in the same way that moving at knifepoint is different from going to the concert.

In order to make these intuitions more precise we can begin profitably by considering Ebbinghaus' memory experiments. The problem which Ebbinghaus had was to invent a method for measuring memory ability. At first sight, there seems nothing repeatable about memory which would legitimate measurement or averaging over a number of measurements. Each time I get into my automobile, I remember how to drive. Does it make sense to say that I remember ten percent better how to drive today than yesterday? What test could show this? Or, suppose I remember a dream; how can I measure how much better or worse I remember my dream than someone else

remembers his dream?

In retrospect, the method which Ebbinghaus hit upon seems quite simple. He constructed (randomly) lists of nonsense syllables. This ensured a degree of homogeneity, but most importantly they lacked meaning. Ebbinghaus had the good sense to realize that a scientific experiment was useless without ensuring that all variables, except those to be correlated, were kept constant or insignificant. He gives his motivation clearly:

> The nonsense material, just described, offers many advantages, in part because of its very lack of meaning. First of all, it is relatively simple and relatively homogeneous. In the case of the material nearest at hand, namely poetry and prose, the content is now narrative in style, now descriptive, or now reflective; it contains now a phrase that is pathetic, not one that is humorous; its metaphors are sometimes beautiful, sometimes harsh; its rhythm is sometimes smooth and sometimes rough. There is thus brought into play a multiplicity of influences which change without regularity and are therefore disturbing.[47]

Ebbinghaus would then read or recite the list of nonsense syllables to himself repeatedly, at the same speed, with the same rhythm, until "the initial syllable being given, a series would be recited at the first attempt, without hesitation, at a certain rate, and with the consciousness of being correct."[48] Ebbinghaus' recognition of the task before him was manifest in the successful memorization. By measuring the time taken or the number of repetitions required to learn the list, Ebbinghaus was able to give a measure of how readily one could learn and thus remember the list. In one experiment, Ebbinghaus measured the learning time saved

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[47] Ibid., p. 23.

[48] Ibid., pp. 22 - 23.

when a set of lists were learned for a second time, as a function of the interval between the first and second learning.[49] Whereas Ebbinghaus struck on the use of nonsense syllables as a convenient way to measure memory ability, in present studies there is nearly a mania for word-processing models for memory.

One drawback to this is that there is a degree of hesitation and thus lack of uniformity in being one's own judge as to whether one has learned the list or not, as was the case for Ebbinghaus who was both experimenter and subject. Therefore, Ebbinghaus had to take precautions against letting a failed attempt to say the list from memory influence the results.[50] This was avoided in subsequent experiments by others. In 1900 Müller and Pilzecker reported an experiment in which a list was presented to a subject who read it in rhythm, placing the accent on every alternate syllable. Later, the experimenter would present the subject with one of the unaccented syllables, the subject's task being to supply the accented syllable which followed in the originally learned list. They called this the "method of hits."[51] The method being so-called because a determination of whether the subject got it right or wrong

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[49] Ibid., p.p. 62-80.

[50] Ibid., p. 24.

[51] The experiment by Müller and Pilzecker is described by D.J. Murray, "Research on Human Memory in the Nineteenth Century," Canadian Journal of Psychology, XXX (1976), 201-220. Reprinted in J.G. Seamon, ed., Human Memory (New York: Oxford University Press, 1980); see p. 11.

could be made; thus a statistical measure of the subject's memory could be given. The method of hits is in fact the forerunner of paired-associates learning.

Before discussing these experimental investigations, which are in fact the bases for the sort of experimentation which is done in psychology even today, it is worthwhile to put them into perspective by reminding ourselves of Wundt's position in regard to the use of the experimental methods of science in psychology. In his Principles of Physiological Psychology, Wundt writes:

> As an experimental science, Physiological psychology seeks to accomplish a reform in psychological investigation comparable with the revolution brought about in the natural sciences by the introduction of the experimental method. From one point of view, indeed, the change wrought is even more radical: for while in natural science it is possible, under favourable conditions, to make an accurate observation without recourse to experiment, there is no such possibility in psychology. It is only with grave reservations that what is called 'pure self-observation' can properly be termed observation at all, and under no circunstances can it lay claim to accuracy. On the other hand, it is of the essence of experiment that we can vary the conditons of an occurrence at will and, if we are aiming at exact results, in a quantitatively determinable way. Hence, even in the domain of natural science, the aid of the experimental method becomes indispensable whenever the problem set is the analysis of transient and impermanent phenomena, and not merely the observation of persistent and relatively constant objects. But conscious contents are at the opposite pole from premanent objects; they are processes, fleeting occurrences, in continual flux and change. In their case, therefore, the experimental method is of cardinal importance; it and it alone make scientific introspection possible.[52]

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[52]Wilhelm Wundt, Principles of Physiological Psychology, E.W. Titchner, trans. (New York: Macmillan, 1904), p. 4.

Wundt's position is that the methodology of science is essential for any kind of systematic study of psychology; however, anything which we say physiologically about humans must, according to Wundt, be supplemented with psychology, "as an indispensable auxilliary of physiological investigation."[53]

Although Wundt recognizes that he is thereby making a metaphysical commitment,[54] I believe that his motivation is primarily practical. It appears that his major premise is (and it is an intuition which I believe many of us share) that we cannot give "an adequate definition of life" unless both the "processes of the physical organism. . . and the processes of consciousness" are considered.[55] Thus, "psychophysics," for Wundt, is a special science which will lead ultimately to an understanding of the interaction of mind and body. Wundt acknowledges certain limitations of the experimental method: Self-observation can only be useful if it is possible to ensure that the observation does not modify that which is to be observed. Further, language, myth, and custom provide a source of psychological knowledge which is not a product of experiment.

Now, turning to the problem at hand, what can be said about the experimental approach to memory. Considering Wundt's favourable and yet guarded comments on the use of experimental methodology in psychology,

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[53] Ibid., p. 2.

[54] Ibid., footnote on p. 3. He contrasts the sense in which he uses "psychophysical" with Fechner's.

[55] Ibid., p. 3.

the question is whether the experimental approach to memory has not, perhaps inadvertantly, modified the phenomenon being investigated, and if it has, whether the modified investigation tells us anything about what was originally the subject of inquiry.

There are two striking aspects to the memory experiments which have been mentioned. The first is that meaningless syllables are being used to ensure that there are no extraneous influences on the reproduction of the test material. We might fancy ourselves dealing with memory in its purest form. Ebbinghaus even mentions that the experiment must be guarded from the influence of mnemonic techniques, his aim being that the list should be produced independently of such contextual influences. The supposition underlying this is that this tells us something about recognition. Indeed, it does, provided recognition is understood as an expected response to a stimulus. It tells us that a person can reproduce meaningless material in certain specifiable ways which can be generalized to include other persons' memory abilities. What must be pointed out is that this is a rather unexceptional consequence: it would be shocking to discover that my ability to reproduce learned material were less predictable than the weather. That we obtain experimental results is not, therefore, surprising—any more than it is surprising that we discover a certain figure once we decide that we can measure, say, the acceleration due to gravity. Wundt is quite right in aiming to be as systematic in regard to psychology as we are in the

physical sciences.[56] Ebbinghaus' attempt to apply experimental techniques to the investigation of memory is also justified. Experiment, however, requires entities which are both measurable and repeatable. This is the reason for attempting to make the test material independent of context. However, there is a sense in which this is objectionable, for only the most dull and monotonous work can be said to be context independent. In fact, even the machine operator who feeds bar after bar of steel into a machine does his repetitions "for the money," unlike the pigeon who pecks at a lever for a reward of food without, we would say, getting bored. Context comes to the fore more prominently when we consider more typical cases of recognizing things or persons. A violinist recognizes his violin as that wich he needs for tonight's concert. A husband recognizes his wife as, amongst other things, the only person for whom he has ever bought flowers. What is missing, I believe, in experimentally contrived recognition, is the assent which a person gives to his disposition to act in a certain way given what is recognized. Presupposed in this is the ability to choose, and even if this ability were no more than a kind of delusion, the "delusion" would not be explicable without such assent.

The other striking aspect about experimentation on memory, which

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[56] There are many parallels to be drawn between Wundt's "psychophysics" and Husserl's phenomenology. Especially, consider Husserl's distinction between the physical sciences which are exact and phenomenology which, although not exact, is nonetheless rigorous. (Ideas, op. cit., secs. 74, 75.)

comes out in Müller and Pilzecker's experiment, is the attempt to measure the ability to recognize in terms of the success or failure to complete the experimental task. This can be seen as an attempt to degrade and eliminate, if possible, the element of assent in recognition. For example, the experimenter might conclude that the subject got eighty percent of his recognition claims correct. It becomes arbitrary which part of the test material the eighty percent is. The errors are ascribed to interference: phonetic confusions, chance associations, and the like. The success of the experiment, rather than the remembering itself, becomes equated with recognition. For instance, a mnemonic technique such as was used by the Russian mnemonist "S", who would place the objects corresponding to a list of words at places along a fancied walk down a Moscow street,[57] must be screened from the memory experiment. The experimenter neglects, I believe, the context in which the recognition occurs, devices or strategies used being part of the context, when it is precisely the context which in ordinary instances of recognition permits what I have called assent. Consider again the example of the professorial tippler. The element of assent could be illustrated by the comment, "Of course it's Professor X. Who else would be at the pub!" Interestingly, the element of assent has not disappeared altogether in the experimental situation; it has simply been translocated to the experimenter, who checks the subject's responses and grades them correct or incorrect.

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[57] See A.R. Luria's remarkable account, The Mind of a Mnemonist, Lynn Solotaroff, trans. (New York: Discus, 1969).

In any case, this suffices for the making of a distinction between recognition as ordinarily understood and as understood in the experimental situation.

To conclude, what seems peculiar about recognition in ordinary experience is that there exists the possibility to recollect events associated with the recognized object. This is what I mean be context. As has just been shown in section 2, presupposed in this are, effectively, conceptions of self-identity and time. The corollary to this is that the recognizing human identifies the object of recognition. In contrast, the memory experiment is not, by and large, concerned with recognition in this sense, but only with response to stimuli, any identification being made by the experimenter, not the subject. Moreover, although we speak properly when we say that a dog expects and recognizes its master, the dog does not decide on how to treat his master. This is not to say, of course, that, as humans, we are not often like dogs.

b. Philosophical Digression

It is useful at this point to compare assent, as I have been using it, with what Russell calls a "feeling of familiarity," which he distinguishes from the element of cognitive belief in memory, that succeeds in referring to the past. Basically, the purpose of this section is to be a corrective for a possible misinterpretation of the previous section. In The Analysis of Mind Russell writes:

> I think we may regard familiarity as a definite feeling, capable of existing without an object, but normally standing in a specific relation to some feature of the environment, the relation being that which we express in words by saying that the feature in question is familiar. The judgement that what is familiar has been experienced

> before is a product of reflection, and is no part of the feeling of familiarity, such as a horse may be supposed to have when he returns to the stable. Thus no knowledge as the past is to be derived from the feeling of familiarity alone.[58]

Assent, as I have used it, is not quite synonymous with what Russell calls a feeling of familiarity; as well, it is not quite the same as the belief that what we are familiar with relates to something experienced in the past. Between that feeling which a horse has upon returning to the stable and that philosophical thinking about a relationship with past experience, is something characteristically (at least) human; and I call this assent. In fairness to Russell, he does say that the felling of familiarity is a matter of degree;[59] however, the distinction which I am after can be drawn by pointing out that both the feeling of familiarity and the ascription of pastness are open to the charge that they emphasize the cognitive aspect of remembering (whereby recognition becomes nearly synonymous with perception), while neglecting that remembering is, perhaps, first and

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[58]Bertrand Russell, The Analysis of Mind (London: Allen and Unwin, 1921), pp. 168-169.

[59]Ibid., p. 168

foremost a matter of action, not contemplation or knowledge.[60] This is fairly evident in the case of ascribing pastness, but it is much less clear in regard to the feeling of familiarity, thus requiring some elaboration.

The reason why a "feeling of familiarity," such as Russell describes, emphasizes cognition rather than action is, it seems, that the feeling is taken to be separable from that with which we feel familiar. The feeling is being construed as a primitive form of belief when it is actually not a matter of belief at all, at least in any cognitive sense. Let us take the simple case of returning to the place of one's childhood: It is far less plausible to say that a feeling of familiarity is appended to the complex sensory stimuli of my surroundings, than it is to say simply that I am able to act (where we can take thinking to be a kind of acting) in a way which we call "being familiar with."

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[60]This is, of course, one of the most important themes in Bergson's Matter and Memory (New York: Macmillan, 1913). Bergson writes (p. 302):

> Now, if we look beneath these three hypotheses [Kantian idealism, dualism, materialism] , we find that they have a common basis: all three regard the elementary operations of the mind, perception and memory, as operations of pure knowledge. What they place at the origin of consciousness is either the useless duplicate of an external reality or the inert material of an intellectual construction entirely disinterested: but they always neglect the relation of perception with action and of memory with conduct. Now, it is no doubt possible to conceive, as an ideal limit, a memory and a perception that are disinterested; but, in fact, it is towards action that memory and perception are turned; it is action that the body prepares.

It appears that "the feeling of familiarity" is a concept which has been displaced from its origin, so to speak, in a way which produces a purely intellectual distinction. Yet, there is no reason to make the feeling of familiarity actually separable from the situation in which one finds oneself, and which permits of a certain way of acting.[61]

We can, however, offer a reason as to why the feeling of familiarity has been separated at least cognitively. The motivation derives from the desire to explain those instances of "being familiar with" which are wholly delusive. To use Hume's succinct illustration, some liars begins eventually to believe their own lies.[62] Accordingly, the explanation of delusive instances of "being familiar with" would be somewhat such as the following: If the "feeling of familiarity" is separable in the sense of being independent of the circumstance in which it arises, then it can arise independently of whatever the feeling refers to, that is, independently of what the feeling of familiarity is

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[61]This complaint against Russell's "feeling of familiarity" is echoed by R.F. Holland ("The Empiricist Theory of Memory," Mind, LXIII (1954)) who, after giving several reasons for not accepting the notion of a feeling of familiarity, says flatly: "The crux of the matter is that familiarity does not by itself indicate its own source: it does not, as it were, bear its own explanation of its face" (p. 468). Holland means, I believe, that the concept of familiarity is purely adventitious, having little explanatory power because it is touted as a basic concept when in application it is not self-evident. In my analysis, I am unwilling to concede the initial move which institutes a separate "feeling of familiarity."

[62]Treastise, 1: 3: 5.

a familiarity with. For instance, we may have a strong sense of familiarity with surroundings that it is impossible we have ever been in. In such cases, a delusive instance of familiarity would be occurring. In short, it would be argued that because there are delusive instances of the feeling, then the feeling is separable from the instances in which it occurs. However, such reasoning should take account of the fact that, practically, the only way to test whether a feeling of familiarity is delusive or not, is to take note of the extent of our confidence in the feeling as a basis for action or thought, the consequences then confirming or confuting the reliability of our willingness to act or think in a certain way in certain circumstances. It is simply incoherent to ask my companion whether my feeling of familiarity is or is not delusive: I have to work that out myself on the basis of what I do or think as the result of the feeling.[63] On the strength of this, it seems very difficult to justify why the feeling of familiarity should be

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[63]The position being defended is that a "feeling of familiarity" is not distinct from the manifestation of a feeling of familiarity, and therefore is not independent of actions, sayings, intentions, abilities, and so forth. Professor Shalom has brought to my attention the experience of "déjà vu" which may be considered to be a significant counterexample to the position being defended. If the déjà vu experience is understood to be a feeling of familiarity, then there appears to be an instance of a feeling of familiarity which is independent of both action and any disposition to act. Two directions are possible: either déjà vu is not relevant to the problem of memory, or déjà vu must be distinguished from a feeling of familiarity (either Russell's use or my own). I can think of no justification for saying that the déjà vu experience is not a problem of memory.

I am only in a position to outline some of my intuitions about this difficulty. If I were required to give an analysis of the déjà vu experience, my direction would be the opposite of what is suggested by

considered to be separable in anything other than a purely cognitive sense. Reverting to the earlier example, I am unable to prejudge the feeling of familiarity with my surroundings to be delusive; only my activities in such surroundings permit such a judgement.

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the phrase; that is, I would understand the experience as being primarily a phenomenon of the person and not the surrounding environment. This attested by the fact that some persons claim to have a déjà vu experience even in surroundings to which they cannot have had similar experiences in the past. Furthermore, the déjà vu experience seems not to be quite the same as a feeling of familiarity (even in Russell's cognitive sense). A déjà vu experience is, metaphorically speaking, a kind of "reliving"; and an explanation of the experience relies on feelings of familiarity, as ordinarily understood. For example: I have a déjà vu experience; nonetheless, I say to myself that the experience must "really" be at least numerically distinct from the similar experience which I remember having in the past, and with which I am familiar. In other words, I may have a feeling of familiarity without having a déjà vu experience; it seems not to be merely a matter of degree.

The best I am able to understand about a déjà vu experiences is that it is a familiarity with one's feeling of familiarity. Such an analysis would be similar to that offered by Husserl when he speaks of the nested character of memory, where one can have memories of memories, and so forth. Naturally, the same questions which arose with Husserl's analysis of memory will arise with respect to such an analysis of déjà vu.

In any case, it seems that the same presuppositions will be involved even if déjà vu is distinguished from a feeling of familiarity, provided that (1) the feeling of familiarity is understood in the sense which have given it and (2) the feeling of familiarity is taken to be a necessary condition for déjà vu.

It may be concluded that although there is a similarity between the term "assent," as I have used it, and a "feeling of familiarity," the difference is that the former stresses the active rather than the purely cognitive aspect of remembering. This aspect of remembering is better described by such phrases as "being familiar with," "knowing how to get along with," "finding one's way about" (one's old neighbourhood), "remembering how it felt," and so forth.

Turning back to the distinction with which we bagan, although there is a difference between recognition and recollection, I think it is a mistake to draw the distinction too sharply. Ultimately, we must take stock of the fact that it is a person that remembers, which is to say, the person who recognizes is also the person who recollects. If recognition is separated from recollection for other than characterizing differences of aspect (as opposed to kind), then the analysis of recognition, which s ems easily applied to what animals do, tends to institute recognition as part of our animal or instinctual side, with recollection marking our "higher nature." This is a mistake, for it is the remembering person which should be the subject of our inquiry, not a marked animal, infused, perhaps, with spirit.[64]

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[64]Accordingly, I am in marked agreement with Ryle's dictum, "Men are not machines, not even ghost-ridden machines. They are men—a tautology which is sometimes worth remembering." (The Concept of Mind, op. cit., p. 79.)

4. Retention

I began the last section by allowing myself to be swayed a little by Augustine's assumptions that (i) the present is instantaneous and that (ii) existence can be predicated of the present only and not of the past and future. If, then, all that exists exists now (memory, expectation, perception), it follows that temporal relations can only be intuited, being prior to experience since experience is rooted solely in the present.[65] Once a self, in the Cartesian sense, is posited, then it is a short step to envisaging this self as the entity which has certain intuitions about the phenomenal world which is given to this self. For Kant, the form of experience is intuited as spatial and temporal. However, as the title ot this part suggests, I propose to follow a different route. A very simple example from ordinary experiences is that I am able to write this sentence without having "lost," as it were, what I first wrote, although I know fully well that I wrote "A very simple" before writing the last eight words of this sentence. If I take this empirical approach, I should, it seems try to understand how it is that I write a sentence considering that I am marking only one word at a time.

The first question to arise is whether this is a matter of memory at all. It is insofar as recollection and recgnition presuppose, at

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[65] As Professor Noxon has aptly pointed out, in any ordinary account of experience, experience is rooted not in the present but in the past. Curiously, a philosophically influential opinion such as Augustine's takes the ordinary conception to be an ungrounded sophistication requiring systematic reconstruction out of the contents of the every changing present, taken as fundamental.

least effectively, a conception to time; and we are thus led to ask for our source of temporal relations such as "before." Whether we speak of memory over short time spans or sensing which has as its object more than what can be defined instantaneously, the direction is the same: We do have a concept of time (as a compact progression of instantaneous states). We do have temporal concepts. Experience is temporal. In a sense each of us is a timebound material object. Therefore, can experience (as sensation) furnish us with an explanation of there being an entity which conceives his own temporal experiences as being temporal? Phrased in this way, with the emphasis on sensation, a discussion of this problem can be centered around what has been called the "specious present." This is the subject of the following sections.

a. James and Psychology

The term "specious present" was invented to account for the alleged fact that persons sense more than what can ("philosophically") be said to be present, where the present is taken to be the durationless division between the past and future.[66] Therefore, what we typically call "present" refers actually to a bit of the past (and by some accounts to a bit of the future).

Experimentally, the problem is frequently thought to centre around the measure of the specious present. Curiously, this is implicit

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[66]See James' quotation of Clay in The Principles of Psychology, Vol. I, 1890 (New York: Dover, 1950), p. 609.

in Locke's Essay. Locke holds that reflection on the train of our ideas gives us the idea of succession, and the distance between ideas gives us the idea of duration.[67] Yet do ideas themselves have duration. For Locke, it appears that they do, despite their being fleeting and variable.[68] Thus we are left in the odd position of defining succession and duration in terms of ideas which are themselves enduring. It therefore follows that we can make sense of the idea of duration only if we ascribe some kind of physical standard to the duration of an idea, from which it also follows that we should assign it a magnitude. Moreover, since the source of our ideas is taken to be empirical, this magnitude must measure a block of sensation which is inspected or strikes one all at once.[69]

In a way, what is implied in Locke's views can be construed as the philosophical justification for the sorts of experiments performed by Wundt's pupil Dietze. In one experiment Dietze measured about four seconds as being the maximum separation between clicks presented to a subject such that the subject was able to group the clicks together in consciousness.[70] In other experiments, Jacobs (in 1887) performed tests

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[67]John Locke, Essay Concerning the Human Understanding, 1690, Bk. II, chap. XIV, sec. 3.

[68]Ibid., Bk, II, chap. XIV, sec. 3.

[69]Compare with J.D. Mabbott, "Our Direct Experience of Time," Mind, LX (1951), reprinted in R.M. Gale, ed., The Philosophy of Time (London: Macmillan, 1968), pp. 304-305.

[70]Experiment cited by D.J. Murray, "Research on Human Memory in the Nineteenth Century," op. cit., p. 15. See also James, op. cit., pp. 612-613.

on school children, in which series of numbers were read to them at a rate of two a second, attempting to measure the maximum which could be reproduced. This ranged from about six to ten numbers, depending presumably on age, sex, and how high in the class the students were rated. Jacobs called this the "span of prehension."[71] Galton performed similar experiments on subjects taken from asylums for the mentally deficient.[72] At the lower range, James refers to the results of a number of his contemporary psychologists who attempted to measure the minimum difference between two stimuli such that multiple stimuli and not a single stimulus were sensed. The results varied depending on which particular sense or conbination of senses were the subject of the experiment.[73]

In itself, there is really nothing wrong with such experimental efforts. It is doubtless true that if I swing a pencil back and forth rapidly between my fingers, I have the appearance of an airy fan bound by two pencils. Although this is what appears, I know very well that there is but a single pencil traversing a particular path continuously. Clearly, I am at once sensible to a range of positions of the pencil, knowing nonetheless that the pencil is never at more than one position at any instant. If this is the case, then it seems reasonable to say

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[71] J. Jacobs, "Experiments on 'Prehension'," Mind, XII (1887), 75-79.

[72] F. Galton, "Supplementary Notes on 'Prehension' in Idiots," Mind, XII (1887), 79-82.

[73] W. James, op. cit., Vol. I, pp. 613-617.

that even for an object which is not moving relative to my eyes, that I sense it for a certain duration Δt. Another simple experiment can show this: I close one eye and block the other with my fingers, peeping at an object through a small slit, made by my fingers, about the size of a pencil. I then flick my pencil back and forth in front of the slit, discover that if I vibrate the pencil slowly, I alternately see and not see the object. If I vibrate it more rapidly, there comes a point when the object appears unobstructed; nonetheless I am aware of the fact that at certain times the line of my sight is indeed obstructed. The only possible explanation is that I sense the object at least once every Δt. For this experiment I have calculated Δt to be about one tenth of a second.[74]

I presume that anyone who knows how to count and owns a watch is able to duplicate this simple experiment; and allowing for physiological differences, the only thing that might be objected to is the accuracy. Let us assume that by this I have given <u>one</u> measure of the specious present. What precisely are we to understand by this? If Locke is our mentor, we might want to say that this is the origin of our idea of succession. But it is just not clear how this is so. A possible clarification, one given by Broad, will be discussed in the next section.

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[74]This experiment can be performed without leaving one's desk. Take as given that the specious present for hearing is much shorter than it is for sight; measure the frequency of the pencil by tapping it on the desk while looking at one's watch. Note that the tap frequency is half the frequency of occlusions.

However, what does emerge is that invoking the specious present has little to do with the measure derived from any particular experiment. If anything, the idea of a specious present is aimed at permitting us to derive our basic temporal notions. That we sought a standard for Locke's "idea" was motivated by our desire to understand succession and duration. That the origin or our temporal concepts is at issue is stated quite clearly by James. In the chapter "The Perception of Time" in The Principles of Psychology, he writes:

> We shall see in the chapter on Memory that many things come to be thought by us as past, not because of any intrinsic quality of their own, but rather because they are associated with other things which for us signify pastness. But how do these things get their pastness? What is the original of our experience of pastness?[75]

Approvingly, he later says, "The only fact of our immediate experience if what Mr. E.R. Clay has well called 'the specious present.'"[76] In the following passage he gives an explanation which deserves some attention.

