McTAGGART'S REJECTION OF TIME

A TREATMENT OF
McTAGGART'S REJECTION OF TIME

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ABSTRACT

An account of salient conceptions shared among McTaggart's contemporaries is offered to maintain the interpretive hypothesis that McTaggart's rejection of time may be a consequence of a more general metaphysical theory.

Yet though McTaggart's rejection of time may follow from a more general account, the more general account may be false.

In what follows we consider the possibility of generating complete lists from given wholes, as opposed to the practice of generating wholes by enumeration or induction. Historical support is offered for this scheme, followed by a distillation of McTaggart's doctrines, a brief linkage with mereological treatments of time and geometry, and an exegesis of McTaggart's unique account of change. Finally a treatment of McTaggart's argument for the rejection of time is offered which seeks to show that McTaggart's infamous conclusion has largely been misunderstood because of McTaggart's unfortunate emphasis on the verbal implications of his doctrines and the consequent subversion of his positive account of infinite divisibility, inclusion and the relation between descriptions and wholes.

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CHAPTER I. INTRODUCTORY

Historians of philosophy have not had an easy time classifying McTaggart's The Nature of Existence. Metz introduces it as a distinct kind of Neo-Idealism, which he calls "McTaggart's Pluralism". He sees it as "a peculiar and imposing work", which "in the setting of modern British philosophy appears foreign - like a solitary light shining from a remote and uninhabited island - and it is almost an enigma how it could have arisen in such an environment. It deserts all the familiar and well-tried and trusted ways of thought."[1]

This thesis will attempt a solution to a problem which has arisen from McTaggart's treatment of time. The rejection of time sounds odd to modern ears. Yet, as Passmore notes, "when Cambridge philosophers analyze metaphysical arguments, they have a strong tendency to take as their typical example McTaggart's denial that time is real"[2]. Passmore too yields to the tendency and uses the rejection of time "as an illustration of the general

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[1] Metz, Rudolph, A Hundred Years of British Philosophy (London: George Allen and Unwin, 1938), p.368.

[2] Passmore, John, A Hundred Years of Philosophy (London: Penguin, 1984), p.54n.

character of [McTaggart's] argument"[3].

At present, only the tip of McTaggart's uninhabited island remains visible, and this only because of his contribution to the philosophical problems of time. McTaggart's is a unique philosophical system which has been ignored - largely due, at bottom, to the "general character" of its arguments.

Much of the problem which McTaggart's rejection of time poses for modern readers is due to the obscuring effect of repeated reinterpretation and rewording. The concept of 'reality' has undergone such change since McTaggart composed his argument as to now almost include time by definition.

The clues and keys to McTaggart's general scheme of the universe may be found in several sources but are most obvious in Roget's plan for the Thesaurus he laid out in 1852. The editors of the 1985 Penguin Edition comment that:

> "Roget's arrangement of ideas reflected the thinking and state of knowledge of his day; this framework was considered so obvious to his contemporaries that no index was provided."[4]

Roget's arrangement is shared by McTaggart and the rest of the Neo-Hegelians for the most part would not have asked Roget for an index. It should come as no surprise that

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[3]Passmore, p.80.

[4] Carney, Faye and Waite, Maurice (eds.), The Penguin Pocket Thesaurus, (Harmondsworth: Penguin Books Ltd., 1985), p. ii.

Roget's first categories are existence, non-existence, reality, essence and then various forms of relatedness: a pattern repeated in McTaggart's presentation of the development of his system.

The plausibility of any possible consistent picture painted with McTaggart time and McTaggart reality can only be assessed on criteria which seem irremediably fuzzy - such as simplicity, explanatory depth, and parsimony. Thus just making sense of McTaggart is not enough to know what to do with him. For all the clarity we may give it, we cannot change the fact that it is a very odd philosophical position.

Lord Balfour, in summarizing Green in 1884, cautioned that:

> "there is manifest objection to reviewing in detail a fragment of any work, and the objection is especially strong when the work is one which develops through its whole course a continuous argument."[5]

McTaggart, like Green, is due "a few words both of apology and explanation".[6] McTaggart was among the inheritors of "the reaction against the systems of empirical metaphysics which in the hands of Mill, Mr. Bain, and Mr. Spencer, reigned supreme" in the 1860's; a reaction the

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[5] Balfour, A.J., "Green's Metaphysics of Knowledge", Mind, 1884, p. 73.

[6] Balfour, p. 73.

importance of which, in 1884, "everyone who has given even a cursory attention to the progress of speculation in Britain during the last few years must be aware."[7]

While McTaggart is a generation later than Green, his understanding of how one goes about determining the nature of reality substantially derives from the influence of Green's attack on empiricism and from his own reading of Hegel. (I will attempt to explain McTaggart's method and ignore Hegel in a later section).

What I am up to in introducing Green is an attempt to trace the development of an idea which is strange to modern minds. When it comes time to explain McTaggart's claim that time is unreal, it will be important to remember two points which are due to Green and his associates: what "reality" is, and what relations have to do with it.

Metz recounts that "Green's mission in the history of philosophy was to clear away the old systems and prepare the ground for a new synthesis of an idealistic kind." The device with which Green did the clearing was an argument that all perception is relational, both in what perception is (a relation between subject and object), and in what perception provides (relations among objects). Green's world is not made up of simples but of relations.

Green's notion of reality is best described in Passmore's account of what late nineteenth century idealism

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[7] Balfour, p. 73.

involved:

> "The central core of their teaching is that to be real is to be a member of a 'rational system', a system so constructed that the nature of its members is intelligible only in so far as the system as a whole is understood."[8]

The basic currency of Green's