> If the present thought if of A B C D E F G, the next one will be of B C D E F G H, and the one after that of C D E F G H I—the lingerings of the past dropping successively away, and the incomings of the future making us the loss. These lingerings of old objects, these incomings of new, are then the germs of memory and expectation, the retrospective without which it could not be called a stream.[77]

If we scrutinize this passage carefully, for simplicity ignoring James' implication that a bit of the future is also included, we find James

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[75] Op. cit., Vol. I, p. 605.

[76] Ibid., Vol. I, p. 609.

[77] Ibid., Vol. I, pp. 606-607

claiming that "lingerings of the past" "give continuity of consciousness." Since James' expressed motive for invoking the specious present is precisely to give us the "original of our experience of pastness," it is premature to speak of lingerings of the past; so really we should say only that lingerings give continuity to consciousness. However, when I am conscious as opposed to being in a coma, say, is something given to me such that I am conscious of the continuity of consciousness? If this were so, I believe we could conclude with perfect seriousness that only philosophers could be said to be conscious. Furthermore, to speak of giving continuity to consciousness strikes me as being a pleonasm. Rather, continuity seems to be a predicate which is ascribed to consciousness. Thus, the most which we are justified in gleaning from James' exposition is that lingerings (that is, lingering thoughts) are somehow the same as consciousness. The problem is, then, how to interpret this, attempting to discover what is presupposed by it. One attempt at interpreting what is meant by the specious present has been given by Broad in his book Scientific Thought, and this begins the next sub-section.

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[77] Ibid., Vol. I, pp. 606-607.

2. Broad and Philosophy

Before presenting Broad's account of the specious present, it may be useful to review the reasons for the direction that has been taken. At the beginning of this chapter, retention was distinguished from recollection and recognition by saying that it referred to that sense in which the past can be said to carry over into or inhere in the present. The problem of understanding what is meant by the past inhering in the present seems at once both metaphysical and physiological. If one asks for those properties or criteria which make the object the object it is, and not some other object, then the approach is metaphysical. Nevertheless, there is also the question of the nature of that organism which functions such that it individuates in effect, if not metaphysically. Perhaps more difficult is the question of the relationship between individuation understood metaphysically and individuation understood physiologically. Without becoming entangled in this question, I think it suffices to say that the physiology of persons is such that much of what can be individuated according to criteria constitutes the individual objects which persons react towards ordinarily, without criteria having been established.[78]

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[78]This rather strained formulation reflects the fact that the problem which is to be set out is metaphysically naive. This can be understood by realizing that we are not speaking of two different procedures for conferring "thinghood," as if it were being generated almost out of nothing. The individual existent is independent of criteria or the physiological adequacy of the organism which apprehends it. It is no mystery that perception has as its objects individual things, for there exist individual things. To see, for instance, sense date instead of objects is a philosophical sophistication.

Now suppose that we wished to give an account of how it is possible for an organism to individuate in effect, through its actions. That is, if we have metaphysical certainty that there are objects "out there," so to speak, how is it possible that they are taken to be individuals by an organism which senses. Given the presupposition that the present is punctiform, then from the side of the question which deals with the organism, we must somehow account for how it is possible that sensations which are in the past are in some sense retained in the present. If we concentrate on physiology or the cybernetic understanding of information, we need not speak even of sensations; we may speak merely of dated neural impulses or a storage of incoming information. So, regardless of the language which is used, it it thought that the pressing concern is to understand how the past can be said to be retained in the present (as, perhaps, a unified conglomeration of partial representations).

The procedure that is then followed is to assume that a small amount of the past does form part of the "present," where the present is understood to be a kind of physiological retention. Having assumed such a "specious present," then an account must be given of the concatenation of these "specious presents" into continuous experience. Having thus reviewed the motivation for having the notion of a "specious present," let us turn to Broad's effort to make sense of the problem.

In Scientific Thought, Broad writes: "I do not find accounts of the Specious Present given by psychologists very clear, and I shall therefore try to illustrate the matter in my own way."[79] As we have seen with James, there is indeed a lack of clarity. For my part, I find Broad's account difficult to grasp as well; so what follows is more an interpretation of the salient points of Broad's exposition than a precis of the actual steps that Broad takes.[80] My guide in this has been Mundle's article "How Specious is the 'Specious Present'?"[81]

Broad supposes that any object judged to have a certain quality, has that quality because we directly sense a "sensum" which really has that quality and which has a certain relation to the object.[82] Thus the discussion of the specious present centres around sensa. If the assumption is made that (i) sensible fields are literally momentary, then (ii) a sensum of one field is not the same as a sensum of another, for "It is obvious that the past cannot be precisely and numerically the same as what is now present. . . ."[83] Thus Broad is supposing that sensa are datable. Further, an observer is being presupposed. It is the observer who, on the basis of qualitative likeness, judges the continuity of

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[79] C.D. Broad, Scientific Thought (London: Kegan Paul, 1927), p. 348.

[80] For instance, I have not duplicated Broad's diagram (ibid., p. 349), opting for symbols only.

[81] C.W.K. Mundle, "How Specious is the 'Specious Present;?" Mind, LXIII (1954), 26-48.

[82] Scientific Thought, op. cit., pp. 239-240.

[83] Ibid., p. 346.

sensa, which thereby indicates the existence and persistence of a sense-object. Alternately one can say that sensa are judged to be successive points in the history of an object. Broad also recognizes that he is supposing (iii) literally momentary acts of sensing by this observer.

Broad's precedure is first to correct supposition (i), the notion that sensible fields are literally momentary. He agrees that they have duration: it is the specious present. Then, once he outlines a solution which takes into account the correction of supposition (i), he seeks to correct supposition (iii), the notion that acts of awareness are literally momentary. The second supposition, that sensa are datable, is not questioned be Broad.

We can simplify Broad's exposition considerably by using a metaphor:[84] Think of a "momentary act of awareness" as casting a kind of searchlight's cone, the base width of the cone being Δt. The first act of awareness will have a specious present Δt_1; the second act of awareness will have a specious present Δt_2; and so forth. Note that the subscripts enumerate; the magnitudes are the same, that is, $\Delta t_1 = \Delta t_2 = \ldots \Delta t$. Let us suppose an act of awareness at t_1 and one at t_2 (two cones of awareness, so to speak). There are three possibilities: (a) If the difference between t_2 and t_1 is less than Δt, then Δt_1 and

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[84]The metaphor is used by Mabbott in "Our Direct Experience of Time," op. cit. Mundle approves of the metaphor although he rejects entirely Mabbott's understanding of Broad's analysis of the specious present. See section I of Mundle's "How Specious is the 'Specious Present'?" op. cit.

Δt_2 will overlap by some amount τ. (b) If t_2 minus t_1 equals t, then Δt_1 and Δt_2 will just touch, $\tau=0$. (c) If t_2 minus t_1 is greater than Δt, then Δt_1 and Δt_2 will not overlap. A momentary sensible field is defined as being given by case (b), where the momentary acts of sensing are separated by Δt, the magnitude of the specious present; and the two specious presents just touch. However, the significance of this can only be seen by first considering case (a), where $(t_2-t_1)< \Delta t$, and the two specious presents overlap by τ, $\tau\neq0$. In this case, all events occurring within the region τ are sensed by both acts of awareness. Having said this, we correct for the abstraction that acts of awareness are momentary by saying that between act one and act two "we can imagine a continuous series of momentary acts of awareness."[85] Thus we are able to say that an act of awareness of finite duration has as its object a sensible field of finite duration. On the other hand, the particular choice of acts of awareness in case (b) demonstrates that a certain set of specious presents permits the awareness of a momentary field of events. Thus if sensing is continuous, the set of all possible specious presents leaves us with an awareness of the moment by moment succession of an enduring sensible field: presumably this is so because on one choice of specious presents the moment is definable, on another choice duration, and the choice is arbitrary; so any choice of specious presents defines both succession and duration. This conclusion must be attended to more

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[85]Broad, Scientific Thought, op. cit., p. 305. There is no circularity here because a moment as conceived is not the same as postulating something literally momentary.

carefully, and I will return to it later. For the moment let us consider two specific criticisms of Broad's analysis made by H.J. Paton.

In his article on self-identity, part of Paton's response to Broad's analysis is the following.

> It appears to me quite impossible that in an atomic moment we can sense a change which begins before that moment and continues up to that moment. I do not indeed believe that in an atomic moment we could sense anything, any more than we could see colour in a mathematical point. But if we waive that difficulty, and remember that we are dealing only with sensa (which if they are anything at all can exist only as sensed), then surely the sensa must be at the same time they are sensed, and it is impossible to sense sensa which are earlier than the time at which they are sensed. The contrary hypothesis has to me no meaning, and I cannot accept it as 'a fact' from which our theorising has to start.[86]

As it stands, the first of Paton's criticisms misses Broad, for Broad does not claim that we actually sense a change in an atomic moment. Paton is thinking of an atomic moment as a kind of particle; whereas, the heart of Broad's argument is the recognition that "momentary sensible fields" and "momentary acts of awareness" are abstractions in need of correction. Essentially, Broad is saying that the fact is that change is experienced; sensation is the origin of experience; so take any moment you wish, change should be definable for that moment, recognizing fully that no moment is independent of a continuum of moments. Analogously, I can use Newtonian mechanics to predict the position of a falling object without any error, but it is impossible that I should measure that position without a certain

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[86] H.J. Paton, "Self-Identity," Mind, XXXVIII (1929), pp. 319-320.

imprecision.

The second of Paton's criticisms is more interesting: ". . . the sensa must be at the time they are sensed, and it is impossible to sense sensa which are earlier than the time at which they are sensed."[87] Paton seems to subscribe to the same fundamental assumption as Mundle detects both James and Broad to be adopting, namely, that sensa are datable.[88] And if the assumption is adopted, I believe that Paton's criticism is valid. To use Paton's example, if Broad is right, and if indeed it is possible to sense earlier sensa, then we should not see the motion of the second hand of a watch, but a stationary fan—that is, all the sensa at once. The problem with this is that in certain circumstances we do see a sort of stationary fan; again think of vibrating a pencil rapidly between one's fingers.

Mundle's solution is to suggest that these confusions are the result of the conflation of two quite different forms of language.[89] (1) If the language which we use has, as its base, a common sense theory of perception, by which Mundle means that whatever I see is the surface of an external object which cannot occupy more than one place at any one time, then we are committed to a doctrine of the specious present. (2) If we adopt a pure sensum language, then we are not committed to dating sensa; it becomes unmeaning to speak of a privileged sensum which exists for sensing in a way which other sensa do not.

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[87] Ibid.

[88] Mundle, "How Specious is the 'Specious Present'?" op. cit., p. 30.

[89] Ibid., Section III.

Hence, Paton's second criticism takes Broad's common sense theory of perception, wherein a specious present theory is necessary, and confronts it with a question asked of sensa alone, yet treating these sensa as if they were the objects of a common sense theory. We would not be motivated to make the criticism which Paton makes if it were recognized that we cannot speak of sensa exclusively, without reference to the sense-object, and yet treat these sensa like sense-objects. In conclusion, whether we must make a choice between a "common sense" or a pure "sensum" language, or whether we should reject the entire epistemological basis for such languages,[90] Mundle is right in warning us that lack of clarity as to which language we are adopting just leads to confusion.

Suppose, however, that we are well aware of the pitfalls of whichever language we are employing. It appears to me that the most that we are able to conclude is that we have discovered more than one way of speaking consistently of the continuity of a person's experience. Because it is arbitrary, presumably, which language we choose, there seems to be no reason why we should speak of the present as being specious when it is properly specious on certain presuppositions only. For instance, we can speak of the "present" being specious if we adopt Augustine's suppositions. As well, one could use "specious" properly if it were supposed that whenever a body ceases to be physically affected by a stimulus, the stimulus would be, at most, remembered "immediately."

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[90]The latter direction is taken by Richard Rorty in Philosophy and the Mirror of Nature (Princeton: Princeton University Press, 1979).

Adding to this the postulate that remembering is not sensing, the present, defined in terms of immediate memory, would be specious, meaning "not being sensed."[91]

On the other hand, and in a way this returns us to Paton's first criticism, could it not be said that it is just wrong to argue from mathematically defined instants to anything which could be the physical analogue of the concatenation of such instants? It is not obvious that to argue in such a way is wrong, for the opposite is ordinarily taken to be the case: for instance, infinitesimal calculus seems to be a paradigm case of using certain conceptual techniques for arriving at physically valid answers. With regard to calculus, however, it must be remembered that a physically valid answer results only if it is possible to provide the physical object or process with a mathematical definition upon which the techniques of calculus can operate. For example, I can use the techniques of calculus to dtermine the volume of an orange provided that I am able to define it mathematically as, say, a sphere given by $x^2+y^2+z^2=r^2$. Now it is asked: What is a theory of the specious present, such as Broad's, meant to determine? The answer is, I believe, that it is meant to determine the source of our notions of succession and duration. So, let us again consider the distillation of Broad's theory which I gave earlier: "On one choice of specious presents the moment is

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[91]This approach, is contrast to making the contents of the specious present somehow sensed, is taken by Russell. See Russell's comments on the specious present and on immediate memory in "On the Experience of Time," Monist, XXV (1975), 212-233, reprinted in C.M. Sherover, ed., The Human Experience of Time (New York: New York Univ. Press, 1975); see also Russell's Analysis of Mind, op cit., p. 174.

definable, on another choice duration, and the choice is arbitrary; so any choice of specious presents defines both succession and duration" (p. 68). Is it not odd, however, to speak of choosing specious presents, or even of a set of specious presents? Physically, in regard to myself only, there is but one specious present. Only if I could speak of my specious present being an infinitesimal part of consciousness, could I, on analogy with the volume of the orange, be justified in saying that the abstract analysis of the concatenation of specious presents explained my experience of succession and duration. However, the spatial analogy fails precisely because it is spatial. The segments of an orange each have their place in space, and the orange is a composite of such parts. The specious present, by contrast, is not at all like a spatial part. The specious present is a physical constraint on sensation. It makes as little sense to invent a way of adding series of such physical constraints as it does to add up instant by instant the constraint "eight feet is out of reach for the C.I. who doesn't jump." The specious present is but one (perhaps quite complex) physical constraint on sensation; and I can only speak of several specious presents if I am talking about mine and others', or if I speak of my yesterday's specious present, this being legitimate because in these cases one does not imagine a kind of addition over time.

I believe that it is this sort of intuition which motivates Mundle, for instance, to "recommend that, in any case, we drop the term 'specious present' in favour of 'conscious present', since the latter, unlike the former, would be equally appropriate to either terminology [common sense and pure sensum]."[92] Mundle may have in mind Paton's

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[92]Mundle, op. cit., p. 47.

major concern with Broad's views (motivated similarly, I believe), namely: ". . . I should be inclined to hold that even the briefest act of sensing implied the unity of self as well as imagination, memory, and thought."[93] Broad as much as admits this when at the end of his analysis, he writes: "What we choose to count as one process of sensing, of course, depends on many factors, of which the most important is probably unity of interest."[94]

I can only conclude that an analysis of the specious present presupposes at least self-identity. Further, presupposing self-identity make an analysis of the specious present unnecessary so far as discovering the origin of our experience of temporality goes. This is so because by self-identity we mean at least an awareness of identity over time. Therefore, an analysis of the specious present fails to give us what we want. Again, we discover the same conditions for the specious present as were discovered for recollection and recognition.

It remains to take a more pragmatic approach. Science, we know, is a powerful explanatory tool. Suppose we take "retention" in a quite literal sense, asking ourselves how retention in the case of a person, as a biological organism, compares with the sense in which one would ascribe retention to other animate and inanimate bodies. This is taken up in what follows.

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[93]Paton, op. cit., p. 320.

[94]Broad, op. cit., p. 351.

3. Biology and Metaphysics

The last sub-section investigated the attempt to concatenate sensations, understood as occurring for the length of a specious present, into continuous experience. By contrast, let us consider retention, the sense in which the past can be said to "carry over" into the present, and which seems to be a kind of remembering at the most basic level, in its purely physical aspect. We can begin by considering the human organism to be an organism amongst others, in a series of ever more complex forms of physical organization stretching from the inanimate to the animate. Phrasing it as generally as possible, retention refers to an interaction between an object and its environment, resulting in an accumulation of physical changes in the object which promotes finally an occurrence which can be said to be the effect of the accumulation of changes in the object. A human action, like an animal action, would have to be considered to be such an effect. Much the same can be said to hold for inanimate objects, as when a ship sinks after having rusted badly over the years.

There are doubtless many processes ascribable to human beings which are identical as to kind with processes occuring in the so-called lower species and even with the inanimate. Reproduction, the physiology of perception, behaviour (both social and individual), evolution, genetic coding, and succumbing to disease name some of the similarities. Surely, there is a great number more. Without a doubt, humans are physical and specifically biological objects.

In addition to this, there are differences. Humans have interests in religion, history, tradition, aesthetics, justice, natural science,

all of which motivate action as well. In a way, these interests may be thought to be merely social practise, but such social practise, just like that of the ants or bees, is also a natural phenomenon. Thus, the animal which does have such interests, along with the practises which such interests motivate, must be explained in such a way that the physical conception of retention with which we began must make way for the possibility of such an animal.

One way in which to provide such an explanation is to claim that the peculiarly human interests to which reference has been made are dispositions to behave which are determined by man's genetic coding. Monod takes the position that the group character of primitive man exerted a selective pressure for those survivors able to produce large numbers of progeny, and thus certain social dispositions are transmitted in the population. Monod writes:

> Given the immense selective importance such social structures perforce assumed over such vast stretches of time, it is difficult not to believe that they must have made themselves felt upon the genetic evolution of the innate categories of the human brain. This evolution must not only have facilitated acceptance of the tribal law, but created the need for the mythical explanation which gave it foundation and soverignty. We are the descendants of such men. From them we have probably inherited our need for an explanation, the profound disquiet which goads us to search out the meaning of existence. That same disquiet has created all the myths, all the religions, all the philosophies, and science itself.[95]

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[95]Jacques Monod, Chance and Necessity, translated by Austryn Wainhouse (New York: Vintage, 1972), p. 167. Gunther Stent gives an interesting review and criticism of Monod's ideas in his essay "Molecular Biology and Metaphysics," in a collection of his essays, Paradoxes of Progress (SanFrancisco: W.H. Freeman, 1978). Interestingly, both Monod and Stent are biologists.

It appears to me that all of the peculiarly human interests which I noted earlier are summed up well by Monod's phrase, "our need for an explanation." Monod believes that we should abandon all types of explanation (religious or Marxist, for instance, because they wrongly ascribe purpose to nature) except scientific explanation, understood as the combination of logic and experience. To take the scientific approach is for Monod the fundamental value which will extirpate the confusions of fact and value which have hitherto marred man's intellectual development.[96]

If the parallel between what I have referred to as those human actions motivated by religion, history, tradition, and so forth and what Monod refers to as "our need for an explanation" is accepted, then the problem which I have formulated as that of giving an account of retention such that the human animal is possible can be thought to be given a solution by Monod, that is, through man's genetic structure and evolution. Thus we can ask the question: How are we to understand retention, genetically or otherwise, such that an animal which has a need for explanation is possible? If Monod's type of solution proves inadequate, then it can be said that the formulation which attempts to explain the possibility of the human animal in terms of retention understood physically is likewise inadequate. Furthermore, we may ask whether, strictly speaking, we are dealing with a scientific question.

It appears to me that the need for explanation is independent of

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[96] Chance and Necessity, op. cit., p. 176.

the explanation itself. Thus, if the object of the explanation is the "peculiar need for explanation" manifested by humans, then the explanation is not in this sense the product of a certain genetic disposition. So far as the characterization of retention is concerned, as the past carrying over into the present, the need to explain can only arise relative to an awareness of events in personal experience. As such, the past cannot be simply coded in the present, but the encoding must make possible, references to past experience. In other words, it makes sense to desire to explain something only if the experience to be explained can be abstracted from the enduring person who had the experience. The most basic way in which this is possible is for those experiences which are my experiences. For example, the question, "What is fear?" is just not possible without first having been thought as "The fear which I had, and which I am now thinking about." Other wise, there are simply states of fear, such as when we speak of animals in flight. Hence, even retention understood physically seems to presuppose the identity of the person as basic.

The second question asks whether we are dealing, strictly, with a scientific question. Is it a matter of discovering the gene for selfhood? Perhaps such a gene could be expressed at all times during a persons' life, and could be responsible for maintaining a certain chemical balance throughout the body for a large number of years. However, any increasingly more complete description of this gene does nothing more than to fill out the properties which we want in any case to describe personhood. If we find evidence for a gene which does not imply the properties which we anticipate for personhood, then it is just not the

gene of personhood. In other words, we are dealing with descriptions which are presupposed to be descriptions of the same thing: one description coheres with one body of discourse; the other coheres with another. However, to ask the question, How is it possible that there are alternate descriptions of the same thing? is not to ask for another description. Essentially we are being asked to supply the principles which make it consistent to apply alternate descriptions, which may in any case be only partially adequate. Principles, because they imply the rules which ensure the consistency of alternate forms of description, are conceptual; they are not empirical judgements, but seek to reconcile such judgements, as with contrasting the genetic determination of behaviour with actions motivated by past experience. Thus the problem of the possibility of an organism which manifests memory, specifically human memory, will depend for its solution on precisely such principles since the problem originates from a conflict of descriptions of the phenomenon. Therefore, since the problem does not rest directly upon the making of empirical judgements, but depends for its solution on supplying principles that ensure the consistency of alternate descriptions, we must conclude that the problem is not scientific, but metaphysical.

II

ON TIME AND THEORIES OF MEMORY

1. On Time

The notion which appears to bear most directly on memory is time. Calling time a notion is intended to emphasize that both analogies and disanalogies should be avoided when it comes to discussing time. Suppose, for instance, that one resorts to the hackneyed simile that time is like a very long river, showing that the comparison is indubitably very bad and misleading: movement relative to the river of time would be in "another time"; travelling upstream might be thought going backwards in time; sitting on the riverbank might suggest being outside to time. The absurdities which result from the simile provide largely useless warnings since the simile is nonetheless psychologically commanding; the reason for this is that talking about time is usually both abstract and emotive, thus compelling discussion in spite of the topic's difficulty.

Compare the simile of the river of time with the metaphor "looking into the past" when one remembers. Surely, I do use perceptual terminology significantly when I am communicating about remembering; however, there is no active verb which corresponds to "time" in the way the "remember" corresponds to "memory." More insidious than this is the tendency, as soon as one exploits a spatial analogy for time, either for demonstration or criticism, to perpetuate the error that it is somehow significant to speak about "perceiving" time. Being guided by the simile of the river of time ensures that only a transcendental ego could accomplish such a

a feat.

Aristotle provides an example of the tendency to understand by time something perceived. He begins his discussion of time with the vacuous claim, "the non-realization of the existence of time happens to us when we do not distinguish any change,"[1] where "change" is taken to include even that sense in which change is associated with there being consciousness. By making change a necessary condition for time, Aristotle is led to speak of perceiving time by analogy with perceiving change. Anyone less clever than Aristotle would have been disposed to draw ludicrous conclusions. However, by shifting the sense in which he uses the word "change," taking a restricted sense which excludes the change associated with consciousness, Aristotle concludes that "time is not movement, but only movement insofar as it admits of enumeration."[2] Of course, enumeration is possible because Aristotle's shift in meaning separates the conscious enumerator, neglecting any further concern with the temporality of the enumerator.[3] (We shall return to this same dichotomy later, but by a different route.)

We could say that Aristotle represents a strictly philosophical orientation in his analysis of the notion of time, where "philosophical" may be taken to mean asking for basic answers to what appear to be

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[1] Physics, IV, 11. See also the brief discussion in J.R. Lucas, A Treatise on Time and Space (London: Methuen, 1973), pp. 11-12.

[2] Physics, IV,11.

[3] The shift in meaning is brought in carefully. First, the change associated with consciousness is referred to as a "seeming movement." Then, Aristotle narrows the scope of his enquiry to that which is "moved from something to something." (Physics, IV, 11, 219^{a}.)

simple questions. As promising as philosophical analysis appears, there is yet something distressing about the notion of time. The thing that is distressing is that the diverse discussions about it and uses of the term, ranging from the poetic to the pragmatic, seem not to agree even vaguely as to the uses of the term. Moreover, it is not clear what is to be admitted as being philosophical. What could possibly be the connection between Shelley's lament that the prime of life has once and ever passed him by, and Minkowski's comment that hitherto time and space must be conceived as being in some sense conjoined and not separate? I believe that for the most part this distress results from the supposition that there is a thing named time which each of us seeks to describe as best he can. Perhaps we suffer from what Bacon calls an idol of the market-place, imagining that every word is a name, when in fact it is quite possible that no existing thing is referred to; or it may be that the word has a multiplicity of uses without a constant meaning. But if time is not a thing (nor is "it" a performance in the way that remembering is), then what is it? An injunction has already been issued against this "it"; so it could be argued that that to attempt to answer an unenlightening question would only prove worthless. We can make progress, however, by asking easier questions. One way would be to take Aristotle to task over the apparent temporality of consciousness which seems to be dropped from his analysis.

Fortunately, lowering one's immediate expectations engenders a wealth of questions. Let us take the following instead: The eighteenth century witnessed the well-known controversy between Leibniz and Newton (through his student Clarke) concerning the nature of time. For there

to be a dispute, there must be some common basis for the dispute (at least in a rational argument). Accordingly, is there a difference between the association of time with memory, which is the concern of this essay, and that which concerned Leibniz and Newton? Replying to this question requires first that we digress a little, outlining the main points of the dispute.

Newton gives a succinct statement concerning time in the scholium of definition VIII of the Principia:

> Absolute, true, mathematical time, of itself, and from its own nature, flows equably without relation to anything external, and by another name is called duration: relative, apparent, and common time, is some sensible and external (whether accurate or unequable) measure of duration by means of motion, which is commonly used instead of true time; such as an hour, a day, a month, a year.[4]

Leibniz, in the third paper of his correspondence with Clarke, writes:

> As for my own opinion, I have said it more than once, that I hold space to be something merely relative, as time is; that I hold it to be an order of coexistences, as time is an order of successions. For space denotes, in terms of possibility, an order of things which exist at the same time, considered as existing together; without enquiring into their manner of existing. And when many things are seen together, one perceives that order of things among themselves.[5]

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[4]Part of the Principia is reprinted in H.G. Alexander, ed., The Leibniz Clarke Correspondence (Manchester: Manchester University Press, 1956), p. 152.

[5]Alexander, ed., op. cit. The correspondence between Leibniz and Clarke will be referred to by initial, letter number (a Roman numeral), and section (an Arabic numeral). For this quotation, "L: III: 4" refers to Leibniz's third letter, fourth section.

Even these short passages suffice to show a radical difference in the very form in which language is being used when speaking about time and space. Leibniz is using the words "space" and "time" as referring terms. Newton, on the other hand, is supplying predicates meant to describe the notion of time. Newton is saying essentially: If by "time" is meant that time which is "absolute," which is "true," which is "mathematical," then that time "flows equably," is "without relation to anything external"; and finally he gives it a name, "duration."

Understood in this way, the core of the dispute becomes clearer. Newton is tacitly supposing that a family of coherent predicates cohere in virtue of an entity time. Likewise, Newton's similar ideas on space suggest a parallel with the later notion of an ether which is all-pervasive, somehow ensuring that the interaction of non-continguous bodies is possible. Leibniz, by contrast, objects to this approach because he feels that space and time are nothing of themselves; that is, space and time, in disassociation from the things which comprise the material universe, are purely ideal.[6]

Hence, when Clarke charges Leibniz as holding the purportedly absurd belief that any two points of space or time are exactly alike,[7] being as much an attack against Leibniz's principle of the identity of indiscernibles as an attack on the relativity of time and space, Leibniz

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[6] L: V: 27-29.

[7] C: IV: 5-6.

is quick to point out the weakness of such an objection. Namely, there is a difference between considering points in abstraction, in which case they may be identical, and considering points concretely, in which case they are actual. We may fancy, for instance, as many beginning points for the world as we wish; the fact remains that there is only one actual beginning. It is a "conceit of the imagination" to think that the material universe could move forward in empty space,[8] and the same can be said for the odd Newtonian predilection to imagine that it is some kind of constraint on God that He should not be able to create the universe sooner than he did. Leibniz agrues curtly, and I believe rightly, that the idea of a time before creation is meaningless.[9]

Inasmuch as naming these two positions can be helpful, we may say that for Newton space and time are real, but for Leibniz they are ideal. Leibniz attempts to explain that Newtonian misconception by saying that it derives from imagining that unmoving objects leave a kind of trace in the same way that a moving object leave a track along the surface of another relative to which it moves.[10] But if we accept Leibniz's

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[8] L: V: 29.

[9] C: III: 4 and L: IV: 15; C: IV: 15 and L: V : 55-56. In the latter exchange Leibniz relents on his dismissal of the idea of a time before creation being nonsense, offering a "possible worlds" explanation of the point which he is attempting to make.

[10] L: V: 47.

criticism of absolute space and time,[11] what will constitute the "real" for Leibniz? For Leibniz it amounts to this: material things exist; space denotes their coexisting; enquiring into their "manner of existing,"[12] as in a causal succession of material things, will be denoted by the use of the word time. Whereas Newton attempts to guarantee the existence of material bodies by placing them in time and space, Leibniz accepts their existence and manner of existing as fundamental, "space" and "time" being abstract terms denoting two distinct senses of arrangement.[13]

Having outlined the sorts of questions which motivated the dispute, the central question is "What is at issue in the two approaches?" It appears that theological considerations are incidental. Each side seems to accept that God exists and that He created the world, attempting

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[11] J.R. Lucas argues that Newtonian absolute time as conceivable, in contrast to Leibniz's conception of time understood as what is knowable, is not idle as Leibniz suggests. Lucas' argument is that there are different schemes for dating, only one of which is compatible with Leibniz's views. However, since there are different schemes, one is not forced to accept the presuppositions of one or other dating scheme. So it is perfectly legitimate, for instance on the dating scheme which employs the token-reflexive "now," to envisage the world beginning half an hour before it did. Lucas' argumentation is both careful and acute; my suspicion is, however, that this course can only lead to an unresolvable dualism of the mental and the physical. See J.R. Lucas, A Treatise on Time and Space, op. cit., sec. 11 and the references he gives (in sec. 11) to other parts of the text.

[12] Cf. L: III: 4, quoted above (p.83).

[13] I consider Leibniz and Newton to be giving conflicting interpretations of Descartes. Descartes' notion of "duration" is mathematized by Newton; it is related to existence by Leibniz. This suspicion would require much work to be substantiated.

to reconcile these beliefs with its own position at the expense of the other's.[14] Moreover, it cannot be said that each is attempting to give conflicting physical descriptions of the motions of bodies. For instance, Leibniz agrees with Newton that an object in circular motion experiences a force toward the centre of motion which is not explicable if we decide to consider the object at rest and the remainder of the universe turning about it.[15] Leibniz argues that this is due to the cause of the force being from within the object, refusing to accept Newton's inference that this entails an absolute motion in absolute space.

Consequently, the dispute seems to be neither about articles of faith, which are untestable in principle, nor about observables. Curiously, however, neither are the conflicting descriptions of the universe offered by Newton and Leibniz so important as the fact that they undertake such descriptions. This is best explained metaphorically: If the universe were describable by God, what would He say (assuming, of course, that we could understand Him)? One problem is that it is difficult to say what an observation statement made by God would be like. At least this much is clear: both Leibniz and Newton are pursuing questions of cosmology by unwittingly imagining themselves in the divine perspective, capable of making statements about the universe in its totality. Leibniz seems much more sensitive to this issue than is Newton, for Leibniz has a metaphysical system to support him.[16] Plato, by contrast to both

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[14]See again C: III: 4 and L: IV: 15.

[15]See L: V: 53.

[16]Compare Leibniz's Monadology (e.g., paragraph 61) with the General Scholium from the end of Book III of Newtons' Principia, in Alexander, ed., op. cit.

Leibniz and Newton, merely describes allegorically the activities of the demiurge,[17] that by modelling creation after the eternal, made it an image of the eternal, which is then taken to be time.[18]

It is best said that Leibniz and Newton are doing cosmology, trying to describe the universe in its totality. Should it not be asked, however, what precisely is being described? One could say that "things" are being described, but this would be objectionably vague. As a cursory catalogue, one may want to distinguish events, processes, states, physical objects; and then, because we would be claiming to make statements about the totality which we name the universe, one would need to introduce a modality expressing the claim that it is possible to describe meaningfully what we are not in fact describing observationally or unable to describe thus. I am referring to what are usually called counterfactual conditionals. Examples are numerous: "If I were outside, I would be standing in a foot of snow." "If I were an observer without physical restrictions, then the beginning of the universe would be seen as a dense fireball."

This is the point at which to attempt some unsophisticated metaphysics. Provisionally, suppose that we take "event" and "cause" to

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[17] Timaeus, Jowett translation, 31-38.

[18] Even on Plato's account the temporality of creation should not be understood to be a kind of imperfection. Simply, it is impossible to hold that the world is created, yet created identical to the eternal; for in that case the created and the eternal would be identical (a plurality being subsumed under a redefined totality), making it impossible to say that anything at all has been created.

be primitive terms. A "state" can be defined as the description of an event. A "process" can be defined as a series of events which are causally connected, with the series being bounded by states. A "physical object" could be defined as a process with arbitrarily indistinguishable states as bounds. Further, let us suppose that a reasonable theory of causal order can be given.[19] For my purposes, the cogency of the above definitions is not so important: Merely the fact that a geometric method such as this is plausible should lead us to enquire about the basic terms: events, causality, and counterfactuals.

To begin, there is a descriptive arbitrariness about events, which is not the arbitrariness associated with giving diverse descriptions of the "same thing." The arbitrariness relates more to the relationship between part and whole. In virtue of what, one may ask, is an event integral? Germination and fruition are both events; the plant's transformation from seed to decay is also an event. Would we be required to hold that events are constituents of events? On this line of thinking it appears that we would be required to say that events are composed of events. However, it also follows that there is no a priori reasoning that would demand that one kind of event is basic or more fundamental than another. Thus there seem only to be laws of composition of events into events. Such laws of composition are general, and when one speaks of actual instances, then one speaks of the causal relation between events: for example, planting this seed will cause a certain seedling

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[19]Such as is formulated by Bas. C. van Fraassen in An Introduction to the Philosophy of Time and Space (New York: Random House, 1970).

to grow, which in turn will become a particular plant of a certain familiar sort. Nevertheless, it may be argued that there is nothing special about such events: If what is called an event is arbitrary, unitary only insofar as an intelligent being deems it so, then they are the laws of composition which are taken to be fundamental. Of course, a law of composition is useless if its application is merely local; so space and time are conceived such that this ruler or this clock will measure the same at any place or date.[20] The claim that measurement is indifferent to place and date requires the use of counterfactuals. For example, if I had lived in Julius Caesar's time, three million heartbeats would have measured me as aged then as I am now. We can imagine Newton making the comment: How is it conceivable that there should be the same measure unless "time flows equably"? To this, Leibniz can be imagined retorting: Is it not superfluous to give reasons for why two measures come out the same?

Actually, we are dealing with two sides of the same coin. It is not so much that two measures come out the same, as when measuring two people with the same ruler; rather, the point is that the measure would come out the same despite never being experimentally verifiable. Therefore, Newton's concerns appear not to be idle: What must time be like

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[20] If I were speaking of standardized rulers or synchronized clocks instead of this ruler or this clock, then relativistic considerations would be required, specifying the systematic discrepancy between measurement on different world lines. Since the discrepancies are systematic, none of the claims that follow should be affected.

for it have such measure properties. The controversy resurfaces, however, because Newton seems unable to say anything about time except in terms of measure, that is, in terms of "flowing equably." The fact that Newton calls time absolute and true adds nothing to our understanding.

My contention is that there is a conception of time which underlies both Newton and Leibniz. Newton is explicit: absolute time is mathematical time, which is to say that the mathematical model for any measure of time is that of the real numbers. Leibniz, who take time to be the order of succession, can only make succession meaningful if some measure is applied to it, and again such measure supposes the real numbers for the system of measure (e.g., a "ruler" that could not distinguish between ten inches and eleven inches would not be a measuring stick; and the same holds for a system of measure, which should be able to distinguish between any x and y, where $x \neq y$). Thus, the order of succession is definable mathematically. So far as I can see, questions such as whether God could have created the universe sooner than he did are separate from the essentially mathematical structure which is given to time. And this is consistent with the alleged arbitrariness of events, for if we take as true the seemingly obvious claim that no event lasts but an instant (understood mathematically), then any event can be decomposed into other events, ad infinitum. From this follows the belief that in a causal process, there must be a physical correlate to every mathematically definable instant. Affirming that this it true for any causal process whatsoever, which is a counterfactual claim, describes what I will call the cosmological conception of time. Therefore, in a sense there is merely instant by instant succession such that the integrity

of events and their causal relations must, according to the sort of thinking which I have been outlining, be understood as intellectual discernment superimposed on instant by instant succession.

This framework is, I think, clearly one which distinguishes between the mental and the physical in such a way that one is left at an impasse in regard to the temporality of that being which individuates events and makes statements about their causal order. This is again the problem which is sidetracked by Aristotle. Now my contention is that any theory of memory which subscribes exclusively, perhaps tacitly, to the cosmological conception of time is bound to be riddled with difficulties because it aims to give an explanation, within a certain temporal framework, of that which has no place within the framework.

Consider remembering something. Any ordinary sense in which one can speak of remembering supposes that one remembers what was experienced in the past. The experience and the remembering are two events; somehow a connection must be drawn, and it is thought that this connection must be compatible with the cosmological conception. Theories of memory then fall into two characteristic groups: those which are unmediated and those which are mediated. In unmediated theories of memory, the postulated gap between the remembering and the experience remains a mystery. In mediated theories of memory, some connecting mechanism (images, stored traces, and the like) must be postulated to bridge the gap between the time of the experience and the time of the remembering of that experience. The next part of this chapter investigates the coherence of such theories of memory, many of the criticism being motivated by Wittgenstein. Wittgensstein appears to have a distinct approach, where

remembering is construed simply as a kind of behaviour or linguistic activity. The final part of this chapter deals with the adequacy of Wittgenstein's approach.

There is a possible misinterpretation of what I have been saying which should be cleared up before moving on to the other parts of this chapter. It may be thought that I am repudiating the cosmological conception of time, embracing some sort of mysticism instead. Certain emotional or temperamental failings could be given as the causes of this, and the objection could continue by suggesting that the cosmological conception of time is presupposed by any sense of time whatsoever. Thus, even if the cosmological conception of time is a sophisticated intellectual development, arising, as is very likely the case, from more primitive notions, this does not mean that the cosmological conception should not have pre-eminence over other conceptions.

First of all, there is absolutely no suggestion in what I have said that would deny the cosmological conception of time. Rather, the problem lies with the cosmological conception regimenting explanation in such a way that certain phenomena, such as remembering, cannot be explained in a coherent way. If raising this difficulty is valued negatively, as some kind of dogmatism, then the positive valued placed on the cosmological conception is no less a form of dogmatism. As for the cosmological conception being presupposed in any conception of time whatsoever, one need only point out that the mind/body dualism which is presupposed by the cosmological conception of time leaves radically unexplained the temporlity of the being which conceives according to the cosmological conception. Finally, the last argument, which holds

that the cosmological conception may be pre-eminent, that the world is in a sense sheer process, is not being denied. If there is a sense in which the universe is sheer process, there is also a sense in which it is not. Suppose, however, that the last objection is interpreted without the qualification: the universe is sheer process (or perhaps a network of processes), and that is all there is to it. If this is the case, then the peculiarly human conception of time as past, present, and future, which ascribes a kind of "nowness" to the universe, is mistaken. A relativistic critique of the concept of simultaneity appears to lend support to this: two events may be taken to be simultaneous by one observer and the self-same events may be taken as not simultaneous by another observer. In relativity, one is not concerned with a cosmological conception of time per se as with the relativity of frames of reference and the verifiable relations between different frames of reference. However, the history of a person and his particular frame of reference, his "world line," is treated solely in its relation to other world lines. The relativistic observer is understood in fact as no more than a maker of measurements. Therefore, although it may well be arrogance to describe the universe as if it were being described by the kind of "now" or "present" which we could conceive God to be capable of, for God knows

instantly, without limiting causal influences to the speed of light,[21] it still remains an open question as to how we are to understand the temporality of the observing person. Restricting ourselves to the observer's frame of reference, relativistic considerations are actually separate, and the pertinent difficulty is to reconcile what I have called the cosmological conception of time with the temporality of persons.

The remarks which have been made concerning time have been intended to cast doubt upon any program which seeks to give an explanation of how memory is possible while at the same time restricting the form of explanation to that motivated by the cosmological conception of time exclusively. The central reason for this is that the cosmological conception of time presupposes a distinction between the mental and the physical; so a theory of memory will invariably reflect this distinction, and in so doing the theory of memory cannot be said to succeed. This criticism is in a sense external. It remains to take samples of theories of memory, showing that they lead to difficulties and inadequacies which are symptomatic of the suspicious preconception concerning time on which they are based. Thus the next part of this chapter concentrates on the internal difficulties of several theories of memory.

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[21] It is actually this consideration which leads to the ambiguities over the ascription "simultaneous" in relativity. This is best understood without recourse to mathematics. Assuming that the mose precise way in which it is possible to determine the time of an event is by reflecting a light signal off it, and taking the speed of light to be constant in all frames of reference, then two observers, one moving relative to the other, will cease to be coincident in the time it takes to reflect light signals from two events; thus the two observers will date the events differently. If one observer dates the events as being simultaneous, the other will date them as not being simultaneous. If signal transmission were instantaneous, then the ambiguity would not arise.

Section II: On Theories of Memory

1. Unmediated Theories of Memory

Unmediated theories of memory claim simply that in remembering we have a direct awareness of the previous experience, without recourse to intervening images, copies, representations, neurophysiological mechanisms, and the like. Remembering and experiencing are simply different, and we are aware of this difference. In a sense, the rose I smelled yesterday, by remembering, I am smelling today. Of course, today's experience does not have "past" stamped on it; I merely remember smelling the rose as past.

What I have given is a caricature of unmediated theories of memory, for I know of no serious philosophical efforts aimed at an unmediated theory which do not make certain qualifications. The qualifications are what merit close scrutiny, suggesting that the theories are not unmediated in the way that an ideal caricature may suppose. Nonetheless insofar as a theory of memory relies on the following framework, then it is plainly incoherent: Accepting a cosmological conception of time dicates that certain sets of separate and successively existing events require a causal connection between the events. The advocate of an unmediated theory of memory would presumably accept that the experience and the remembering of that experience are temporally dissevered, and he would thereby be subscribing to a certain preconception concerning time, which I have been calling the cosmological conception. Nonetheless, the advocate of the unmediated theory would want to say that we do have direct acquaintance with whatever we are remembering, that in some sense whatever is remembered is co-present with the remembering. However,

having accepted the cosmological conception of time, it becomes impossible to make any sense of the terms "direct" or "in some sense." They become wholly mysterious because they deny what we have already accepted as a criterion for respectable explanation, namely, causal connectability in the way that it might be conceived on a cosmological conception of time. I admit that an unmediated theory of memory has a certain appeal, but if it makes the moves outlined above, it cannot be saved from being utterly incoherent.

Some philosophers' views on memory come close to being unmediated theories. Thomas Reid, for instance, writes, "It is by memory that we have immediate knowledge of things past."[22] Earle, writing from a phenomenological perspective, says of his own view, "It should be noticed that in this view, nothing copies anything else. I am now directly aware not of a copy of the past experience with its object, but of that past experience itself."[23] Yet, Earle seems to be firmly entrenched in a certain conception of time when he admits, "There is a genuine gap between the past and the present acts," which he qualifies by adding; "but to say this is not to say the last word."[24]

For both Reid and Earle, the last word is that the idea of personal identity plays a crucial role in connecting experiences and

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[22] Essays on the Intellectual Powers of Man (Cambridge, Mass.: M.I.T. Press, 1969), p. 324.

[23] William Earle, "Memory," Review of Metaphysics, X (1956), 11.

[24] Ibid., p. 15.

making them available, through memory, at later times.[25] Earle's intuitions are, I believe, sound; but the implications which he draws are dangerously close to being incoherent: "The presence of the past to the present through memory is thus an actual event, occuring with the whole of Being; but it is not a physical event. It is an enacted relationship, where one leg of the relationship stands in the present while the other stands in the past...."[26] Thomas Reid qualifies his claim that memory gives immediate knowledge of the past by using another device, namely, the term information: "The senses give us information of things only as they exist in the present moment; and this information, if it were not preserved by memory, would vanish instantly, and leave us ignorant as if it had never been."[27]

Whereas Earle would have to explain what kind of entity is a person such that this person "spans the gap," Reid would need explain how the idea of preserving information does not make our knowledge of the past mediated.

My final example of a philosopher who might be accused of holding an unmediated theory of memory is Bergson. In a way this would be a superficial accusation since Bergson is careful to argue that the distinction between the mental and the material are not nearly so clear as we

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[25]See Earle, op. cit., pp. 15-16 and Reid, op. cit., p. 326.

[26]Earle, op. cit., p. 16.

[27]Reid, op. cit., p. 324.

might wish. He uses this notion to embark on a theory of the infinite levels of virtual memory which are capable of impinging on actual action in different degrees of "tension or vitality."[28] In his concluding chapter of Matter and Memory, Bergson writes:

> The truth is that memory does not consists in a regression from the present to the past, but, on the contrary, in a progress from the past to the present. It is in the past that we place ourselves at a stroke. We start from a "virtual state" which leads us onwards, step by step, through a series of different planes of consciousness, up to the goal where it is materialized in an actual perception; that is to say, up to the point when it becomes a present, active state; in fine, up to that extreme plane of our consciousness against which our body stands out. In this virtual state pure memory consists.[29]

Aside from the flamboyant metaphysics which "virtual states" and "levels of consciousness" would lead to, the widest and strongest criticism of Bergson is that his writing is so poetical as to be interpretable, even by Bergson himself, as nearly deductive proof for the independent reality of spirit (as pure memory).[30] At least in the modern temperament, Bergson's extravagance goes much too far. Moreover, believing that the event experience and the memory of that event (considered as separate, assuming a cosmological conception of time) are unmediated, can make no sense at all without a device such as spirit. I believe that both Earle and Reid could be pushed in the same direction as Bergson. This would

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[28] Bergson, Matter and Memory, op. cit., p. 211ff.

[29] Ibid., p. 319.

[30] Ibid., p. 81, p. 325.

be symptomatic of any view which supposed jointly that existence is instantaneously successive and that personal identity is a requirement for any theory of memory. The former supposition is, I believe, mistaken, the latter justified. However, a device such as spirit throws back into our laps with renewed intractability, the problem of spelling out the relation between mind and body. How, for instance, will spirit or mind comprehend the body's sensible relations with objects in the past except by means of images or representations, which leads to the consideration of a mediated theory of memory? On the face of it, it seems much more reasonable to succumb to the allurements of a mediat d theory.

b. Mediated Theories of Memory

Suppose I say that the relation between the event and the memory of the event is mediated. The obvious question is "Mediated by what?" For convenience answers to this may be divided into two types: rational or physical. In the first case, one seeks whatever is (logically) necessary for a memory event to take place, which, since the memory event is presumed to be disconnected from the event experienced, suggests some form of mental representation. The second type is motivated in much the same way; there is a gap to bridge between event and memory of that event, such that this entity is causally connected with the event experienced in the past. Such an entity is often, but not always, called a trace, and it is most often located in the vicinity of the brain. In a way, the physical theory is just a causal interpretation of the rational theory, except that it happens to be susceptible to scientific sophisticaiton. Invariably, the scientifically directed models for memory all depend on the same general scheme: At time t_1 I experience event E, forming a

representation r which is stored in my brain, and which is retrieved later at time t_2, this retrieval constituting the memory event M(E).

It is worth noting that the rationally mediated theory of memory requires the notion of interpretation. The image or representation must be interpreted to be an image of a previously experienced event. This is necessary in order to be able to distinguish representations from actual experiences; and this distinction is necessary because we can have the representations nearly any time we like, but the experience only once. The physically mediated theory has a weaker requirement than interpretation, namely, translation. The perception of the event must be translated into bits of information on a cybernetic model or brain traces on a neurological model; then the trace or information is re-translated into overt behaviour, language, or even images. These two requirements of mediated theories will play a part in ciriticisms of those theories.

Although the distinction between rationally and physically mediated theories of memory is not very sharp, the illustrations which follow aim at showing the transition from rational to physical theories, alond with the supposed gain in scientific respectability. Criticisms are intercalated.

Mediated theories of memory are plentiful in the literature of philosophy. Hume, for instance, distinguishes between sensation, memory, and imagination, where both memory and imagination are ways of "repeating" the sensation.[31] They are, in a way, a species of impression, but because

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[31] Treatise, I: I: III.

they are distinguished by degree of vividness or vivacity, they are thus derived from impressions. Hence, they are also ideas. Memory and imagination are further distinguished in that the idea of the imagination "cannot without difficulty be presum'd by the mind steddy and uniform for any considerable time."[32] Or, as Hume writes elsewhere:

> For tho' it be a peculiar property of the memory to preserve the original order and position of its ideas, while the imagination tranposes and changes them, as it pleases; yet this difference is not sufficient to distinguish them in their operation, or make us know the one from the other; it being impossible to recal the past impressions, in order to compare them with our present ideas, and see whether their arrangement be exactly similar.[33]

Hume realizes that the constancy or mutability of the idea is not sufficient for distinguishing ideas of the memory from ideas of the imagination. Ultimately, the distinguishing criterion must be the "superior force and vivacity" of the idea of memory over that of the imagination.

Hume does concede that an idea of the memory may lose force and vivacity to be mistaken for an idea of the imagination, and likewise an idea of the imagination may gain in force and vivacity to be mistaken as an idea of the memory. In spite of this Hume affirms that the "vivacity" or "force and liveliness" is precisely what constitutes the "belief or assent" which accompanies memory and sensation, but not imagination. At first sight this may seem a little odd since Hume seems forced to believe that people could be systematically mistaken about

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[32] Treatise, I: I: III.

[33] Treatise, I: III: V.

their impressions, taking them to be memories, and thereby be mistaken about the world. However, from Hume's point of view this is irrelevant since the ultimate cause of impressions can never be ascertained:

> As to those impressions, which arise from the senses, their ultimate cause is, in my opinion, perfectly inexplicable by human reason, and 'twill always be impossible to decide with certainty, whether they arise immediately from the object, or are produc'd by the creative power of the mind, or are deriv'd from the author of our being.[34]

Ryle argues that Hume made the notorious mistake of assuming that there are impressions and ideas, distinguished by degree of vividness or faintness, without having realized that ideas are not a species of impression.[35] Ryle argues convincingly that Hume's criteria of forcefulness, liveliness, etc. are a misleading use of language which perpetuates the fallacy that an ideas is a weak copy of the impression. As we have seen, however, Hume's criteria for distinguishing impressions and ideas relates to the indisputalbe fact that there are differing degrees of belief; and even if belief is a matter of degree, this does not obviate the distinction between strong beliefs and those which are not so strong, thus distinguishing sensation and memory on the one side from the imagination (in the sense of fancy) on the other. The immediate question to ask is this: Why do we group sensation and memory together, and why are they not confused given that, practically speaking, we do not confuse memory and experience? Hume answers the first part of this question by saying simply

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[34] Treatise, I: III: V.

[35] Concept of Mind, op. cit., p. 236.

that it is "a peculiar property of memory to preserve the original order and position of its ideas," and since ideas copy impressions, Hume can be taken to be suggesting that the memory is a kind of "picture" by virtue of preserving the structure of the original. As to explaining how one does not confuse a memory for the original, Hume invokes the criterion of "vivacity," which as much as says that we simply believe memories to be memories and not originals, almost automatically, and that is all there is to it. In my opinion, Hume is not being extravagantly wrong; for in a way he is merely stating the facts about remembering and not giving an analysis. However, insofar as Hume does give an analysis, he seems to be driven to a contradictory position. On the one hand he wishes to say that impressions of sense cause impressions of memory. However, the criterion which distinguishes sensation from memory, vivacity, vividness, etc., insofar as this is related to belief, allows that an impression of sense could "really" be an impression of memory, and vice versa. At least, it would be unmeaning to try to justify the distinction on more basic grounds. But if this were the case, then there is no sense to be made of impressions causing ideas, except perhaps on the positive side of Hume's doctrine of causation. The point, here, is not one of Hume scholarship; it is rather a question of palusibility. It simply seems incredible, if I am interpreting Hume correctly, that he should distinguish so weakly between sensation and memory (especially when memory is being conceived as the recall of an event witnessed in the past). Reid, for instance, argues heatedly against Hume's views on the nature of belief:

> Every man knows perfectly what it is to see an object

> with his eyes, what it is to remember a past event, what it is to conceive a thing which has no existence. That these are quite different operations of his mind, he is as certain as that sound differs from colour, and both from taste; and I can as easily believe that sound, and colour, and taste, differ only in degree, as that seeing, and remembering, and imagining, differ only in degree.[36]

Hume's central error is, I believe, the reification of the "data" of remembering, as something almost pictorial. Hence, remembering is taken to involve a species of senation, with the distinction between sensing and remembering becoming subsequently blurred. As Ryle quips, "An anecdotalist is not a sort of detective."[37] Nonetheless, it is all to Hume's credit that his theory is spare and direct. There is a certain plausibility in not attempting to justify further the distinction between sensation and memory, leaving the grade of our belief to be the final arbiter. If we think of memory, as a kind of spasmodic dreaming, interspersed with fits of sensation, then how can one distinguish the two except by saying that some of my impressions I am willing to risk a great deal on, while on others I would not bet a nickel?

What is praiseworthy in Hume's account of memory is that he is resisting the tendency to compartementalize the various components considered necessary for memory. We will find this breakdown into components to be the case in James' account of memory, and this will lead ultimately to a full-fledged reification of a "feeling of familiarity,"

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[36]Reid, Essays on the Intellectual Powers of Man, op. cit., p. 379.

[37]The Concept of Mind, op. cit., p. 263.

for instance, such as we have seen in Russell's account. Accordingly, the next two illustrations of mediated theories of memory are James' and Russell's.

Roughly, there are three components in James' view: a feeling of pastness, the cognitive ascription of pastness (datability), and the name or phenomenal content of what I once experienced. James writes:

> A general feeling of the past direction in time, then a particular date conceived as lying along that direction, and defined by its name or phenomenal content, an event imagined as located therein, and owned as part of my experience,—such are the elements of every act of memory.[38]

James pursues this with a useful clarification, and although he is sensitive to disaffirming the idea that memory requires a kind of pictorial copy, he does not quite divorce himself from the belief that there exists some complex representation of the memory event which makes the remembering possible. James broaches carefully what in much of moder psychology is taken for granted, namely, a brain trace. He writes:

> It follows that what we began by calling the "image," or "copy," of the fact in the mind, is really not there at all in that simple shape, as a separate "idea." Or at least, if it be there as a separate idea, no memory will go with it. What memory goes with is, on the contrary, a very complex representation, that of the fact to be recalled plus its associates, the whole forming one "object" (as explained on p. 275, Chapter IX), known in one integral pulse of consciousness (as set forth on pp. 276 ff.) and demanding probably a vastly more intricate brain-process than that on which any simple sensorial image depends.[39]

The idea that an intricate brain-process parallels the sensorial image will be taken up later when discussing Köhler's principle of isomorphism.

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[38] The Principles of Psychology, Vol. I, op. cit., p. 650.

[39] Ibid., Vol. I, pp. 650-651.

It is worth noting, however, that James' references to Chapter IX are part of his criticism of associationist psychology, which maintains that a thought is composed of a number of associated ideas, each idea corresponding to each separate part of an object.[40] James' basic criticism, essentially an appeal to the whole being distinct from the sum of its parts, is the same as he uses against Hume's view that there is a similarity of structure between the copy and the impression. Surely, Hume could think about the Treatise without having every word and letter float by his mind's eye, James reproaches.[41]

James gives an especially interesting illustration which ties in with what was said concerning time in the first part of this chapter. He asks us to consider the thought, "the pack of cards is on the table."[42] Is not this thought a composite of the idea of the cards inside the pack, of the table, the legs of the table, and so? James denies this: "The thought taken as an example is, in the first place, not of 'a pack of cards.' It is of 'the-pack-of-cards-is-on-the-table," whose Object implies the pack, and every one of the cards in it, but whose conscious constitution bears very little resemblance to that of the thought of the pack per se."[43] James suggest we consider what happens when we utter the phrase, "the pack of cards is on the table." Each part of the phrase takes time to utter, but no "time-part" can be taken so short that it will not, in some sense, be thought of as the entire object, "the pack of

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[40] Ibid., Vol. I, p. 277.

[41] Ibid., Vol. II, p. 46.

[42] Ibid., Vol. I, p. 278.

cards is on the table." "They melt into each other like dissolving views, and no two of them feel the object just alike, but each feels the total object in a unitary undivided way. This is what I mean by denying that in the thought any parts can be found corresponding to the object's parts."[44] Immediately following this, James, without explanation, asserts bluntly: "Time-parts are not such parts." He appears to take this to be too obvious to merit any investigation.

The conception of time which derives from cosmological considerations is again playing mischief. If James is referring to the relationship between the elements of a numbering system being independent of the unity "the pack of cards is on the table," then he is quite right; but this is hardly informative about what we might claim temporally. In other words, to speak of "time-parts" as James has done is not the same as speaking about time. Is the thought "the pack of cards on the table" an event? I believe that it is. Seeing that, the sense in which we can speak of it being temporal, as well as its relation to other events, become legitimate quesitons. First, however, we must exhaust the more obvious options open to us, before moving to this sort of discussion (the subject of Chapter III).

Whether right or wrong, Russell always strikes me as being a model of clear thinking. I return to discuss Russell's theory of memory in more detail because the theory of memory which has been working itself out with Hume and James comes closest to being the paradigm of a rationally mediated theory with Russell. The general scheme of Russell's

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[44] Ibid., Vol. I, p. 279.

theory can be drawn fairly easily from his Analysis of Mind.[45] Russell accepts at least the direction of Hume's claim that images represent sensible impressions. Whether the representation occurs always or only sometimes, is exact or approximate, is not so important for Russell. The belief that there is some kind of "copy" relationship between images and sensations is the important fact that must be substantiated.[46] Thus there are two elements to memory: the image and whatever is associated with the peculiar belief associated with that image in memory. Russell accepts Bergson's distinction between habit and true memory, concentrating on an analysis of true memory.[47] There are two characteristics which seem to be taken as independent entities by Russell: They are the "feeling of familiarity" and the reference to the past. The reference to the past may be a "feeling of 'pastness'" or it may be contextual (relation to other images or simultaneous existence of a series of images faded by degree!)[48] The reason why the "feeling of familiarity" and the reference to the past seem independent entities is that when

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[45] Op. cit., ch. IX.

[46] Ibid., p. 158.

[47] See Bergson, Matter and Memory, op. cit., pp. 86 ff. Cf. Russell's Analysis of Mind, op. cit., pp. 166-167. Bergson's distinction between true and habit memory is not particularly useful, and I have avoided it. The reason is that it is difficult to give many actual examples of purely "true" or "habit" memory. Does not, for instance, remembering the marriage of Prince Charles suppose the ability to communicate the remembering in forms of expression which we are used to using?

[48] Analysis of Mind, op. cit., p. 162.

they are conjoined to an image, we are dealing with true memory; yet they also have their place in a separate analysis of habit memory, wherein presumably no image occurs. Russell undertakes the latter analysis under the headings "feeling of familiarity" and "recognition."[49]

Aside from these psychological considerations, Russell must contend with considerations which he finds logically compelling: everything in the memory event is happening now; there is no logical connection between one moment and the next; therefore, "nothing can disprove the hypothesis that the world began five minutes ago."[50] Accordingly, at least one of the components of a theory of memory must, for Russell, conspire in the present to make a reference to the past. We have knowledge of a past, but it must be justified against the compelling, if uninteresting, possibility that the past is wholly unreal.

The claim to have knowledge of the past is justified by virtue of the peculiar "belief-feeling" which is associated with the content of the remembering. This content, in the case of true memory, is an image and it may be associated with its expression in words. But the reference to the past is not achieved by the image or the associated words. (Russell suggests the words, "the existence of this.") It is the belief-feeling, in being related to the content, which actually makes the reference to the past. This belief-feeling is analagous to the "respect" which the "real" commands over the "imaginary." Thus, Russell requires

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[49] Ibid., pp. 168-172.

[50] Ibid., pp. 159-160.

"an image" and a "belief in past existence" for there to be said to be any remembering.[51]

Russell's theory can be boiled down to this: One is certain about present existence. Certain types of what exists presently are appended with a peculiar belief-feeling. Although this peculiar belief-feeling is itself present, it prompts one to declare that what is now present represents what does not now exist but did once exist, in other words, to what existed. This past existence is not necessitated logically any more than a belief should be logically true. Nevertheless, a claim about existence is a knowledge claim; indeed, Russell believes that "memory forms an indispensable part of our knowledge of the past."[52] Now suppose that the belief-feeling lasts no longer than five minutes, such that it is logically independent of the past, which would mean, I suppose, that believing that x occurred more than five minutes ago is consistent with x never having been the case. If it follows from Russell's views that the belief-feeling is a steppingstone to knowledge, as Russell appears to believe, then so far as knowledge claims are concerned, Russell's theory is susceptable to two sorts of contradictions suggested by Norman Malcolm: 1) If knowledge of the past depends on a belief-feeling in the present, logically independent of the past, how can this yield knowledge of the past which is not logically independent of the past. Adapting Malcolm's example, if I speak quickly, saying in the present, "It rained last week," then it follows logically that it did

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[51] Ibid., pp. 186-187. Russell's summary of his theory.

[52] Ibid., p. 165.

rain last week. 2) The other difficulty is that on Russell's account, it would follow that any manifestation of memory, having a belief, behaving in a certain way, making a judgement, would be independant of past learning, perception, and experience.[53]

The follower of Russell may argue that Russell is not concerned about what is physically the case when someone remembers; he is simply giving the conditions for memory to be possible. As Russell says, "Memory demands (a) an image, (b) a belief in past existence." He does not say that a physical image or picture causes the remembering; so Russell's theory is entirely rational, simply giving the necessary conditions for remembering.

This is a weak counterargument, however. We know by not that memory is nothing outside of the performances of remembering. The most that we can say is that a description of an instance of remembering can be the name of a class. The name, of course, is not a thing like "this hand" or "this typewriter." Consequently, we should say that a certain performance called remembering demands an image and a certain belief on my part. Assuredly, I would agree that the image is not physical (restricting "physical" to mean hands, typewriters, and the like). Nonetheless, these indicators are being interpreted as representing what they

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[53]N. Malcolm, Memory and Mind (Ithaca: Cornell University Press, 1977), pp. 118-119. It must be noted that the analytical savoir-faire which follows owes a large debt to Malcolm. The credit due may not be fully appreciated by the direct references alone.

themselves are not. Once the theory of memory being attributed to Russell is phrased in this way, I believe that there is a fatal objection. This objection concerns interpreting any sign (a feeling or a representation) as something other than the sign itself. The idea of interpretation is fundamental to a rationally mediated thoery of memory. Malcolm discusses this at length,[54] but we may go directly to his source.

In the Blue Book, Wittgenstein writes:

> We give someone an order to walk in a certain direction by pointing or by drawing an arrow which points in the direction. Suppose drawing arrows is the language in which generally we give such an order. Couldn't such an order be interpreted to mean that the man who get it is to walk in the direction opposite to that of the arrow? This could obviously be done by adding to our arrow some symbols which we might call "an interpretation". It is easy to imagine a case in which, say to deceive someone, we might make an arrangement that an order should be carried out in the sense opposite to its normal one. The symbol which adds the interpretation to our original arrow could, for instance, be another arrow. Whenever we interpret a symbol in one way or another, the interpretation is a new symbol added to the old one.[55]

The point which Wittgenstein is trying to make is that an interpreted sign is always another sign; yet we need the interpretation because there is no a priori reason why an arrow, for instance, should direct us in one direction rather than the opposite. But the interpreted sign, which is itself a sign, again requires interpretation, and so on. In other words, why should an image or belief-feeling be interpreted one way as opposed to another way? There seems no way to decide except by

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[54] Ibid., pp. 92-98.

[55] The Blue and Brown Books, op. cit., p. 33.

deciding arbitrarily: "The way that I am interpreting this sign is not subject to further interpretation." This entails that there is a level of interpretation which is both sign and interpretation. One could call this the "bottom level," as does Wittgenstein. However, the model which began by separating the interpretation from the sign must now either be open to an infinite succession of interpretations or it must end at a level where the sign and interpretation are not separate. In other words, we cannot give the explanation we want to without leading into a regress.[56]

There is, however, one style of mediated theory which may be seen to avoid the criticism which has been adapted from Wittgenstein. In Russell's theory, the image and the belief-feeling are experiences which a person has, and which lead that person to make a judgement such as "that existed." This being the case, we can understand Wittgenstein to be concerned with the interpretation of signs, presumably, by an interpreter (an experiencing user of language). Suppose, however, that the occurrence of a representation of an object amounts to nothing more than

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[56] It was difficult to decide which passage to quote from Wittgenstein. A subsequent passage from The Blue Book (op. cit., p. 34) was too good to pass by. It is quoted below.

> Let us put it this way:—What one wishes to say is: "Every sign is capable of interpretation; but the meaning mustn't be capable of interpretation. It is the last interpretation." Now I assume that you take the meaning to be a process accompanying the saying, and that it is translatable into, and so far equivalent to, a further sign. You have therefore further to tell me what you take to be the distinguishing mark between a sign and the meaning. If you do so, e.g., by saying that the meaning is the arrow which you imagine as opposed to any which you may draw or produce in any other way, you thereby say that you will call no further arrow an interpretation of the one which you have imagined.

an occasion for saying, "I remember the object." Here the direction is that of a causal explanation, where no interpretation by an interpreter would be involved. Harrod, whose theory is similar to Russell's may serve as an example of this direction. He writes:

> In fact, the memory must be in some sense a copy of the thing remembered. This does not involve the alleged fallacy in the copying theory of truth, because that theory postulates that the mind is aware of a copy rather than a reality, and so introduces an otiose tertium quid. In this account the memory event is merely said to constitute or contain a copy of what is supposed to be remembered.[57]

Harrod goes on to say that the copy need not be an image; the letters R-E-D may symbolize in my mind a red letter box that I pass on my way down the street. After arguing for the trustworthiness of memory, he writes: "The memory may be regarded as a trace left by the lively event, a footprint in the sand, or the resuscitated pain of an old wound. The human constitution reacts sharply to such an occurrence with the propensity to predicate."[58] Harrod's phrase "propensity to predicate" refers to a propensity to predicate liveliness to a present structure or representation, thereby distinguishing memory from reverie. The reason why he speaks of predicating liveliness rather than conjoining it to the representation is that conjoining liveliness would mean that the memory event would actually be lively, which it is not.[59]

Harrod's "propensity to predicate" is analogous to Russell's "belief-feeling," and it is no less problematical. The eccentricity of either element in their theories of memory is demonstrated by drawing

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[57]R.F. Harrod, "Memory," Mind, LI (1942), 49-50.

[58]Ibid., p. 66.

[59]Ibid., p. 51.

upon the abundance of human activities that it would be odd not to refer to as remembering, but which involve a propensity to predicate or a belief-feeling only in the mind of the philosopher who is proffering the analysis. Aside from this rather broad criticism of the excessive emphasis on cognition in memory, the way in which Harrod expresses his views is especially interesting. Harrod seems to be saying something such as the following: A reminder promotes the occurrence of a representation of the original event or object; it is a representation of the original by virtue of being correlated to a propensity to predicate. Could Wittgensetin, for instance, argue that the "propensity to predicate," like a feeling that one claims to be aware of, requires an interpretation, perhaps as being directed toward the past, which would then be open to the criticisms which have been raised? In the present case, the matter is no longer so straightforward. Harrod could argue that we have reached "bottom level," that we are dealing with a disposition, not an interpretable symbol such as a feeling that we are aware of may be thought to be. Furthermore, if we are not really dealing with an interpretation, then there simply never occurs a footprint, trace, etc., in the brain or elsewhere, without there also occurring remembering.

For example, this view is implicit in Broad's theory of memory. Speaking of the peculiar "familiarity" which is associated with the "objective constituents of the memory-situations,"[60] he writes:

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[60]Broad, The Mind and Its Place in Nature (London: Routledge and Kegan Paul, 1925), p. 266. This is Broad's jargon for the content of a memory-event.

> Now we are so constituted that, when we are subjects of a cognitive situation whose objective constituent manifests the character of familiarity, we inevitably apply the concept of pastness; and, if we make an explicit judgement, it takes the form: "There was an event which had such and such empirical characteristics."[61]

Compare this with Harrod:

> If the propensity to predicate involved in memory did not vouch for the existence of a lively counterpart, no meaning would be left in the idea of a part.[62]

Both Broad and Harrod seem to be saying that no further appeal is possible; to use Broad's expression, we are simply "constituted" such that whenever a certain "familiarity" of "propensity to predicate" occurs, then remembering has occurred. If a rational theory of memory demands the conditions for the conceivability of memory, the direction taken here can be seen to be different. It appears to be this: Let us accept that memory is a physical occurrence in the present, expressed by the rather strained locution "I am remembering," say, "the sunrise." Persons are simply so constituted. From this approach there follow several implications. The first is that it makes no sense to invoke a principle such as Russell's "mnemic causation," where a response to a stimulus has a past event as its direct cause.[63] The reason for rejecting mnemic causation would be that the memory-event is a complex state of a person in the present, which must be a complex event at the head of a continuous causal sequence of events—it would be unscientific to think otherwise. The second is

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[61] Ibid., p. 266.

[62] Op. cit., p. 53.

[63] Analysis of Mind, op. cit., pp. 77 ff.

that information about what occurred earlier in the causal sequence must be stored if one is to be able to make any claim about having such information. The third implication is that the storage of information is no guarantee that it is actually informative about the past. I may claim to be able to give a description of the skink I remember seeing at the London Zoo,[64] but unless my present storage of information is representative of the skinks at the London Zoo, I cannot be said to be remembering them.[65] It is the emphasis on causal process which effects a transition from a rationally mediated theory of memory to a theory which encourages scientific sophistication.

It is interesting to see how the shift from the cognitive to the physical in memory theories substitutes stronger postulates for the weaker requirements of the rational theory, making these postulates the subject of intense scientific research and model building. Without going into excessive detail, this transition can be shown by moving from Russell and Broad in regard to causation in memory, to an examination of what is taken for granted with respect to causation by a neuropsychologist such as Lashley. With this we will have succeeded in leading the discussion to the scientifically directed theories. After examining some of

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[64]Perhaps I say, "The lizard-like creature whose body seemed to big for its limbs had the nameplate 'skink'."

[65]These three suppositions are the same as Malcolm's conditions for a "full-blown" trace theory of memory. Memory and Mind, op. cit., p. 179. Malcolm proceeds to undermine the plausibility of each supposition.

these viewpoints, I will attempt to cast a physically mediated theory of memory into its most general form. Then reasons will be given for rejecting the entire brood of theories. These reasons will be motivated essentially by Wittgenstein; so section 3 must examine whether Wittgenstein's view on the subject of memory are adequate.

The point to be made with regard to Russell is that he wavers as to whether mnemic causation is or is not ultimate; he argues that it is at least "possible" that it is ultimate.[66] Broad chooses to reject Russell's concept of mnemic causation, arguing that "the past experience and the present stimulus are not jointly sufficient to cause memory. At the very least a general persistent condition, which fills the gap between the two, is needed also."[67] In one of his papers, the neuropsychologist Lashley addresses himself indirectly, if not glibly, to what is essentially an inquiry into the causal relation between a past experience and a response based on that experience. He writes:

> The contents of experience, the sensations and the like, constitutes all that is directly known. It is the material which has most stubbornly resisted description in the space-time system of the physical sciences.[68]

Should we postualte, in Lashley's words, "The mind's transcendence of time and space"? Lashley's disdain for philosophers is pronounced; he ridicules the idea of transcendence by presenting a caricature:

> The brain is only here and now, but mind leaps into the past and brings it into the present. Mind crosses the ocean when we think of scenes in London or Paris.[69]

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[68] K.S. Lashley, "Cerebral Organization and Behaviour," reprinted in The Neuropsychology of Lashley (New York: McGraw-Hill, 1960), p. 532.

[69] Ibid., p. 533.

In the contents of experience "There are order and arrangement, but there is no experience of the creation of that order." "Experience clearly gives no clue as to the means by which it is organized."[70] Lashley's solution is simply that there exists for each of us a "seried scheme of memories. The order is determined just as is the memory of the alphabet, polarized from a to z, and the pastness of memories is estimated by it."[71]

One thing that should be noticed is that Lashley has made it part of his creed that a theory of memory must be given a physical explanation, that this physical explanation must be cast in the space-time system of science (that this involves a suspicious preconception has already been indicated), and that it is just unintelligent to think other than "scientifically." And the way in which one can be scientific about this "seried scheme of memories" is to make them something scientifically discoverable, calling them traces or engrams, and locating them in the brain:

> The billions of neurons in the cerebral network are organized into a large number of systems. Each system consists of the traces of a number of habits or memories. Knowledge of the moves and games of chess would constitute one such system; memories of neural anatomy another; and so on through all the individual's varied interests. The traces or engrammata in any system are more closely connected with one another than with other systems. The systems are not anatomically separate, and the same neurons, in different permutations, may participate in many systems. For brevity I shall call these trace systems.[72]

Lashley's views deserve some comment. First, Lashley's claim that experience furnishes no clue as to how events of experience are

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[71] Ibid., p. 534.

[72] Ibid., p. 532.

[73] Ibid., p. 535.

organized is just incredible, at least on the face of it. If Lashley were correct, then if I tried to remember the places where I have lived during my lifetime, then I could not possibly be wrong no matter what I thought since it would be considered useless to appeal to corroborating experiences. Lashley, however, seems to be suggesting something else. All experiences end up ultimately as a set of trace systems encoded with information about ordering. Mnemic causation seems ruled out entirely since the sequence of experiences which might influence our behaviour is recorded in the present. We cannot prevail upon Lashley to explain what it is that "reads," as it were, the recorded memory traces since he rejects any concept of a "self external to and possessing consciousness."[73] The only option seems to be to grant Lashley's suppositions, following them through to see whether they make any sense.

Let us suppose a set of engrams N_1, N_2, N_3. It just so happens that every time that N_1 occurs, N_2 follows, and N_3 follows N_2. N_1, N_2, N_3 are all stored; therefore, to say that N_1 "occurs" really means that it is in an active rather than in an inactive state. We may think of the physical sequence of successively activated N_1, N_2, N_3 as a response to the stimulus, "Where have you lived in your lifetime?" My verbal response might be "I lived in X before I lived in Y, after which I moved to Z." Presumably, the trace sequence causes or is correlated with the statement of my residence history. However, the neural state corresponding to the statement of my residence history is not equivalent to either N_1, N_2, or N_3 alone since N_1 corresponds simply to "living at X," N_2 to "living at

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[73] Ibid., p. 538.

Y," and N_3 to "living at Z." There is nothing in each engram N_1, N_2, N_3 which could cause a tensed report of my residence history.

Suppose one attempted to resolve this difficulty by saying that the neural state corresponding to the statement of my residence history is equivalent to the sequence N_1, N_2, N_3, that is, to N_1 causing N_2 causing N_3. This will not do either. For if N_1, N_2, N_3 occur at times t_1, t_2, t_3, respectively, then the neural state corresponding to the statement of my residence history, which has three distinguishable temporal references to the past, cannot be the result of having arrived at N_3 (in the causal sequence of engrams). N_3 can only correspond to, say, "living at Z."

Thus far we are unable to draw any sense of pastness, such as is exemplified by the tensed statement of my residence history, out of the succession of seried engrams. Lashley's analogy of the alphabet just will not do.

In an attempt to circumvent this difficulty, one could say that the sequence N_1, N_2, N_3 causes another trace N_4 which corresponds at least to the pastness conferring part of the statement of my residence history. N_4 cannot simply be a name for N_1, N_2, N_3, for in that case one merely need reiterate the earlier objections, which it is our purpose to circumvent. Lashley would, I believe, be forced to approve this tactic since the brain, of course, is very complex; and the introduction of N_4 in association with N_1, N_2, N_3 would be the first step in keeping with the idea that we should, really, be speaking of "trace systems" and not isolated traces.

There are two possibilities for N_4. N_4 is in some sense

caused by an appropriate stimulus and N_1, N_2, N_3. Therefore, either (1) N_1, N_2, N_3 cease to be active once N_4 is produced and activated, or (2) N_1, N_2, N_3 persist while N_4 persists after having been produced and activated. In case (1), the pastness conferring trace N_4 has nothing with which to be associated. There is simply a feeling of pastness in the present and nothing more.

Case (2) is less simple. Here, it may be thought that the pastness conferring trace confers pastness to N_1, N_2, N_3. But this approach leads to a muddle with respect to causality: N_1, N_2, N_3 cause N_4; N_4 causes N_1, N_2, N_3 to be tensed (insofar as they have a tensed correspondence in language, as in the statement of residence history). However, how can N_1, N_2, N_3, which are not initially ordered, cause a tense conferring trace N_4 without presupposing another trace, similar to N_4, which prescribes the reading or activation order of N_1, N_2, N_3? There seems no way out of this except to presuppose a trace system which is composed of N_1, N_2, N_3, and N_4, where oddly this trace system cannot be decomposed in the sense of N_1, N_2, N_3 causing N_4. If this is the only possible solution, then the aim to give a causal explanation of the remembering, on the level of distinct engrams, which Lashley would require in order to adopt the "space-time system of the physical sciences," simply does not provide the explanation which is being sought. It is tragic that the brain trace theorist's principal motive was to give a causal explanation in terms of trace series in order to explain the ascription of pastness in ordinary remembering, hoping by this to avoid causal gaps, which Lashley derides as mind leaping into the past; and yet the brain trace theorist does not succeed in explaining how the ascription of pastness is

possible on the neurological level—except to say perhaps that there must be a very complex brain system corresponding, for instance, to the statement of my residence history, a fact that few would deny in any case.

Doubly tragic is Lashley's own admission that there is little evidence supporting the localization of traces. The troublesome evidence comes from animal studies in which animals were given brain lesions in suspected trace locations, but the animals continued to perform the tasks which they were trained for and which allegedly depended on the excised portion of the brain. In despair, Lashley toys with the conclusion that "learning just is not possible."[74] Obviously learning is possible; so instead of rejecting brain traces, Lashley invents the rather unusual doctrine of "equipotential regions":

> The psychological studies, like the more limited direct experiments on the brain, point to the conclusion that the memory trace is located in all parts of the functional area; the various parts are equipotential for its maintenance and activation.[75]

Surely Lashley cannot mean that the brain trace migrates from place to place depending on which part of the brain is about to be destroyed. The trace must be suffused throughout the brain. But if it were suffused throughout the brain, then it scarcely merits being called a trace. If

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[74] "In Search of the Engram," reprinted in The Neuropsychology of Lashley, op. cit., p. 501.

[75] Ibid., p. 492.

an appeal is made to "redundancy,"[76] that the trace is stored in the brain in multiple copies, the whole notion of having traces is still open to the earlier objections.

Throughout, Lashley has taken traces to be located in the brain. It should be noted that a rational theory of memory does not demand this. To use Broad's expression, the "general persistent condition" requires only that a location of some sort be ascribed to it. The reasoning for this would be that whatever fills a causal gap would need by physical, and whatever is physical must have location or have a spatial configuration. In fact, even atoms of matter, thought of as bulk items, are not necessary; for electromagnetic phenomena must be thought to be a form of physical representation. Indeed, such a theory of memory has been advocated in the use of holograms as being analogous to the way in which memories are in the brain. In any case, there is no reason, given the elusiveness of establishing the existence of traces empirically, that they should reside in the brain, in the brain and the eye, or any other combination of anatomical parts. Nonetheless, it is insisted by neurologists that actual things capable of being found inside the body are what constitute memory, perception, and so forth. Hubel, a neurologist, writes the following:

> In brief, there is an input: man's only way of knowing about the outside world. There is an output: man's only way of responding to the outside world and influencing it. And between input and output there is everything else, which must include perception, emotions, memory, thought and whatever else makes man human.[77]

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[76]Steven Rose believes that this solves Lashley's difficulties. The Conscious Brain (New York: Vintage, 1976), p. 159.

[77]D.H. Hubel, "The Brain," Scientific American, CCXLI (1979), 50.

I once saw a donkey that, due to carelessly set packs which were too heavy to begin with, had such sores on its back that they seemed glazed in the sun. I had a feeling of sympathy for the poor animal. Where was this emotion? Where did it stop being "input" and become emotion? Where is the memory I have now? One might argue that these criticisms are cheaply gratuitous; so let us grant that a memory requires a location of some sort or other. What could possibly motivate the belief that "it" is in the body? More specifically, what motivates Hubel to speak of a synaptic component of memory, which is his misleading euphemism for a brain trace? I think that the answer is embarrassingly easy: surely it is nothing more than that the physical structure of the central nervous system involves some kind of flow into the brain's repository and then flow out. Couched in such general terms, no one could possible deny that something of this nature does in fact occur. Suppose, then, we take the memories to be stored in the brain. We are attempting to be scientifically sophisticated; so we must not imagine that there is, literally, an image stored somewhere (as Aristotle seems to do). If this is the case, then the nervous system must effect a translation, of some sort, of the experienced object; after all, neither the experienced object nor some kind of photograph of it is physically inside my brain. The kind of translation which would be acceptable would be one which would, for instance, take all the characters on this page (spacing, letters, and punctuation), give each type of character a unique numerical equivalent, change the resulting number from base ten to base two, and have all of the resulting characters stored in a computer. We have, it would appear, succeeded in producing an acceptable sense in which to

speak of "storage."

One difficulty, which relates directly to the storage metaphor in the sense that has made it acceptable, is that the spatial configuration which is conceived to be the stored memory is no longer specific to any particular body or person. Whether I have the memory or someone else has the memory, or even whether a machine has the memory, becomes quite immaterial. We can imagine an experiment in which a visual experience, by means of half-silvered mirrors and a translation device which yields digital information from "visual information," results in each of us (I, my friend, and the computer) having identical memories insofar as "identical" refers to the information content (where "information" is being considered to be the neutral stuff of cybernetics).

Suppose, further, that "we" all had the visual experience of "watching" a child play near the river bank; and I hasten to add parenthetically that for the purpose of this exercise we must forgive the grossly strained language which is being used. As we watch the child playing, we decide to play a popular computer game instead; thus our attention is shifted from the playing child. Suddenly we all hear a splash and then gurgling sounds coming from the river bank. I scream, "The child is drowning"; my friend runs to the river bank and jumps into the water; the computer, "who" would ordinarily send a teletype to the Coast Guard, decides that children are low on its list of priorities, and so it does nothing. Each of us remembered that the child was playing at the river bank, thereby inferring that the child has tempted fate by falling into the water; but I remembered by screaming, my friend by jumping, and the computer by doing nothing. We all stored the same

information. Why did we all react differently? The easiest answer is to say that no two bodies are the same: How can I, with my body, act in the same way as my friend, who has a body with a different history? This seems ever more obvious in the case of the computer, with the "history" of its "body"! Be this as it may, the central question concerns what it is that we should call remembering (or at the very least what it is that we ordinarily call remembering). Remember, we all possess identical information with respect to the child. I think it abundantly clear that we cannot and do not say that having a memory or remembering is the same as the storage of that information which was so carefully fed into each of us by means of half-silvered mirrors and digital translators. The remembering was the scream of alarm, or the rushing to the river, or the anthropomorphic deliberation of the computer—none of which are the same. The only conclusion is that remembering is not the same as having stored information; and although it makes sense to speak of information (in the sense in which it is defined in cybernetics) being stored, it is preposterously confused to say that a memory is stored. The only way in which this confusion could be avoided would be by saying that the stored information causes the remembering, which merely leads again to the difficulties concerning causal connection.

The style of argument which has just been employed is, of course, from Wittgenstein. He feels that our difficulties result from "The tendency to look for something in common to all the entities which we commonly subsume under a general term."[78] For the storage metaphor which

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[78] The Blue and Brown Books, op. cit., p. 17.

was explored above, the presumption is that there must be something physically common to all cases of remembering which (to be physical) must be located, and since the central nervous system looks like a reservoir with streams running in and out, the physical thing in common must be located in the brain. Is this really how one should interpret the expression having something in mind? As Malcolm points out, we fail to consider the diverse uses of the word "in."[79] Is being "in trouble" or "in labour" or "in motion" the same as being "in a shoebox" or "in church"?

The final characteristic of trace theories of memory is the idea that there is a similarity of structure between what is remembered and the remembering of it. This is a hangover from the rational theory of memory which held that some kind of image was necessary for the remembering. The rational theory makes some sense considering the significance of imagery in remembering, but the physically mediated theory wants to go further, holding that the brain organization represents or has a similarity of sturcture with what was initially perceived. It is claimed that in virtue of this is memory possible.

Köhler, who make traces the basis of a psychological theory of memory, writes the following:

> In fact, we are inclined to assume that when the self feels in one way or another referred to an object there actually is a field of force in the brain, which extends from the process corresponding to the self to those corresponding to the object. The principle of isomorphism

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[79] Memory and Mind, op. cit., p. 21.

> demands that in a given case the organization of experience and the underlying physiological facts have the same structure.[80]

Köhler's comments on sensory organization help to clarify what he means:

> A moment ago, I pointed out that, in establishing its specific entities with their boundries, sensory organization tends to produce results which agree with the actual make-up of the given physical situation. How can this happen if the light waves which mediate between the physical objects and the eye are mutually independent events? Obvioulsy in the transmission of light something must be preserved that makes, on the whole, for the right organization. In actual fact we already know precisely what is preserved. Although the local stimuli are mutually independent, they exhibit formal relations among the surface elements of the physical objects. These formal relations in the physical objects are preserved as corresponding relations among the stimuli, and since orgainzation depends upon the latter it must also depend upon the former.[81]

Köhler's principle of isomorphism postulates a structural correspondence between physical objects, experience, and the physiology of the brain. Physically, according to Köhler, the experience of an object is comprised of a number of independent local stimuli: for instance, it is possible to hear the tenth note of a symphony without hearing the symphony, or it is possible to see one side of a matchbox without seeing the other sides. Such independent stimuli cohere in virtue of having a structure; this structure is physically present in brain, and it is the same structure as that of the experienced object. Experience, one could say, is structure preserving; and for a complex experience, which involves scanning or intermittent stimuli, rather than simply "being seen at once," Köhler would have to say that information obtained sequentially is nonetheless structure preserving as well. As

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[80]Wolfgang Köhler, Gestalt Psychology (New York: Liveright, 1947), p. 301.

[81]Ibid., pp. 166-167.

Köhler writes, "From the point of view of isomorphism, one would expect that there is a corresponding kinship between the physiological correlate of the temporal and that of this particular spatial dimension."[82]

To begin, Köhler is faced with the persistent problem of the "self" understood as a brain process. Köhler holds the view that the part of the brain process corresponding to self interacts with the structural correlates, in the brain, of external objects by means of what the physicist understands by a "field."[83] Köhler seems to have in mind something like electromagnetic or gravitational fields. Aside from the fact that there is no evidence to support the claim that brain parts "communicate" in the way that Köhler suggests, there is the problem that whichever brain part corresponds to the self, as brain process, cannot be distinguished from the isomorphic processes of external objects. Thus it makes little sense to assert that there is a part of the brain process which is the self.

Another difficulty relates to information which arrives into the brain sequentially, rather than as a gestalt. If sequential information is spatialized in the brain, it is difficult to understand how something as ordinary as the ascription of pastness in remembering is possible. Any attempt to accomplish this on the neurological level is destined to the same fate as was developed for Lashley's views.

Still another point is that the examples which Köhler uses to

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[82] Ibid., p. 150.

[83] Ibid., p. 345.

illustrate his principle of isomorphism appear to be systematically prejudiced. His examples are predominantly visual. The underlying reason seems to be that a visual example makes it appear appropriate that there should be a neurally conceived "image" in the brain. Consider, however, remembering that I have a pocketful of change, or remembering that I must meet my friends at three o'clock, or taking in the scenery, or watching the mouse scurry along the baseboard. In such cases it just is not clear what sense can be given to there being a structural correlate in the brain. Is there a kind of stretched and faded mouse process superposed on a static wall process? This is not meant to be facetious, for such processes should be detectable, perhaps under an electron microscope; but I know of no neurologist who has evidence for such a discovery, or even proposed transformation rules going from neuron arrangement to, say, mouse shapes. In short, not all experiences call for structural correlates, and even for those experiences which do call for a structural correlate in a plausible way, such as seeing a dead mouse instead of a scurrying one, no one has ever discovered such a correlate. Compare this with Lashley's dashed hopes to discover a memory trace.

Another noteworthy point about Köhler's theory of memory is that, like Lashley who admits that there is little evidence for localization of the memory trace, he concludes that a mechanical model for recall, which explains recall in terms of neural circuits which by being worn with use promote certain associations, is unacceptable. The reasons he gives are that (1) on such a model, if A and B are initially correlated, then any subsequent X that follows the path of A would be correlated with

B; and (2) any A' similar to A, if it followed a path different from A, should not be associated with B, but experimentally it is found that the association does occur despite A' following a different path. Therefore:

> Under these circumstances it seems natural to solve the problem in dynamic rather than machine terms. The similarity between A (or A') and the old A must play a part in the fact that the new A will cause recall of B from virtually any place. Now we know that similarity is a factor which strongly favors pair-formation in perception, even when the members of the pair are not immediate neighbours. The same factor may be said to favor a specific dynamic interrelation between a new process A and the trace of an old A. If this happens, the place of A will no longer play a decisive role in this process, and A will be able to cause recall of B, wherever A may be located.[84]

What could a "dynamic" trace possibly be? It has the most astonishing property of simply appearing when it has to; for no matter where A-type stimuli end up, they almost always end by being connected with B by virtue of the similarity of the A's. This amounts to action at a distance unless there is a connection between trace A and trace B, or trace B is everywhere in the brain. In the former case, the connection is not specifiable in principle since trace A does not end up in the same place each time. This leads one to suggest that a "connection" which is not specifiable in principle hardly deserves to be called a connection. In the latter case, it hardly seems sensible to call a trace that must in some sense be everywhere in the brain, a trace.

Suppose, nonetheless, that we could overcome the logistical problems concerning the ascription of a spatial configuration of some sort or other to a dynamic trace. Köhler would wish to say that the

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[84] Ibid., pp. 318-319.

persistence of such a spatial configuration is necessary for having a correct memory.[85] In fact, this constitutes the virtue of the principle of isomorphism, namely, in explaining the "accuracy of recall."[86] But as we shall see, a trace is unnecessary for memory; so similarity of structure is beside the point as far as having correct memory is concerned

Malcolm gives lengthy consideration to a criticism of the principle of isomorphism, for, as he mentions, the principle or one like it has been instrumental in prompting the idea of traces as a mechanism for memory.[87] Howard Bursen undertakes a detailed criticism which is essentially the same as Malcolm's.[88] Such criticisms are, I believe, devastating for a trace theory of memory. Therefore, I will endeavour to present a version of a physically mediated theory of memory which is as succinct and general as possible, thus rendering any criticisms against it applicable equally against either neurological, behaviouristic, or computer modelling variations of the theory. The only provisions are that the variations of the theory subscribe to some sort of representative configuration of the original experience as ensuring the possibility of memory, and they assume that memory is impossible otherwise.

The following is proposed as a general scheme for what has been called a physically mediated theory of memory. A heading has been added

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[85] Ibid., pp. 279-287.

[86] Ibid., p. 252. See also his discussion of the objective value of sensory orgainzation, p. 160 ff.

[87] Memory and Mind, op. cit., ch. X.

[88] H.A. Bursen, Dismantling the Memory Machine (Dordrecht: Reidel, 1978), part I, chapter two.

to each stage to indicate what that stage is concerned with. For simplicity, I begin with an utterance, but this is later generalized (at stage seven).

(1) Claim: "I remember X."

(2) First existence claim: X occurred at time t_1.

(3) Second existence claim: X was perceived by person P at time t_1.

(4) Third existence claim (for a stored, localised, and caused entity):

There must exist a representative of X, call it rX, which causes P's claim "I remember X."

(5) Causal connection: rX is a function of time t; that is for any t, such that $t_1 \leq t < t_2$ (where the relative magnitude indicates the relation "later than"), rX at t names a physical state which is representative of X. Although rX is a function of t, it is conceivable that it be constant (e.g., it is not logically necessary that a trace decay).

(6) Meaning of "representative": By rX being representative of X is meant that if X entails a set of features which could have been witnessed by P at t_1 (call this S_X), then rX entails a subset of S_X (call it S_{rX}).

(7) Retrieval: If person P can make the claim "I remember X," then more often then not, P could make a verbal report about S_{rX}, or P could perform actions which are improbable without awareness of S_{rX} (equivalently, one could speak of the activation of what is named by rX).

(8) Criteria for awareness: One criterion for awareness is the ability to describe, another is the handling of an object for a purpose, another (generally speaking) is laughter, and so forth. At some stage we must resort to a definition of this sort (that is, appealing to examples) in order to obviate the need for further definition.

The above is a general a model as I can conceive for a physically mediated theory of memory. It should be noticed that rX can be either a trace in the brain, a disposition to behave which persists as the effect of some earlier stimulus, or it may be a store of information such as might be fould on a magnetic tape, a set of punch cards, or a silicon chip. Furthermore, if rX did not exist, then (4) and (5) imply that there would be a causal gap in the explanation, which of course would be objected to since it would be claimed that memory would be impossible. As well, if rX did exist but was not representative in the sense of (6), then S_{rX} would not be a subset of S_X (except by accident, which is hardly adequate for a theory of memory). So memory would again be impossible, on the strength of (7). Therefore, a corollary of the physically mediated theory of memory is:

(9) If there is no rX, then memory is impossible. (This amounts to saying that we must invoke the principle of isomorphism in order to explain the possibility of memory.)

Criticism 1: Suppose an awareness of S_{rX}. Recall, S_{rX} stands for the enumerable fratures of the representative rX or object X, which are utterable or presupposed in certain performances in the present. It is not so difficult to see, however, that as a factual matter there is no restriction on which subset of S_X is chosen to be S_{rX}.[89]

[89] S_X is actually a rather mythical set. Presumably the number

Nor is there any restriction on the union of S_{rX} with other sets of unrelated features. Bursen works an example which illustrates this very well:[90] Consider remembering The Fourth Brandenburg Concerto. It is possible even for the musically uninitiated to remember it being performed with trumpet notes substituted for the recorder notes. If this is possible for one instrument, it is possible for them all. As well, can we not remember it as being played with ear-piercing loudness instead of the customary loudness of a symphony? Cannot the same be imagined for the tempo, importing the feature of dreary slowness into the remembering of the Fourth Brandenburg Concerto (i.e., into S_{rX})? In fact, there is no feature of S_{rX} which cannot be eliminated in favour of another feature, and still this does not affect the claim "I remember X." If, then, I can claim "I remember X" no matter what I alter systematically in S_{rX}, it follows that the only part of S_X which may be conceived to persist is that part which I have forgotten (that is, that part which I am unable to express or those features which are not necessary conditions for calling some action which I am presently performing "remembering X"). With this, we then see that rX, whatever the physical state is that it names, has no place in the explanation of the claim, "I remember X." In short, traces may exist, patterns of behaviour may exist, stored digital information may exist, but none of these enter into the explana-

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of describable features of object X is infinite. It seems that we cannot know X without possessing this infinity of features, yet we cannot go through an infinite number of features cognitively, and nonetheless we do know X. X reminds one of Kant's thing in itself.

[90] Loc. cit.

tion of memory. Furthermore, if remembering is characterized by the "pastness" which is associated with it, understood either as the use of tensed language or as activities which presuppose past experiences, then this "pastness" is likewise distinct from the actual states of the brain understood in terms of traces, information content, or repeatable dispositions to behave which in turn must presuppose repeatable physiological states.

Criticism 2: At stage seven in the general scheme for memory, a retrieval of whatever is remembered is postulated. Being able to claim "I remember X" (not accidentally) must assume an awareness of S_{rX}. For this to be possible there must be a continuous causal connection between whatever physical process is the correlate of saying "I remember . . ." and the present physical representative of X, which has been called rX. (The physical correlate of "I remember. . ." and the physical state rX are not the same, for that would entail that there is no difference between remembering X and trying to remember X.) It is obvious that we commonly and successfully make completed claims of the form "I remember . . . ." The problem is, therefore, to understand how it is possible that rX is discovered. The metaphor "searching" is used frequently. However, an organized search presupposes a thinker; in order to avoid this, let us begin by assuming a random search. A number of representations are successively activated: rX comes up. This would be like putting pennies into a gumball machine until it produced a yellow gumball. What must be happening? It must be the case that whereas all the representations other than rX do not lead to a continuous causal connection to the physical correlate of the claim, "I remember . . . ," as soon as rX comes up, it does get connected. A scientific explanation

would demand a cause for this seemingly fortuitous connection. But what could possible be scientifically acceptable except another representation of a physical sort. We are again led to our original problem: how do we choose from amongst the myriad of physical correlates, which we know must exist, for the one which causes rX to be connected with the physical correlate fo the completed utterance"I remember . . ."? There must exist, it seems, the logical equivalent of a series of decision-making homunculi with homuculi; without such a regress, the remembering would be entirely fortuitous. At the least we require the logical equivalent of a delighted child who exclaims triumphantly "Yellow!" Moreover, if, in this way, we put an end to the regress arbitrarily, then there is no reason why we should have taken any steps in the regress to begin with. As we can imagine the later Wittgenstein reproaching, it makes no sense to think that the child needs the mental image of a yellow gumball in order to be able to pick the yellow one. Similarly, the scientific question, What causes the connection between rX and the neural correlate of the statement "I remember . . . "? is answered by saying that one cannot ask for a cause; that there is a connection is just the way it is.

If the scientifically-minded model can be pressed to make a response like that above, as the criticism demonstrates that it must, then the response amounts to little more than an expression of annoyance at discovering that the sort of explanation which was wanted has failed. In short, the theory fails to explain how the retrieval of the neural equivalent of a memory is possible except by means of a regress or by the introduction of an effect without a cause. Of course, no one wants to deny that memory is possible. Therefore, the situation can be out-

lined summarily. That memory claims are generally reliable is testable; that the type of theory which falls under the general scheme which has been given is incoherent is demonstrable, leading either to a regress or to effects without causes: to accomodate these one must introduce either deviant forms of explanation or mysterious forces; alternatively, one may reject the theory. Needless to say, there are few who are willing to accept either deviant forms of explanation or to introduce mysterious forces; therefore, my treatment of mediated theories of memory has come to an end because the rejection of the appraoch to memory has been justified.

Before moving on to a discussion of Wittgenstein, it is worthwhile commenting on the burlesque performed with language by psychologists who offer models for memory. For it is this bizarre use of language which is the first indication that there is something amiss.

D.A. Norman, a psychologist who has written extensively on memory, limns the general view of psychological models of memory in a collection edited by him:

> The general picture of human information processing is this. First, newly presented information would appear to be transferred by the sensory system into its psychological representation (which may already involve a substantial amount of processing on the initial sensory image), and this representation is stored briefly in a sensory information storage system. Following this sensory storage, the presented material is identified and encoded into a new format and retained temporarily in a different storage system, usually called short-term memory. Then, if extra attention is paid to the material, or if it gets properly organized, the information is transferred to a more permanent memory system (or, in some models, the rate at which it decays decreases substantially). In general, the capacity of this more permanent memory system is so large that information that is stored there must be organized in an efficient manner

> if it is ever to be retrieved. Then, finally, when it is necessary to retrieve information from memory, decision rules must be used, both to decide exactly how to get access to the desired information and then to decide exactly what response should be made to the information that has been retrieved.[91]

Norman's explanation has the appearance of a causal explanation. It is a causal explanation inasmuch as a set of successive and distinguishable states of the brain, each being a necessary condition for the next, are being postulated: If there were not sensory encoding, there would not come about a primary storage state; if there were not a primary storage state, there would not come about a more permanent storage state, and if there were not a latent storage state, there would not come about an active state. I am willing to accept such an explanation, for it would be foolhardy to reject something so trivial unless factual or sceptical considerations were being entertained.

The initial plausibility of Norman's general model for memory is lost as soon as one attends more carefully to the language in which the preceding trivial considerations are couched. Norman is trying to associate physiological talk about remembering to remembering as ordinarily understood. There are several examples of this in the passage quoted above: Norman speaks of material being "identified" for encoding; of "extra attention" resulting in permanent storage; of organized material being "retrieved"; of using "decision rules" to obtain the stored material which is "desired." Each of the foregoing terms is being used ambiguously

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[91] D.A. Norman, "Introduction: Models of Human Memory," in D.A. Norman, ed., Models of Human Memory (New York: Academic Press, 1970), p. 2.

if identification is understood in the sense of "spotting Rover in the bushes," or if retrieval is understood in the sense of "fetching a stick," or if a decision rule is understood in the sense of "red means stop," and so forth, it is just nonsense to suppose that such phrases play a part in the description of the causal process of remembering at the neurological level.

There is a counterargument to this, used especially by scientists who recognize their failure to provide an adequate theory for a phenomenon, but who insist that their inadequate theory is paradigmatic of the way a theory must be, at least in its initial formulation. The person who argues that the language being used to espouse a theory is irregular or even incoherent is told that his ignorance of the workings of scientific thought, in addition to his failure to realize that scientific progress outpaces the development of language, necessitating what seem to be metaphorical uses of language in scientific discourse, are the real reasons that promote his trifling objections. This counterargument would doubtless be correct if we were dealing with unambiguous causally connected observables. The fact is that we are not.

As an example, let us take the claim that material is "identified." "Identification," as ordinarily understood, pertains to identifying dogs, homes, persons, and so forth. The memory theorist can only make sense of identifying stored brain material by adducing a supplementary thesis which serves to correlate identification as ordinarily understood with some neurological state. Clearly, neurological states can be understood to be causally connected observables, but one cannot combine languages without being compelled to understand and perhaps justify the thesis of

correlation which is being presupposed in combining the languages. Considerations such as the following would be significant. If the thesis is simply one of correlation, without causal connection, then we are entitled to speak of causal connection only for entities of the same sort: neural states on the one hand, language use and actions on the other. However, if the correlation thesis implies some sort of causal generation from neural states to what is spoken about in ordinary language, then "causation" is being used in two distinct senses: the sense of emergence or generation and the sense of repeatable description. The upshot is that we are simply not dealing with "causally connected observables" in some unambiguous sense. Thus the counterargument to the claim that memory theorists use language in an objectionable way when formulating their theories, fails to distinguish between the sorts of observables which can be said to be causally related. Thus, if a memory theorist insists that distinctions as to what may and may not be considered causally connected observables is the result of misconstruing the scientific approach, which should always be understood to be tentative, then such a theorist is neglecting to investigate the senses in which the principle of correlation may be taken. It is the neglect of a more careful understanding of the principle which the theorist presupposes which permits him to set neurology and the ordinary claims about memory on the same level, opting to discuss what appears to him more scientifically respectable, that is, neurology, while giving the appearance that he is dealing with memory as ordinarily understood.

Some psychologists do have an inkling of the oddity of their

colleagues' approach to memory. Reitman[92] expresses his distress over memory research which fails to account for the fact that experimental subjects spend large amounts of the time alotted to them in memory experiments, working out elaborate strategies for coping with the experimental tasks set for them. Most memory experiments, Reitman says, assume that it is reasonable to suppose that a subject's memory subsystem can be "decoupled" from the strategies that the subject employs. Concerning computer models for memory, he writes:

> An information processing program intended to generate behavior simulating human thinking, for example, necessarily includes assumptions about the organization of information structures in memory, about access and acquisition strategies, about basic storage and retrieval processes in terms of which such strategies are defined. Often, however, it is difficult to divide the elements of such a system into two distinct subsets, those having to do with memory and those not.[93]

It must be pointed out that the implication of Reitman's final line is plainly outrageous. He seems to be saying that memory refers to what the psychologist stipulates, and the use of strategies is not properly called memory. I would have to conclude that if the psychologist were to give me a list of words, part of which I remembered by saying to myself that three of the words began with k's, then the mnemonic is not remembering. Again, what apperas to have happened is the psychologist has found it difficult to reconcile remembering in the way we usually use the word with a brain model for the remembering; so he has altered

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[92] W. Reitman, "What Does It Take to Remember," in Models of Human Memory, op. cit., pp. 469-509.

[93] Ibid., p. 507.

the scope of the word memory to cover his field of interest only.

3. Wittgenstein

If nothing else, ample reasons have been given for being extremely circumspect when any mediated theory of memory is offered as an explanation of remembering. Physically mediated theories, which emphasize causal connection and physical representation seem only to compound the difficulties of a rational theory. The physical theory, instead of giving legitimacy to the requirement that some sort of mediation is required to beidge the causal gap in the explanation, which if this intermediate is not mental, it must be physical, serves only to expose the difficulities all the more glaringly: The demand for causal connection becomes impossible to fulfill; the idea of a brain trace or information store becomes at best unnecessary; access to memory stores leads to presupposing memory. Likewise, one is dissuaded from accepting an unmediated theory of memory because it appears prima facie unscientific. The bind we are caught in is this: A scientific analysis is conceptually incoherent; a conceptually simple theory is unscientific.

As has been mentioned, we have come to this conclusion, especially in regard to mediated theories of memory, by employing criticisms which must credit Wittgenstein as their source. However, quite apart from Wittgenstein, the first part of this chapter attempted to diagnose a certain preconception of time which has led to the expression of theories in the ways which have been outlined, and which have proved to be so problematic. The renewed investigation of this is the subject of Chapter III. Before this is undertaken, however, it is reasonable to

inquire into what positive claims we may take Wittgenstein to be making about memory. For if he has a satisfactory solution, then the need to inquire into the further implications regarding the concept of time may be obviated. Therefore, Wittgenstein, who has been such a fruitful source of criticism, is the subject of the remainder of this chapter.

In a way, Wittgenstein does not give an analysis of memory, where by analysis we might mean the giving of a set of criteria which must be satisfied for remembering to be said to have occurred. For instance, a follower of Wittgenstein would argue that Martin and Deutscher's intention "to define what it is to remember"[94] is an ill-conceived project. Why? it could be asked. A clue to answering this is Wittgensteins' diagnosis of "our craving for generality."[95] This craving is not in itself pernicious, but it leads us to suppose (mistakenly) that there is a common something which a name, that subsumes a number of comparable activities, actually refers to.

> We are inclined to think that there must be something in common to all games, say, and that this common property is the justification for applying the general term "game" to the various games; whereas games form a family the members of which have family likenesses. Some of them have the same nose, others the same eyebrows, and others again the same way of walking; and these likenesses overlap.[96]

Games can be of many sorts, of course. There are mind games, verbal games, sportive games; there is the game of life, which is less frequently

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[94] "Remembering," op. cit., p. 161.

[95] The Blue and Brown Books, op. cit., p. 17.

[96] Ibid., p. 17.

called a game. We use language to speak about all these sorts of games. As it happens, some of these games, such as the mind game, is susceptible to confusion, if only because it is easy to cheat. If I say that I am imagining that "I left Kant's Critique on the pantry shelf," I may not be imagining anything at all, and still I might be remembering.[97]

Wittgenstein's point is that the language or remembering is full of discordant forms of speaking, one seemingly precluding the other, depending on whether we are concerned with images, behaviour, or language activity. Yet, Wittgenstein wants to say that all such games are really of the same family: "The memory-image and the memory-words stand on the same level."[98] Ultimately, a consideration of memory, whatever our prejudice is in regard to it, uses language, and as such is a manifestation of the use of language:

> Shrugging of shoulders, head-shakes, nods and so on we call signs first and foremost because they are embedded in the use of our verbal language.[99]

Having said this, one might still ask what it would be like for someone to remember something. Here, it is important to imagine the number of ways in which one might be said to be remembering something. For instance, Wittgensetin asks us to consider the "many different processes which we call 'estimating by eye'."[100] This same procedure

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[97] Ludwig Wittgenstein, Zettel., G.E.M. Anscombe, trans. (Oxford: Basil Blackwell, 1967), sec. 649.

[98] Ibid., Sec. 650.

[99] Ibid., Sec. 651.

[100] The Blue and Brown Books, op. cit., p. 11.

applies to remembering; for instance, Malcolm gives a list of possibilities as to what is happening when one remembers that the door was locked.[101] The most mundane examples are the most useful. Consider what it may be like for someone to remember where he set the screwdriver.

1) He curses profusely, rummages across the work table, runs to the medicine cabinet, reaching for the screwdriver as soon as he spots it.

2) He says to himself, "Now I took it out of the tool box, I put the Phillips end on the handle, cut my finger, went to the medicine cabinet—of course, I left it in the medicine cabinet."

3) He puzzles over where he could have put it; he happens to notice the bandage on his finger, and he immediately has a vivid image of the screwdriver on the second shelf of the medicine cabinet, saying, "It's in the medicine cabinet."

Needless to say, the number of descriptions are nearly endless, whether the description simply employs words to describe the remembering behaviour, or reports the use of remembering-language. This immensity of variation raises a concern: "Can a memory-experience be described?" Wittgenstein asks. He answers: "Certainly.—But can what is memory-like about this experience be described? What does this mean?"[102] Wittgenstein's point is that once we have described the remembering, we should guard against falling prey to our craving for generality. Even if we could say something about what is memory-like about the experience, we

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[101] Memory and Mind, op. cit., 128-131.

[102] Zettel, op. cit., Sec. 654.

must not imagine that we have described something common to (and necessary for) particular cases of remembering. We should not expect this any more than we should expect to find a single strand through the length of a rope holding a ship to the wharf, thinking that the ship would not be held otherwise.[103]

Remembering, then, is no more than a name given to a multitude of possible descriptions, some of which describe behaviour, some mental mechanisms, others are merely reports of a person's use of language. "Memory-experience," writes Wittgenstein," are accompaniments of remembering." He continues:

> Remembering has no experiential content.—Surely this can be seen by introspection? Doesn't shew precisely that there is nothing there, when I look about for a content?—But it could only show this in this case or that. And even so it cannot shew me what the word "to remember" means, and where to look for a content![104]

If, then, in this case or that, I cannot say what the content of remembering is since the content is nothing aside from the manifestation of remembering, then it makes even less sense to ask what "to remember" means. If this were all that Wittgenstein's views on memory consisted in, then they could be rejected immediately on grounds which Wittgenstein himself alludes to. For the word "to remember" would be applicable to stones, chairs, humans, dolls, dogs, virtually anything we could think of. The reason for this is that "to remember" refers to such a variety of human activities, from thinking to one's self to fetching what one

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[103] The Blue and Brown Books, op. cit., p. 87.

[104] Philosophical Investigations, G.E.M. Anscombe, trans. (New York: Macmillan, 1953), p. 231.

needs, that, objectively speaking, we could not say that there is anything different between the stone's thinking to itself and the human's thinking to itself, between the dog fetching the stick and the human reaching for the screwdriver.[105] All this shows, I believe, the Wittgenstein is quite sensitive to the charge that he is espousing behaviourism. He argues that he is not denying mental processes (there wouldn't be any remembering at all without them)[106]; what he denies is the analysis of remembering which makes the mental process a datum for the remembering. As Wittgenstein writes: "'There has just taken place in me the mental process of remembering....' means nothing more than: 'I have just remembered....'."[107]

Wittgenstein may not like the charge of behaviourism, but has he altogether escaped the consequences of his views, which would compel us to reject them outright? After all, Wittgenstein may not be rejecting mental processes, but who is to say that a stone does not have a mental process. With his usual poignancy, Wittgenstein directs himself precisely to this problem:

> We say a dog is afraid his master will beat him; but not, he is afraid his master will beat him to-morrow. Why not?[108]

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[105] See, for instance, Philosophical Investigations, op. cit., Sec. 361.

[106] Ibid., Sec. 306.

[107] Ibid., Sec. 306.

[108] Ibid., Sec. 650. There is a curious comparison to be made here with Paragraph of Leibniz's Monadology.

The answer to Wittgenstein's question is that the differences depends on the use of language. Moreover (and this is the significant point), the use of language is not merely a report about experiences, but is actually a kind of experience. Wittgenstein is clear about this:

> "So if a man has not learned language, is he unable to have certain memories?" Of course he cannot have verbal memories, verbal wishes or fears, and so on. And memories etc., in language, are not mere threadbare representations of the real experiences; for is what is linguistic not an experience?[109]

Could we not, however, respond to this by saying that the dog has it own form of language? Perhaps the dog talks to itself. Wittgenstein is particularly careful not to answer this question, pointing out instead that it makes as little sense to say that the dog does or does not talk to itself, basing our evidence on the behaviour of the dog, as it does to say that I am talking to myself, based on the evidence of my own behaviour.[110]

Wittgenstein's solution is to say that it is of human beings that we speak of thinking, feeling pains, having consciousness, and so forth. It is simply a matter of the conventional use of language. He writes: "Only of what behaves like a human being can one say that it has pains."[111] The implication of this is that it is legitimate to use words "pain," "think," etc. when speaking about things other than humans, but it would be a derivative use. For instance, saying that the dog

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[109] Ibid., Sect. 649.

[110] Ibid., Sec. 357.

[111] Ibid., Sec. 283.

looks as if he were talking to himself, is not the same as saying that the dog weighs twenty kilograms. To say that the dog weighs twenty kilograms is an empirical statement; to say that the dog is barking when no other dog or person is about is also observable, but to say that the dog is "talking to himself" is a liberty which I am taking with language. Wittgenstein makes this point in considering machines that may be said to think:

> Could a machine think?—Could it be in pain?—Well, is the human body to be called such a machine? It surely comes as close as possible to being such a machine.
>
> But a machine surely cannot think!—Is that an empirical statement? No. We only say of a human being and what is like one that it thinks. We also say it of dolls and no doubt of spirits too. Look at the word "to think" as a tool.[112]

Wittgenstein is speaking about "thinking," but the same holds true for remembering. It is not an empirical claim that a machine, a doll, or a stone does or does not think or remember. It is rather that the use of the word "to remember" is such that it names a variety of activities manifest in a community of humans (especially linguistic activities). To say that a stone or a doll remembers is not wrong: it either doesn't make sense, or it describes a game which requires a context for any sense to be made of the claim. That is, a word like "remember" can be used usefully in circustances which do not have humans as subjects, and this use depends on the way the word is used in a community of language users.

On the face of it, there seems much to commend Wittgenstein's views. His views are consistent with his criticisms. The spurious activity of looking for entities such as contents of memory, images,

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[112] Ibid., Secs. 359-360.

brain processes, conceived to be necessary for an explanation of memory, are rendered unnecessary. The use of language is an experience in itself, which distinguishes, for instance, humans from dogs. Nonetheless, I believe that Wittgenstein's account is inadequate. I show the inadequacy be drawing on two places in Wittgenstein's writing.

Using one of Wittgenstein's illustrations, suppose we consider the difference between a memory image, an expectation image, and an imagined image.[113] There is nothing introspectable about such experiences which serves to distinguish them, but there are characteristic experiences of remembering, expecting, and imagining:

> Thus we certainly say different things in the different cases, e.g., "I remember his coming into my room", "I expect his coming into my room", "I imagine his coming into my room".—But surely this can't be all the difference there is!" It isn't all: There are the three different games played with these three words surrounding these statements.
>
> When challenged: do we understand the word "remember", etc.? is there really a difference between the cases besides the mere verbal one? our thoughts move in the immediate surroundings of the image we had or the expression we used. I have an image of dining in Hall with T. If asked whether this is a memory image, I say "Of course", and my thoughts begin to move on paths starting from this image. I remember who sat next to us, what the conversation was about, what I thought about it, what happened to T later on, etc., etc.[114]

I take Wittgenstein to be saying that the verbal distinction suffices for the explanation of the difference. So far this is consistent with every-

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[113] The Blue and Brown Books, op. cit., p. 182 ff.

[114] Ibid., p. 183.

thing else that has been said about Wittgenstein's views on memory. We should notice that asking for what distinguishes remembering from expecting or imagining amounts to the same thing as asking for what is particular about remembering that makes it remembering and not something else. Now, suppose we consider a few instances of remembering. We have encountered some already: (1) remembering where I set the screwdriver; (2) remembering whether the door was locked; (3) remembering that the cake is in the oven. Many different descriptions of what is occurring or is said are possible, and they may all be considered to be "remembering where I set the screwdriver"; the same is true for the other cases. There seems to be nothing in common between the three instances of remembering: one deals with screwdrivers, the other with door locks, the last with cakes. Wittgenstein would like to press us into believing that we have the mistaken propensity to believe that a "feeling of pastness" is what unites all these cases of remembering.[115] He would then suggest that this "feeling of pastness" need be nothing more than an expression of pastness, such as saying "long, long ago." We should, however, resist this dodge by Wittgenstein. The reason for this will presently become clearer.

Consider again "remembering where I set the screwdriver." It is true that there are many possibilities for answering the question, "What happened when I remembered where I set the screwdriver?" However, any set of possibilities which could be listed would involve certain pre-

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[115] Ibid., p. 184.

suppositions. In the screwdriver case, one such presupposition is that I am not remembering the location of the screwdriver as a result of possibly forgetting where I put it tomorrow. Another is that I do not remember where the screwdriver is by willing it to materialize before me, being thereby able to get on with my work. Still another is that I do not remember where I set the screwdriver while knowing full well that it was the mechanic who has handling the tools and not I. Such concerns may seem infantile, but they are not. It is easy to see that similar presuppositions hold for remembering whether the door was locked or remembering that the cake is in the oven. Moreover, we were not constrained to choose these three examples of remembering. Really, this is the whole point at issue. We have discovered presuppositions which are common to the various instances of remembering. The three presuppositions with which the screwdriver example has been illustrated relate to temporal order, spatial separation of what is remembered from at least part of the action of remembering, the identity of rememberer and witness. How can Wittgenstein deny these concerns legitimacy in a sense which is not solely a matter of verbal usage, of grammatical investigation? After all, we appear to have excellent warrant for discussing matters which are common to all instances of remembering, and as such this discussion would be distinct from any particular language game, say, one of the building games which occur in The Brown Book. In the Philosophical Investigations, for instance, Wittgenstein seems to admit the possibility of philosophical statements about time, in contrast to the clarification of grammatical confusions such as Augustine's.[116] Unless Wittgen-

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[116] Op. cit., Sec. 90.

stein is simply being facetious, we see that he has no justification for disregarding something which he admits, namely, philosophical statements about time, from a discussion of remembering.

Another illustration of this inadequacy in Wittgenstein's views can be set forth in somewhat a different way. Consider the following passage from Wittgenstein's On Certainty:

> ... in order for you to be able to carry out an order there must be some empirical fact about which you are not in doubt. Doubt itself rests only on what is beyond doubt.
>
> But since a language-game is something that consists in the recurrent procedures of the game in time, it seems impossible to say in any individual case that such-and-such must be beyond doubt if there is to be a language-game—though it is right enough to say that as a rule some empirical judgement or other must be beyond doubt.[117]

At any one time, some of our judgements about empirical facts must be groundless; that is, they are beyond doubt. As Wittgenstein comments, "A judge might even say 'That is the truth—so far as a human being can know it'. But what would this rider achieve? ('beyond all reasonable doubt')."[118]

Now consider Wittgenstein's mention, in Section 519 quoted above, of "recurrent procedures of the game in time." Are we to understand by "time" a word whose use as a substantive is rife with con-

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[117] On Certainty, G.E.M. Anscombe and G.H. von Wright, eds.; Denis Paul and G.E.M. Anscombe, trans. (New York: Harper and Row, 1972),

[118] Ibid., Sec. 607.

fusion?[119] Are we to assume that such confusions concern only the bungled grammar of our locutions concerning past, present, and future?[120] In a way, Wittgenstein is perfectly correct; a case in point is the rich source of confusions promoted by the metaphor that time is a river.[121] In another way, Wittgenstein's inflexible parsimony blinds him to something that seems obvious. He refuses to acknowledge the way, for instance, in which "time" is being used in the expression "recurrent procedures of the game in time." This is not a question about a vague grammatical usage which requires an "'analysis' of our forms of expression."[122] Quite clearly, Wittgenstein is making a statement about the procedural rules of the game changing. This amounts to a judgement about the judgements which we unreflectingly make while engaged in a particular game. How else is Wittgenstein able to make the statement, "as a rule some empirical judgement or other must be beyond doubt."[123] By admitting repetition despite change, Wittgenstein has presupposed "time" in other than a linguistic sense. Essentially, the same conclusion was reached with Wittgenstein's view on memory: We can, indeed, make general statements about what is peculiar to remembering; and if this is true, then

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[119] Cf. The Blue and Brown Books, op. cit., p. 6.

[120] Philosophical Investigations, Sec. 90

[121] See The Blue and Brown Books, op. cit., pp. 107-108.

[122] Philosophical Investigations, op. cit., Sec. 90.

[123] On Certainty, loc. cit.

it follows that remembering is not merely a linguistic phenomenon in spite of the fact that we must use language to speak about it. For instance, we could say that a physicist plays a game. He might play the sub-atomic particle game, the earth physics game, or any other number of games. It is possible for this physicist to enquire into the game playing of physics. When he does this, he would best be called a philosopher of physics. In a sense, Wittgenstein is denying that there exist philosophers of physics; or if they do exist, they deal with confusions only.

Seen from another perspective, Wittgenstein's violent aversion to metaphysics is as much a denial of the usefulness of the distinction between language and metalanguage. Just as the semanticist aims at making statements in the metalanguage about L, a variable ranging over all possible languages, so a metaphysician aims at making valid claims which are based on a history of human beings making statements about the world in which they find themselves. It does not follow that metaphysics is nonsense because some metaphysicians have succumbed to grammatical confusions in scientific guise.[124] Moreover, it has been shown that even Wittgenstein is forced to make claims which can only be described as metaphysical, despite his assertion that metaphysics serves only to lead the philosopher into darkness.[125]

At this point, it is useful to give a brief review of what has

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[124] The Blue and Brown Books, op. cit., p. 35.

[125] Ibid., p. 18.

been accomplished in this chapter. The first part of the chapter, which dealt with issues concerning time, attempted to show that a certain preconception of time, what I have called the cosmological conception, is difficult to reconcile with remembering. In fact, a more careful analysis of terms like "event" and "casuality" are called for. The sections that follow on unmediated and mediated theories of memory demonstrate that theories of memory which presuppose the cosmological conception of time, are so full of difficulties as to be virtually incoherent. However, the criticisms launched against unmediated and mediated theories of memory suggest a parsimony in regard to metaphysics which appears to vitiate the suspicions raised regarding terms such as "time," "causality," and "event." Specifically, Wittgenstein's solution involves nothing more than the clarification of grammatical confusions. The last section of this chapter has shown that Wittgenstein's views are inadequate. The need for a more metaphysical approach is thereby vindicated. Having said this, the thrust of the following chapter is to examine, at least in a preliminary fashion, the implications that the foregoing analysis of theories of memory has for the metaphysical concepts mentioned.

III

Memory, Time, and Persons

Thus far three major points have been emphasized. They are that the phenomenon of memory presupposes a remembering person, that exclusive reliance on the cosmological conception of time makes it impossible to give a coherent theory of memory, and that a metaphysical direction is suggested strongly by the failure of empirical theories of memory.

These conclusions have been arrived at through default. Both the common sense approach and the theoretical appraoch have indicated rather than demonstrated them. The present chapter attempts to show that presupposing a remembering person, enduring over time, is an ontological claim. In a sense, the chapter both begins and ends by considering the existence of the person to be fundamental, the bulk of the chapter being comprised of analyses of basic terms such as causality and event. As such, the analyses of basic terms constitute both an explication of the implications of the existence of the person and entail the existence of the person. The dual nature of these analyses will be seen to be consistent with the conception of metaphysics which is to be elaborated. It will emerge that on the one hand the existence of the person requires explication; on the other hand, the explication, by attempting to resolve descriptive ambiguities, will entail the existence of the person.

1. Metaphysics

The characterizations of the diverse modes of remembering as well as the criticisms of theories of memory have presupposed the person as enduring over time. Using memory as a distinguishing characteristic of persons, we are led to the problem of attempting to understand the sense in which that orgainism which is able to remember is temporal. Throughout, both this conclusion and the problem have been punctuated with the claim that a metaphysical understanding is required. There fore, an elaboration of what is meant by metaphysics and how it relates to the problem at hand must be prior to any subsequent considerations.

There are two contrary attitudes towards metaphysics which are inaccurate, but they will lead to an adequate conception. They are these: (1) Metaphysics is the highest form of generality concerning the objects of experience. (2) Metaphysics transcends the empirical.

Regarding the first attitude, if metaphysics concerns the highest form of generality, then there is no distinction as to kind between a metaphysical statement and a scientific generalization since a scientific generalization can also be conceived to be a natural law, which in turn may be thought to be the highest form of generality. Thus, if scientific generalizations give conflicting descriptions, then the aim of metaphysics, which would be to resolve conflicts of description, could not be achieved. Consistent with this conception of metaphysics is the belief that there is an ultimate reality which the metaphysical system will describe. However, on this conception of metaphysics, if scientific generalizations conflict, then the highest generalizations of metaphysics will also conflict since they can only be conceived as being

generalizations concerning the objects of experience.

The second attitude recognizes that the aim of metaphysics is to resolve conflicts of description. The resolution of such conflicting descriptions of experience occurs on a level which is not that of experience, where experience is understood exclusively as perception. Thus metaphysics is said to transcend the empirical. The "ultimate reality" becomes inverted, as it were, conferring itself on the judgements made in the course of metaphysical thinking, and not on waht is designated by description. The judgements made in the course of metaphysical thinking, because they transcend experience, lose their relation to experience; they become independent of empirical generalizations. This independence and priority of metaphysical thinking entails that those empirical generalizations which may be made in the future must be restricted or structured by the metaphysical system which has been developed. Thus conflicts of description are never genuine, but they result from the peculiarities of human reasoning. (Hidden here is the assumption that there is an ultimate reality, but, as ultimate, it is unknowable.) Accordingly, if conflicts of description are nothing other than necessary complements of the use of reason, then metaphysical conclusions can never be more than truisms: the problem is equated with its solution, as by saying that the mind/body problem can be resolved by realizing that the person can be understood under two separate aspects.

Both these attitudes towards metaphysics have something in common. They presuppose an ultimate reality which in the one case is knowable, and which in the other case is unknowable. In the latter case, since an ultimate reality is assumed, but it is held to be unknowable,

the ultimate reality, as knowable, is ascribed to the reasoning process. These two attitudes mark the metaphysics of realism and idealism.

It is a mistake, I believe, to characterize metaphysics through any initial appeal to ultimate reality. The subject of metpahysics relates simply to those principles which aim at resolving descriptive ambiguities. If, from the beginning, we detach ourselves from any opinion regarding ultimate reality, the characterization which has just been given encompasses the points of merit in both the realistic and idealistic attitudes towards metaphysics, without falling prey to the negative consequences. Firstly, if metaphysics supplies principles which aim to resolve descriptive ambiguities, then the objects of such principles are the scientific generalizations about experience, or, with greater generality, those statements whose truth or falsity is decidable. Secondly, while maintaining that the objects of metaphysical principles are empirical, there is nonetheless a distinction drawn between the metaphysical principle and the empirical generalization. It makes sense that a principle which aims to resolve a descriptive ambiguity should not itself be another description of experience.

A common attitude towards metaphysics is that it is a term which describes barren, abstract thinking, nonsense uttered seriously. This is justified unless an explanation can be offered of what is meant by the resolution of descriptive ambiguities. Flatly, I can say that the resolution of descriptive ambiguity is the explication of the existential status of the described existent. My reasoning behind this is the following: Descriptive ambiguities, whether of the mind/body problem, wave particle duality in physics, or relating to simultaneity understood

relativistically or according to the token reflexive "now," are not resolvable by appeal to superior descriptions; for one description is never rejected on the strength of another description alone. (Only a concept such as "explanatory scope" could permit this, which is not itself an empirical generalization.) Metaphysics resolves such descriptive abmiguities by positing, for instance, the existence of the person so describable, the existence of the entity describable either as a particle or as a wave, or the existence of the universe describable relativistically or definable instantly as I say "now." Metaphysics is not a description of ultimate reality; rather, it is the positing of that in virtue of which description is possible, giving it the predicate "exists." So, it is not so much that the subject of metaphysics is ontology as it is that metaphysical thinking is ontological. The manner of existence is then explicated in terms of the most general features of description, such as time, space, and causality. This reasoning appear to me to be correct, and the foregoing provides an adequate conception of metaphysics in so far as it makes the minimum necessary distinctions while keeping metaphysics empirically relevant.

Now, if metaphysics is such as I have outlined, then it may be asked, Why is metaphysics necessary for an understanding of memory? Essentially, the answer to this is simple. Where there is a descriptive ambiguity, and the ambiguities are not merely verbal quibbles, then there is a need to reconcile such ambiguities. If the analysis of memory leads to ambiguities of terms and concepts, then a metaphysical appraoch is required. It remains only to review how memory leads to ambiguities, to show how it necessitates the existence of the person, and to indicate

which concepts require explication in the context of memory and the existence of the person. The remainder of this section undertakes a review of the ambiguites involved.

1. Throughout, it has been stressed that memory is in fact a performance: "remembering" is basic (not storage). It follows that remembering is a performance by an organism, a manifestation of what the organism, especially the human organism, does. This aspect of remembering is too frequently overlooked. One would be less inclined to compare human memory to computer cirucits, for instance, if it were realized that skilfulness and incapacity due to disease (e.g., mnemotechnics and Korsakoff syndrome) were constituents of what is meant by "a person remembering."

2. Of course, there is more implied in the performance of remembering than the performance itself: The human organism is capable of performing in the present such that the present performance is not only conditioned by events in the past, but is often the consequence of a particular and unique event in the apst. In addition, since the remembering process is separable from any action which can be said to result from the remembering, then such an act, which we assure ourselves is physical, has as its proximate physical cause, the unique event in the past.

3. The two preceding points lead us to a seeming impasse. A biological organism must be, if biology is to proceed at all, a mutually dependent set of continuous processes. Take any biochemical state of the organism at all, and it must have an immediately antecedent state, such that a state description is possible at any point along a continuous

physical process. For instance, it is just incredible to imagine that I can will to raise my arm without some stimulatory message being sent along a nerve to the muscle of my arm. In this case, the diverse ways in which "without" could be interpreted would lead to all the traditional solutions to the mind/body problem. In the case of remembering, however, the proximate cause is an event in the past. In fact, the proximate cause may be a particular and unique event in the past. It is precisely this sort of reasoning which leads some to speak of "causal gaps" or "mnemic causation." This would be compatible with some form of idealism. What is to be noticed is that both directions exploit the concept of causation.

4. Thus one principal ambiguity is to understnad what is meant by causation. However, if "causation" means a relation between particular entities (physical ojbects, events, individuals and properties), such that a full description of the interaction involves laws and presupposes a structure for the ordering of the related entities (i.e., the ordering of physical objects is asymmetric and transitive), then we are examining actually, ambiguities that relate to the concept of time.

5. If in one sense the process of remembering itself is an event, and in another sense remembering is of an event, then we are led to consider the sense in which we can speak of the temporality of remembering, attempting to discover what is presupposed by it. It is perhaps most striking if the question is phrased this way: What is the temporality of the organism which is able to remember, that is able to make correctable statements about the past (and predictions about the future)?

Accordingly, the first concept to be clarified is that of causality, and this is the subject of the part that follows. As may be

expected, it will be found that the difficulties over causality relate to preconceiving time in the cosmological sense, exclusively. After inquiring into the ontological status of events, the final part of this chapter will attempt to draw some of the implications of the possibility of there being any remembering at all.

2. Causality, Law, and Translation

In chapter II it was concluded that time, considered to be a dense succession of instants, such that between any two instants there exists another, is a suspicious preconception. The reason for the suspicion is not that a scientist who undertakes a time-series analysis of a physical phenomenon, such as the concentration of algae in a pond, is performing a frivolous exercise. Rather, the suspicion arises because the preconception is allowed to influence what is and is not to count as legitimate causal relation. If one understands that any two relata of a causal relation are particular and unique, re-enforcing this with the realization that the cosmological conception of time is not a priori but is a sophisticates supposition, then it should not be surprising if it were claimed that whatever occurs on the microscopic level, relative to the causal relation in question is but incidental and not relevant to that causal relation (in a sense to be explained). If, for instance, the moment of grief caused the hour of despair, then the microbiology of the body tussues at the time, is irrelevant to the particular causal relation.

These bald claims may appear unconvincing because there seem to be counterexamples that are all to obvious. Consider the following: If a certain weed-killer is advertised as having the capacity to kill all weeds of a certain type; it is easy to conceive that one day we discover a weed which meets all the criteria for that type, but it is not killed by the weed-killer. One option is to juggle the criteria for weed-type in order to eliminate the counter instance to the causal claim that weed-killer X causes all weeds of type Y to die. Such a procedure has a difficulty, however. The diffiuclty is that there is a certain descriptive arbitrariness about such criteria juggling which may eventually do violence to

our intuitions about what do and do not belong to natural kinds, although, of course, long established criteria may lead eventually to our speaking of a natural kind which was once thought quite an unnatural kind (e.g., the sun and stars are of a kind, but they were not a kind for the ancients). In any case, the point is that it is much more frequent to take a scientific appraoch to the resolution of the weed-killer problem, namely, that we should search for the biophysical difference between the weed that the weed-killer does not succeed in killing, and the other weeds of the weed type.

In view of this, how then can I claim that the micorphysical is not relevant to the causal explanation? This objection rests, actually, on a confusion which conflates two senses in which the concept of causation has been used. There is a difference between particular events, objects, etc. being related causally, and general statements about causal realations. Consider:

(1) The moment of grief caused the hour of despair.

(2) Brand X weed-killer causes weeds of type Y to die.

(1) uses definite articles to indicate that singular referring terms are being related. (2) is phrased in terms of types, and a counterexample to it must in turn be reconciled with the original causal generalization by resorting to a generalization about what is typically, biophysically distinct about weed type Y. If it happened only once that a weed of type Y did not die on application of the weed-killer, the scientist could make no use of such information.

Nonetheless, something must still be said about the incidental occurrences which are deemed irrelevant to the causal relation between

particular entities. If I tell someone that thinking about it caused me to slam my fist on the table, there is no doubt that to accomplish this there must be an arm, nerves in the arm, a brain, electrons in the universe, and so forth. These, however, are not causes of the thought, nor of the slamming of the fist, nor are they causes of the thought causing the slamming of the fist. Thinking these to be causes amounts to being able to understand the meaning of the cause of a cause, which I believe is meaningless. In this example, the general statement that there are brains or electrons has no causal efficacy; in fact, any causal relation between particular entities supposes a myriad of conditions which amount, in a way, to saying that one cannot claim a causal relation between particular entities without presupposing a world in which they obtain. Thus there are numerous conditions for any causal relation between particular entities, and these conditions are only confusedly referred to as causes—except, of course, when we are discussing causal generalizations, which purport, in a way, to be a kind of timeless discourse.

"Timeless discourse" is, however, artifactual. It means only that the same symbols can be used over and over again for the purpose of referring. An agreement as to the conventional use of symbols is thought to be timeless because of the constancy of the conventions, the rules, and so forth. However, the constancy is temporal rather than timeless because the constancy relates only to the repeated use of the rules and conventions. The manifestation of language, even to invoke a law of nature, is temporal. For even a law of nature is meaningless except as being instantiated repeatedly.

The cosmological conception of time is of a piece with the sort of timeless discourse which leads us to speak of causal gaps. Instant by instant succession attempts to legitimate the confused demand that the conditions for a causal relation obtaining between particular entities, be considered a species of cause. There is no justification for this except in dealing with causal generalizations, wherein any exceptions may indeed demand a consideration of the causal nexus of the constituents hypothesized (in general) for any actual instance of a type of entity (for instance, the case of the hardy weed).

At this point if the discussion, the question of lawfulness enters. When shall we speak of a causal interaction being lawful or nomological.[1] To begin, it is clear that a causal generalization presupposes a number of laws. For instance, if I did not accept a simple law of soil mechanics that liquids seep into the ground, then I would have no reason for supposing the generalization that the weed-killer would cause the death of a certain type of weed. Indeed, one law may be subsumed under another: forgetting our sophistications for a moment, the soil seepage situation is subsumed under the law that what goes up must come down. What is relevant to understanding memory, is whether one can speak of law or set of laws which cover, so to speak, the causal

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[1]What follows concerning the law-like character of causal relations is motivated to a large extent by Donald Davidson's "Mental Events," reprinted in the collection of his papers Essays on Actions and Events (Oxford: Clarendon Press, 1980), pp. 207-227. Davidson's purpose is to reconcile freedom and determinism; my purpose is to focus on what is peculiar to a mental event such as remembering.

relation between particular entities. Surely, this is very often the case. The statement, "I push this book off the table, and it falls to the ground," instantiates the law of gravitation, which postulates a certain attractive force between any two bodies with mass. However, is there a law which covers the following situation: I witness a certain grievous incident; I remember it; I slam my fist our of despair? There appear, in this case, to be three events which are causally linked.

Let us suppose that there is a law (perhaps a very complex one) which covers the causal chain just mentioned. Then it follows, assuming that remembering has certain manifestations such as verbal reporting, that the causal chain is compatible with some sort of behaviourism: Witnessing grief-type incidents may cause remembering which may cause fist slamming-type behaviour. Thereby, we have translated the initial claim which concerned particular and unique events, into a general statement which can be understood to be a sort of psychological law. In other words, event-descriptions have been substituted for singular referring expressions, that is, for the events themselves (a controversial issue which will be taken up later).

Suppose, however, that we have reasons for rejecting behaviourism (as in Chapter I), such that we are not satisfied with the law-instantiating translation which has been offered for: the incident, the remembering, the despair. The other direction which may be taken to ensure that some law or other is being satisfied is to revert to micro-physical explanation. This, however, again mistakes the conditions for the causal relation between particular events to be causes of those events. We have already rejected this. Therefore, if the relation

between particular and unique events is not identical to the restatement of that relation according to types of events, and if the causal relation is independent of the law-instantiating character of the microphysical processes that are the conditions for the causal relation, then one is forced to conclude that the relation between particular and unique events cannot be said to be law-like.

This is not a matter of complexity, as if to say that the relation is not law-like because we do not know all the details. Filling in the details would again amount to prescribing that the general conditions are connecting causes, a view which has been rejected. Only if complexity does not entail uniqueness can it be said that the causal relation is law-like or not law-like due to our lack of knowledge of the complex structure. For instance, I may fail to predict accurately the motions of two billiard balls after a collision because I had no knowledge of the spin of one of the billiard balls which imparted an extra amount of energy to the other during the collision. The motions are "not" law-like by virtue of my ignorance. However, the motions of these two billiard balls can be siad to be or be "not" law-like because the complex interactions can be duplicated with the same or other billiard balls. Even the description of an event in the sky must be a repeatable description for it to instantiate a law. A mental event such as recalling a certain experience exemplifies a situation in which complexity entails uniqueness, and so I conclude that it is unmeaning for it to be described as law-like or not law-like since it is not a question of epistemological grounding.

The expostulating critic may retort that "everything" must be subsumed under law; the very fact that the cosmos is order rather than

disorder, knowable rather than mystery, the very fact that we have been successful at prediction and control, must point to the harmony and uniformity of nature. Such a retort is forceful, but it commits itself mistakenly, I believe, to the view that event-descriptions are the same as the events themselves. There is no reason to believe that because persons are capable of using language for the purposes of description, "everything" that is designated by language must instantiate a law. Nevertheless, if one does hold that "everything" must be subsumable under a law or set of laws, then one is forced to say that everything that is designated by a description instantiates law. One should recognize that it is the descriptions themselves which instantiate laws, not what is designated by those descriptions. When the bomb exploded over Hiroshima, no one saw $E=mc^2$ inscribed in the mushroom cloud; rather, a description of such an event instantiates the law $E=mc^2$. The point is that when it comes to particular events, there is no guarantee of any kind of repeatability, and for those events which are particular and unique, it makes no sense to speak of them being either law-like or not law-like since they are neither repeatable nor, I think most would agree, random. What are repeatable are the general statements of conditions, but, as has been argued, these conditions are incidental or ancillary to the event, for instance, of my remembering the grievous incident being the cause of the event of my slamming my fist on the table.

Another way in which to look at the question of subsumption under law is to recognize that a law, of itself, has little use unless the initial situation is specified. Such "initial situations" are not specified by the law unless intellection were construed to be a process

of creation (actual material creation). Since laws are "timeless" in the sense that they can be invoked any time we please, then the universe could be understood to be a kind of plethora of "initial situations" that were and could be the initial situations for the use of a law as an explanatory tool. It is the very nature of description (especially description understood as being law-like) to obliterate the unique particularity of that which existed, exists, and will exist, where existence is understood in the sense of duration.[2] And it is precisely this sense of temporality, as almost history or biography, that is exemplified in the causal relations between those events which are typically described as mental (prominently in remembering).

Thus far, we have reached the conclusion that the causal relation between events, at least one of which is particular and unique, is complete in the sense that the general conditions for there being such a relation do not enter as connection or subordinate causes. The question of time is related to that of causality; for if time is understood to be the ordering of entities, an ordering which is directed or irreversible, and which is nonetheless so understood at every definable instant, then time is the manifestation of the ordered entities, and again time is manifested in the entities hypothesized to occupy each definable instant. Conceiving time within time, as this view requires, is at best unnecessary. At worst, this conception has led to the regresses in theories of memory, where it was thought necessary to give remembering on the experiential

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[2]The theme, at this point, is clearly Bergsonian.

level a microphysical solution.

Furthermore, that a certain form of causal relation is not describable as law-like stems from the uniqueness of the events related. the idea of uniqueness accords with the existence of the person, understood from the empirical side as duration or from the metaphysical side as existence posited in virtue of descriptive ambiguities. For existence is always concrete, and can only be general if understood linguistically, as a word.

The question of translation (that is, reduction) now figures prominently, for in effect the cosmological conception of time actually encourages one to adopt a certain form of language for the purposes of explanation. What, one may ask, is the motivation for the encouragement received from many philosophers to translate mental-description into physical-description? (That I am using the terms "mental-description" and "physical-description" betrays one of my own presuppositions: Whatever can be said truly to exist is independent of <u>how</u> I describe it.) Again, the motivation for reducing one form of description to another can be traced to having (uncritically) a cosmological conception of time, exclusively. It is thought that if one cannot specify what has happened at each instant (or how, at least, it is to be done in principle), then only an incomplete explanation has been offered. Searching for a specification of what happens at each instant is, however, the same as taking the general conditions (those necessary for a causal relation to obtain between particular and unique events) to be causes. This, as has been shown, is a mistake. Quine himself is admitting this same point, essentially, when he speaks of the indeterminacy of translation: There

just are not enough basic observation statements in common between the user of mentalistic language and the user of physicalistic language that would justify the acceptance of the hypotheses of one language over the hypotheses of the other language.[3] So far as my analysis is concerned, this is the way it should be; for if translation were the goal of philosophy, and no translation could be said to be preferred, then it would follow that all explanations would be incomplete in principle, if by translation were meant translating from one from of description to another, such as from psychological to behaviouristic, to physiological, to chemical, to atomic . . . . This, surely, is absurd since complete explanations abound. For example: Why did the dog yelp? Someone closed the door on its tail. Moreover, if a certain translation be preferred, for instance, observables and logic, then an explanation on that level of description would prove inadequate.[4] The only option is metaphysical: to posit existence and then to explicate the descriptive ambiguities according to principles which are metaphysical in contrast to descriptive.

Another example may serve to make these points clearer, while again offering a possible mode of objection to the appraoch which I have taken. Consider the case of a person who ingests a certain mushroom, and this mushroom causes the person to have remarkably vivid remembering.

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[3] See Chapter II of W.V.O. Quine's Word and Object (Cambridge, Mass.: M.I.T. Press, 1964).

[4] A full justification of this point is beyond the scope of this essay, but numerous analogous situations have been covered, as with the psychological, behaviouristic, phenomenological, empirical and Wittgensteinian approaches to memory.

There appear to be two causes here: the past experience which is necessary for there to be any remembering at all of that experience, and the physiological effects of the active constituent of the mushroom. How, it may be objected, can I suggest that the person's physiological condition is irrelevant to the causal relation between the past experience and the remembering of that experience? Surely, the mushroom is causing, by way of altering body chemistry, the remembering.

Once again, the point relevant to this example is the distinction between the conditions necessary for there being any remembering at all, or for there being one kind of remembering rather than another (in this case, unusually "vivid" as opposed to "normal"), and the particular experience which is the cause of the remembering of that experience. The fact that such-and-such is remembered has as its proximate cause the fact that such-and-such was once experienced, and it remains undisputed that the vividness of this remembering may never have occurred without the conditions being as they were, namely, the body chemistry being altered due to the ingested mushroom. Mushroom ingestion causes a repeatable condition of the body; after all, one could ingest mushrooms daily or weekly. However, the mushroom does not produce the same memory any more than sleeping produces the same dream; nor is it plausible, as one would be forced to conclude, that next year's mushroom could not yield a memory that was of an experience between now and then.

This leads to the other conclusion which has been addressed, namely, that for causal relations between particular and unique entities, there is no clear sense in which one can speak of their being lawful. Mushroom states of the body have descriptions which can be used quite

generally whenever a mushroom is ingested (chemical X produces changes in the central nervous system, and so forth). There is no doubt that chemical laws are insantiated by each use of the description. It must be borne in mind, however, that one cannot be quite certain that molecule such-and-such follows the precise path (or one identical to it) that it did the last time, but this is not so important. The point of importance is that the law is indifferent to the individuals, descriptions of which satisfy the law.

Now, the opposite is true of remembering. The particular and unique event is all important. I do not remember sitting on "the-aqueduct-in-general"; but I do remember, "more or less," "sort of," "in general," that I did once sit on the aqueduct. The event of sitting on the aqueduct is particular and unique. If we think of a law as a generalization which is beyond doubt, the predicate "law-like" is just not predicable of instances of remembering. Furthermore, if Chapter I is correct in maintaining that recognition and retention both presuppose what is presupposed by recollection, then this conclusion is general with respect to remembering.

3. Events, Facts, and Remembering

The phrase "proximate cause" has been used to relate the manifestation of remembering to what the remembering is of. The question now arises as to how precisely we are to understand the relata of such a causal relation. Is remembering, for instance, a relation between events or facts? In either case, is it amenable to a sentential analysis?

The significance of these questions draws from the fact that the manifestation of remembering (the report, the musing, the thoughtful pasue before action, etc.) has been construed, up to this point, to be an event; and, most frequently, the relata of a causal relation are understood to be events. Furthermore, since events are considered generally to be particular and unique, then "event" seems the relevant term requiring clarification, at least in so far as it relates to remembering: actions, rememberings, musings, Jones' exhibition of a certain habit, and so forth. Therefore, the motivation is that getting clear on events will assist in the clarification of remembering understood as a chain of events.

This direction is complicated by the fact that there is presently a dispute amongst linguistically-minded philosophers about the status of events; and this was the motivation for the introductory questions as to whether the relata of the causal relation should be taken to be facts or events, and whether or not events can be eliminated in favour of facts. Accordingly, three sample positions in this dispute are given below. They will leed ultimately to a justification, on practical grounds, for the use of "events" and "event-descriptions" when speaking about remembering.

Donald Davidson argues that there are good reasons for holding that events are entities.[5] The reasons he gives are that a theory of action seems impossible without postulating events; that explanations for which variant descriptions are possible, have those variant descriptions in virtue of designating the same event; that the notion of identifying mental events with physical events only makes sense in virtue of events being individual entities.[6]

Terrence Horgan attacks Davidson by launching criticisms against each of Davidson's arguments for there being events, hoping to have shown that it is possible to eliminate all reference to events. Horgan takes this one step further by arguing that if our aim is to develop a parsimonious ontology, then it would be well to say that events just do not exist.[7]

On the other hand, Neil Wilson argues that events are truncated facts.[8] Moreover, atomic facts are not to be taken to be merely conventional, but they have a certain form entailed, I presume, by what

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[5]Donald Davidson, "The Individuation of Events," reprinted in Essays on Actions and Events, op. cit., pp. 163-180. Originally published in N. Rescher, ed., Essays in Honour of Carl G. Hempel (Dordrecht: Reidel, 1969), pp. 216-234.

[6]D. Davidson, "The Individuation of Events," Essays on Actions and Events, op. cit., pp. 164-165. Davidson's main argument for there being events occurs in his paper "Causal Relations" (same collection). The outline of the argument will be presented in what follows.

[7]Terrence Horgan, "The Case Against Events," Philosophical Review, LXXXVII (1978), 28-47.

[8]N.L. Wilson, "Fact, Events, and Their Identity Conditions," Philosophical Studies, XXV (1974), 303-321.

Professor Wilson calls a "universal metaphysical truth":

> "If x has property Q at time t, then there is a place P such that x is at P at t."[9]

Thus an event is a truncated fact in virtue of not having a specified time. Notwithstanding, in the penultimate section of his paper, Professor Wilson courageoulsy recants his theory that events are truncated facts, recognizing that what is truncated is the event-description, not the event. Therefore, according to Professor Wilson, we just are not dealing with different entities. The problem lies with language that makes it seem as if we are. Ultimately, Professor Wilson's appeal is to the difficulty of distinguishing events from facts, which then necessitates that we should paraphrase event-talk out of language. Professor Wilson's reason for paraphrasing event-talk rather than fact-talk out of language is, it seems, that facts are for him true propositions, and thus the clarity and resources of a logical analysis can prevail.

As can be seen, the controversy focuses on whether events should or should not be understood ontologically. This is particularly significant from the point of view of the analysis of remembering because the aim is to offer an explication of the phenomenon such that its ontological implications are brought to the fore, as a correlate to positing the existence of remembering persons in the light of descriptive ambiguitues. In addition to this, there is a parallel between events and remembering in so far as both have been said to be particular and unique. However, a few distinctions are both helpful and necessary.

One should be careful to distinguish between events, which are

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[9] Ibid., p. 312.

particular and unique, and event-descriptions, which are quite general (we can quantify over them). Davidson, who adopts this view, is then compelled to give a criterion for event identity. Simply stated, an event is the event it is by being fitted into a particular causal chain. Davidson's formulation is the following:

> (x=y if and only if ((z) (z caused x↔z caused y) and (z) (x caused z↔y caused z)).[10]

There are affinities between Davidson's formulation of event identity and remembering: There are those cases in which a certain experience in the past is the cause of a certain manifestation of remembering, and the manifestation of remembering brings about a certain action as a consequence. However, the manifestation of remembering itself is in one sense particular and unique, and in another sense it is particular but not unique. I can remember the same thing virtually any time I like. This is true even in cases of so-called "remembering-how," where the learning is a kind of causal "accumulation" of particular and unique events, and the remembering-how (for example, how to sketch, how to ride a bicycle, or how to throw darts) is an ability. We cannot, in a sense, say that this ability is unique because we can remember-how any time we please or any time that the occasion calls.

Thus the manifestation of remembering itself has more the character of an event-description or an ability (an ability even in the sense of being able to provide an event-description)—in short, it is a

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[10]"The Individuation of Events," op. cit., p. 179.

manifestation caused by a particular and unique event or set of such events, which in turn may (as a possibility) lead to, that is, cause, other particular and unique events (usually actions).[11] Of course, we must bear in mind that to speak of a particular and unique event in a causal sequence is, according to the sense in which I have spoken of time, to introduce again the question of the temporality of remembering. Before pursuing this line, which will lead to the central, if unstartling, thesis of this essay, we must make a case for events, or at least we must indicate that the dispute over events is largely a quibble. To do this, I will return to the three authors already mentioned, showing that talk about events is necessary if only to avoid throwing certain important concepts into obscurity.

Actually, it does appear that event-descriptions can be paraphrased out in favour of a sentential calculus of individuals, properties, connectives, quantifiers, and times. In this respect, I believe that Professor Wilson is correct. But there is a price to be paid for this. The price to be paid is that the sentential calculus which we employ must then introduce rather unusual sorts of connectives. We can get at this by outlining Davidson's main argument for there being events:[12] Suppose (1) "The short circuit caused the fire" is rendered sententially as (2) "The fact that there was a short circuit caused it to be the case

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[11] For similar views to these, see Davidson's "Actions, Reasons, and Causes," Essays on Actions and Events, op. cit., where he argues that giving reasons is a species of causal explanation.

[12] "Causal Relation," op. cit., pp. 152-153.

that there was a fire," that is, as two facts flanking a connective. (2) is not truthfunctional; simply interchanging "there was a short circuit" and "there was a fire" shows this. Davidson then offers an argument showing that (2) satisfies all the conditions that should allow one to conclude that (2) is truthfunctional. From this contradiction, Davidson concludes that (2) is not the correct translation of (1); in other words, we cannot get rid of events by translating them into facts.

Horgan argues that (2) is a translation of (1) provided we allow for the "non-truth-functionality of the causal connective."[13] Thus the price one pays for eliminating events is the introduction of n w sentential connectives. However, if this follows, then it would be improper to argue for the elimination or non-existence of events on the basis of ontological parsimony.[14]

Professor Wilson recognizes that if we wish to give a sentential analysis, then times must be specified. Thus, he adapts Davidson's example that the flipping of the switch alerted the prowler, translating "A alerted the prowler" as

> "$(\exists \underline{V})(\exists \underline{t}_1)(\exists \underline{t}_2)$(A did $\underline{V}$ at $\underline{t}_1$ & the prowler became alert at $\underline{t}_2$ and the prowler became alert at $\underline{t}_2$ because A did $\underline{V}$ at $\underline{t}_1$),"

where "V" ranges over one-place basic actions such as "flipping the

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[13] "The Case Against Events," op. cit., p. 35.

[14] See Andrew Altman, Michael Bradie, and Fred D. Miller, Jr., "On Doing Without Events," Philosophical Studies, XXXVI (1979), 301-307. The first part of this article offers a clear exposition of Davidson's argument above.

switch."[15] The events have been eliminated; there remain individuals and properties. To be noticed, however, is the introduction of the connective "because" and what I shall call the time-labels t_1 and t_2.

The clarity which Professor Wilson achieves with his sentential paraphrase serves, I believe, to throw something else into obscurity; and it is precisely what is captured by the use of the term "event" which is being obscured. Professor Wilson warns correctly that "the causing of . . ." is not itself an event. However, his use of the connective "because" already betrays the fact that we are dealing with a temporal direction which is irreversible. The numbers t_1 and t_2 tell us nothing about this by their magnitude because their use is conventional. Person A can never, so to speak, "take back" his alerting of the prowler. As well, let us consider the use of the time-labels t_1 and t_2: they indicate that numbers in some system of measure are being correlated to certain actions. "... . did V at t_1" means that t_1 would appear, be counted, be uttered, be written, etc. during the occurrence of action V. In other words, the ascription of time-labels is independent of the duration of the action, and this is precisely what is implicit when one speaks of an event, an event having duration in that it is individual and yet temporal. (That is, events are not in time, but are temporal.) So far as I can see, duration, which may better be referred to as existence, is not ontologically negotiable depending on which language one

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[15] N.L. Wilson, "Facts, Events, and Their Identity Conditions," op. cit., pp. 318-319. Davidson's example is from his essay "Action, Reasons, and Causes," op. cit.

adopts. The difficulty lies, I think, with the existential quantifier, which is easily interpreted as postulating only the possibility of giving a measure, saying nothing about duration. The upshot is that sentential analysis serves only to clarify events, not to eliminate them. We may conclude, for instance, that it must be possible to give all events a time-label. But this does not entail that the concepts, an understanding of which is facilitated by event-talk, can be dispensed with. In fact, it seems that the reductionist program tends to obscure the idea of existence or duration entirely. This, however, is reductionism at its worst. Generally, the effort to eliminate dogmatically a certain form of speech (for example, event-talk in favour of fact-talk) is mistaken, if only because there is no advantage, ontologically, to be gained by such a translation. Moreover, if translation has no advantage, then it follows that we are permitted to use coherently whichever language suits our particular enquiry: what is implied by any language whatsoever must be the aim of what could be called a meta-enquiry; for instance, time and duration are implied by both event-talk and fact-talk. Therefore, the dispute over which language it is proper to employ is a quibble if, as I have supposed, the reality being described is in a sense independent of the language being used for description.[16] According to the conception

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[16]The evolution of language should be distinguished from there being several competing languages at the same time. Metaphysics relates to the latter. The former is mostly a matter of history, wherein the problem of resolving descriptive ambiguities does not arise unless one is attempting to conceive again, and sometimes in relation to present concerns, the metaphysics of a certain period.

of metaphysics which has been developed, "the reality being described" must be understood in the sense of explicating posited exsitence according to the most general features of description (e.g., time), the explication in turn having ontological implications.

4. Remembering, Time, and Persons

If I mull over what happened yesterday, I am said to be remembering. Mulling over something takes time. Thus we may be inclined to conclude that remembering takes time. However, in the last section we came to the conclusion that the manifestation of remembering is more of the character of an event-description of an ability, even in the sense of being able to provide an event-description. If remembering takes time, and if "taking time" can be understood in terms of having duration, then what is meant by the duration of an event-description or an ability? It is not clear, in this case, what is to be understood by duration.

Wittgenstein is astute on this point. Intending, believing, hoping, understanding,[17] do not have what Wittgenstein calls genuine duration ("echte Dauer"). He writes:

> Intention is neither an emotion, mood, nor yet a sensation or image. It is not a state of consciousness. It does not have genuine duration.[18]

Another of Wittgenstein's passages is helpful for understanding what he has in mind by denying, for instance, that intentions have genuine duration:

> "So long as the temperature of the rod does not fall below. . . . it can be forged." Or: "I can play chess from five till six," i.e. I have time from five till six.—"So long as my pulse does not fall below . . . I can do the calculation." This calculation take one

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[17] See Zettel, op. cit., secs. 45, 75-81, 85. Norman Malcolm draws attention to this aspect of Wittgenstein's thought in his Memory and Mind, op. cit.

[18] Zettel, op. cit., sec. 45.

> and a half minutes; but how long does being able to do it take? And if you can do it for an hour, do you keep starting afresh?[19]

Wittgenstein's position appears to be that it is proper to ascribe duration to activities, but the ability or disposition to act in a certain way neither does not does not take time. "Being able to do" has duration only in virtue of the actual doing; thus intending, believing, hoping, understanding, do not have genuine duration: only their manifestations have genuine duration. Actions begin and end; we could only speak of an ability or disposition beginning and ending if it made sense to say that the ability or disposition began and ended continuously throughout the particular manifestation of that ability or disposition. For example, if I understand the workings of a clock, "understanding" could have duration only if it made sense to say that my understanding began and ended during each instant of my taking the clock apart and putting it back together, or during each instant of my explaining to someone how one gear meshes with the other and so forth. The reason for this would be that it makes no sense to say that I understood the workings when I removed one gear but not when I removed another. However, the expression which seems called for, "beginning and ending instantly,"[20] does not properly speaking express anything about duration—thus Wittgenstein's denial of genuine duration.

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[19] Ibid., sec. 672.

[20] Assuming that my reconstruction of Wittgenstein's reasoning is correct, compare it with Descartes' reasoning in the second meditation, where the duration of a being capable of understanding (Descartes himself) is presupposed, and the instant by instant existence of such a being must be maintained by God. Wittgenstein simply denies such duration.

In the terminology which I have been using, Wittgenstein can be understood to be claiming that only that which is particular and unique (events) can be said to have duration. Let us now turn to remembering. Remembering, both the ability and the manifestation, has as its proximate cause an enduring event in the past. The manifestation would, according to Wittgenstein, have genuine duration, the ability does not. Both of these conclusions are, however, temporally ambiguous. The manifestation has, presumably, genuine duration, but are we to construe the duration as referring to the actual act or word-saying, or is the duration of the event remembered also included; moreover, are we to include as part of the duration the temporal separation between the act or word-saying and what the memory is of? On the other hand, is not the ability to remember an abstraction for an enduring persons's ability to act on what he once experienced, that is, an event in his past? Surely, we are not justified in inferring from the fact that abstractions can be said not to have genuine duration, that persons have no genuine duration. Yet Wittgenstein's comments on subjectivity, where "I" appears merely as a certain use of language, would prescribe such a direction.[21]

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[21]A point such as this one, namely, the suggestion that it may make sense to say that a person has not genuine duration, which I think Wittgenstein would be forced to accept, leads me to suspect that Wittgenstein had not shaken completely the Cartesian framework. The denial of genuine duration to persons would be of a piece with the literal affirmation that the self is non-temporal and non-spatial. Therefore, we should expect Wittgenstein to assume the enduring person at some point, which he seems to do, for instance, with the use of the terms "L.W." and particular person" in The Blue Book, op. cit., p. 67.

From the point of view of remembering and the temporal references which are essential to remembering (and remembering must be presupposed in intending, hoping, understanding), Wittgenstein's dualism between genuine duration and the denial of genuine duration leads to ambiguities: It is just not clear what genuine duration is to be ascribed to. Remembering both takes time and refers to times not identical to the time taken to remember. In what respect, then, does remembering have duration? Wittgenstein, by ascribing duration to the manifestation rather than to the remembering person, would be led to an ambiguous position. Thus, remembering is in time and of time in virtue of the remembering person. This is, at the very least, a logical necessity in the sense that we cannot have a language that does not have irreducible terms that refer to persons.[22]

Nontheless, I believe we can go further than to think of the person as being in the same group of concepts as a thing-in-itself or an unknown substratum, namely, as necessitated logically by one's epistemological outlook.[23] To accomplish this, we must take stock of the fact that any manifestation of remembering has a temporal reference, and presupposed in this temporal reference is that a person remembers

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[22]Accordingly, I am in substantial agreement with P.F. Strawson's conclusion in the section "Persons" of his Individuals, where he takes the concept of the person to be primitive.

[23]The following argument may appear unnecessarily tedious, and in a way it is since (as will be done) it can be stated briefly. My aim is, however, to draw explicitly on the points which have appeared somewhat diffusely throughout this chapter. My hope is that is achieves in precision and clarity what it losses in brevity.

what that person experienced, and that person's remembering may cause that person to perform a certain action. Accordingly, let us consider "remembering such-and-such" to be a sequence of three events: E_1, E_2, E_3. That which was experienced causes the remembering of what was experienced, and there may be caused an action consequent upon the manifestation of remembering, E_2. Let us give each event a time-label t_1, t_2, t_3. E_2, the manifestation of remembering, is peculiar and deserves some attention: the peculiarity lies in the fact any sequence of rememberings, having references to the past, is contingent. It is neither necessary that the sequence should be as it is, nor is it impossible that it could be otherwise. Imagine calling to mind the persons whom one had known in one's lifetime. There is no reason why I must imagine one face before the other. There is no fixed order for one image leading to the next. Let us give the activity of remembering the persons whom one had known in one's lifetime the time-label t_r. Since there is no reason to distinguish the placement in the sequence of the remembering of person 1, the remembering of person2, and so forth, it is accurate to have t_r sufficiently imprecise such that on some measure, t_r comes up while I am remembering the persons whom I have known in my lifetime (e.g., t_r = yesterday afternoon). To this, let us append the earlier results that "remembering person1," $R(p_1)$, has as its cause the experience(s) of person 1, $E(p_1)$, at some time-label t_α (t_α, sufficiently imprecise), and the same can be said for the other persons I have known. Schematically:

$R(p_1)$ caused by $E(p_1)$ at t_α

$R(p_2)$ caused by $E(p_2)$ at t_β

at t_r $R(p_3)$ caused by $E(p_3)$ at t_γ

Provided we do not include, as remembering, something imagined which is mistaken as remembered, then we can say that $E(p_1)$ is necessary for $R(p_1)$, $E(p_2)$ is necessary for $R(p_2)$, and so forth.

As already remarked, any $R(p_m)$ and $R(p_n)$ are ordered in a sequence, but that sequence is contingent. However, this sequence which is contingent has a complex cause given by $E(p_1)$ at t_α, $E(p_2)$ at t_β, and so forth. Furthermore, there is no reason why I should do my remembering at t_r rather than, say, t_p. The conclusion which this leads to is that remembering (such as remembering the persons that I have known in my lifetime) is independent of the time-labels (i.e., t_r, t_p, . . .), nor does it depend on the order of the memories (i.e., $R(p_1)$ then $R(p_2)$ then . . .). In other words, remembering is actually independent of <u>when</u> and <u>how</u> one remembers. What counts then is the ability to remember, not the manner in which one remembers. This ability has, however, particular and unique causes (i.e., $E(p_1)$ at t_α, $E(p_2)$ at t_β, $E(p_3)$ at t_γ, . . .). If we ascribe existence to such events, since it has been shown that this is legitimate and necessary when events are not understood linguistically, then it is reasonable that the causal nexus wherein these events occur can also be ascribed existence. This is no different from the fact that if one predicated existence of the dropping of the atomic bomb on Hiroshima, then one is committed to the existence of the fission products and to the existence of the devastating explosion.

However, in the case of remembering, it is less clear to what, precisely, existence is to be attributed. How can we attribute existence to the remembering which occurred at t_r but could have occurred, and may still occur at t_p; and which may have one sequence at t_r and another at t_p? The only solution that avoids the ambiguities which Wittgenstein's position led to, is to say that existence must be attributed not to the manifestation of remembering, but to the ability to remember. Clearly, there are no "abilities to remember" floating around, but there are persons who are able to remember. Attributing existence to the abstraction "ability to remember" amounts to attributing existence to the person who is capable or remembering: the person endures over time. So it is not merely a logical necessity that there be a person for there to be remembering, but the person must be said to be enduring in the sense that he can remember independently of the time-label of the remembering and independently of the manner of the remembering. (There is a restriction of this formal exposition in that the time-label of the remembering, say, t_r, must be greater than the greatest of t_α, t_β, t_γ, . . . , accounting for the repetoire of experiences increasing until death or incapacity, and for not being able to remember what is yet to be experienced. This restriction simply underscores the fact that we are material beings.)

Briefly, the argument is this: The conclusion that mental events such as remembering cannot be said to be either law-like or not law-like has been worked out in terms of remembering being independent of both time-labels and the manner or remembering. The possibility of there being remembering which is independent of when and how one remembers,

conjoined to the legitimacy of ascribing existence to events, entails the existence not of a specific instance of remembering but of the ability to remember. The ability to remember is an abstraction for there being persons who are able to remember. Therefore, it is in fact the existence of the person that is fundamental. In so far as the enduring person has the ability to remember, that person has an awareness of time in the sense of being aware of the temporality of his actions. Even the most primitive intuitions of birth and death express this.

What is meant by saying that a persons exists? Or, to use an alternate terminology, what does it mean to say that a person endures (or has duration) relative to time-labels; or, in still another terminology, what does it mean that a person is self-identical over time? Surely stones and computers exist; they endure from one day to the next. Why has such a commotion been made about the existence of persons?

Being in a position to answer these questions has been one of the greater tasks of this essay. Remembering has been used as a touchstone for distinguishing between remembering persons, the "behaviour" of stones, and the circuits of computers. And it has been shown that explaining human memory in terms of behaviour or representative microprocesses is either inadequate or incoherent. Besides this, however, a metaphysical confusion is also involved. The propensity to believe that stones, computers, and persons are the same in virtue of existence, as if existence were a colour, or weight, or perhaps even a texture, is a prejudice which a metaphysical inquiry must avoid since to posit existence is to posit distinction, not sameness. "Sameness" is a class concept with respect to which one could speak of a mode of existence;

but a "mode of existence" (if it can be said to exist at all) cannot be said to exist as does any existent which satisfies the mode.

Thus, the individual person exists, endures over time, but the criteria of identity are not those of the stone or the computer. In fact, if remembering is our guide, and remembering as I have been using it is presupposed in all human activities, there appear to be no specificable criteria for the continued existence of such-and-such a person. Moreover, that there are no specifible criteria for the identity of the person over time, is consistent with the notion of self-identity. If each instant, moment, hour, day, etc. I am the person I am, then it would be rather silly to give criteria such as shape, size, and position (in the way I would for a stone) to assure myself that I am continuing to be the same person. Not only is it entirely superfluous, but it is quite wrong because it fails, even given the boundary conditions of birth and death, to recognize that the existence of the person is in a real sense independent of time-labels. One need only consider the arbitrariness of choosing to speak of instants, moments, day, etc, in order to recognize that the criteria for identity would depend on which unit measure of time were being used: the specious present of preception for the instant, perhaps bodily location for the moment, or recollecting yesterday's experiences from day to day. Such arbitrariness precludes any possible meaning for the phrase "criteria of identity."

Professor Shalom has developed a related theme through criticizing the solution to the problem of personal identity offered by process

philosophers such as Hartshorne.[24] He believes that the effort to construct the person out of self-like elements is endemic to both philosophically and scientifically minded solutions: either to a succession of "momentary selves" or to the integration of a series of momentary states (which are presumably both physical and psychical). The first direction seems merely to presuppose the self; the other direction must account for the emergence of the psychical in a state, from what is physical about the state, which succeeds only in entrenching mind/body dualism.

Pertaining more directly to the subject matter of this essay are Professor Shalom's comments on the attempt (in process philosophy) to institute memory as the solution to the problem of personal identity.[25] Professor Shalom offers two arguments against two possible ways of interpreting Hartshorne's program of binding "momentary selves," by means of memory, into a unitary self. A "momentary self" can be interpreted either as being representative (at some time) of the unitary self, or the "momentary self" can be construed to be a distinct entity, a complete self despite being brief. On both interpretations, memory is supposed to be the link between momentary selves. In the first case, for two mementary selves A at t_1 and B at t_2, both representing the unitary self, it is postualted (by fiat) that A inheres in B. We call this memory.

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[24] Albert Shalom and John C. Robertson, "Hartshorne and the Problem of Personal Identity," Process Studies, VIII (1978), 169-179.

[25] Ibid., pp. 175-176.

However, if A inheres in B, then B at t_2 which represents the unitary self, also represents the unitary self represented by A at t_1. If this is the case, then memory is not a link between A and B since the explanation of what memory is supposed to accomplish shows that the unitary self is being presupposed by B at t_2. Memory is being purported to explain what has been presupposed all along. As well, one is able to conclude from this that the possibility of memory requires that a unitary self be presupposed. These conclusions are familiar. The familiarity is due to the similarity between Professor Shalom's argument and the analysis, in Chapter II, of what I have called mediated theories of memory. The similarity lies in taking the momentary self to be representative of the unitary self, then marking the momentary self "remembered," thereby constructing the unitary self; mediated theories of memory (of the sort I called rational) mark images (representing experience) with a "feeling of pastness," and the hope is to construct a remembering person out of such marked images.

The second interpretation which Professor Shalom discusses takes A and B to be independent entities, each successively present. For convenience, we can follow other writers in suggesting that they last about 1/10th of a second. Again, memory must be made to link them. However, if memory is to link two successively present states, then memory loses the pastness which we ordinarily associate with it. Professor Shalom concludes, rightly I believe, that memory no longer explains a connection. There remain, merely, present momentary selves "inexplicably linked" so at to constitute the unitary self. This conclusion is similar to what I have described as being unmediated theories

of memory, where memory is thought simply to be a kind of turning directly to the past, and the past and present are mysteriously linked.

Professor Shalom concludes by saying, "that for an "I" to remember, to believe, to intend, and to know seems to require a theory of a many-levelled self, each level being specified by the systematic equivocity of time."[26] I do not have such a theory, but the need for such a theory has been shown to be necessary.

If the ability to remember necessitates the existence of a person, namely, as self-identical over time, then the person is the person he is at every instant or moment to which a time-label can be correlated. At every instant, the person is aware of himself as temporal, or at least behaves as if his awareness of being a temporally bound being is manifest in each instant.[27] Does this, however, mean that a person is outside time? The answer to this is that the person is not outside time, and the only reason why one phrases such a question is the dominance of the cosmological conception of time. Relative to the cosmological conception, one is forced to speak of the person enduring over time. Without such a prejudice, one speaks simply of the person as somehow basic. The person exists and makes judgements about that which exists, even about his own person who was born and must die. Remembering, as the ability of the existing person, manifests itself as the ability

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[26] Ibid., p. 176.

[27] One way of working this out would thrust us directly into a consideration of Heidegger's metaphysics in Being and Time.

to make judgements about that which exists. The temporality of that being which makes judgements about existence can only be distinct from the judgements about the ordering of such existents (the cosmological conception of time understood causally). Despite this distinction as to temporality, the self-same being recognizes changes in himself as through aging, moodiness, or injury.

Consider what may be meant by the "present." Grunbaum believes that the present is mind dependent, understood as simultaneity with some state of the person (thinking, feeling a pain, observing a supernova).[28] Reichenbach, by contrast, takes "becoming" to be meaningful only so far as physics is able to provide an answer. The notion of eternity is, so far as Reichenbach is concerned, just a defense mechanism against the fear of death.[29] Both these approaches, taking the present to be either mental or physical, fail to emphasize that the person described mentally is also a physically describable being, such that there remains the difficulty, and perhaps the impossibility, of regimenting the abmiguity as to whether "now" should be correlated with this life, or this mood, or that injury. Moreover, in spite of this ambiguity, this life, this mood, that injury all presuppose a person; so there is a legitimate sense in which one can speak of the existing person being present; also there is a legitimate sense in which this "present" is constituted of

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[28]Adolf Grunbaum, "The Status of Temporal Becoming," in R.M. Gale, ed., The Philosophy of Time (London: Macmillan, 1968), pp. 322-354.

[29]Hans Reichenbach, The Direction of Time, Maria Reichenbach, ed. (Berkeley: University of California Press, 1956); see his first chapter entitled "The Emotive Significance of Time."

pastness and futurity (after all, this mood may not last and I had the injury).

Accordingly, if the cosmological conception of time is understood as the description in some suitable mathematical fashion of the correlations amongst and causal succession of events, the existing person could be understood to be, in a sense, a singularity like an event itself. Understood this way, the cosmological conception of time just does not apply to the event itself, indeed, to the existing person, who is in a sense simply present. The effort to translate the event into micro-processes, once again to invoke the cosmological conception of time, serves only to obscure the event of there bieng an existing person, in the manner of existing which I have alluded to.

Metaphysically speaking, it was said that an explication of the posited existence of persons should in turn entail the existence of the person. Here, the explication is in terms of time, what I have called one of the most general features of description. The metaphysical principle which is called for is that time must be understood to be ambiguous. The "present," a peculiarly human formulation of time, can be understood legitimately in terms of instants, days, or a lifetime. That this is so indicates that each moment can be understood to be simultaneously present and past. So far as the measure of time is concerned, this choice of 'moment' is to a certain extent arbitrary; therefore, it could be said that the temporality of a lifetime is implied in each instant—a potentiality for drawing on the history of one's experiences (both by effect in action, and by report) entails what was posited in view of descriptive ambiguities. For this potentiality is not simply

possibility, as with a possible world envisaged in a science fiction novel, but the potentiality is real. It is actualised in every instant of the human organism's life. That this potential is actual is what is meant by the existence of the self-identical person.

Thus the thesis of this essay has been reached. After discovering the presuppositions of the common sense understanding of memory and tracing the source of inadequacy in theories of memory to a prejudiced conception of time, the existence of the person was taken to be fundamental. An explication of this fundamental character of the person according to general descriptive terms such as causality, event, time has implied the existence of the person. Therefore, that the person exists has been given a metaphysical foundation. However, the metaphysical principle required for this is that "time" is ambiguous in its descriptive application to the person. Therefore, since a multiformity of descriptions is possible of the person (biological organism, social being, contemplative thinker, and so forth), there remains the problem of working out the way in which the ambiguity of time relates to the complex structure of the existing person.

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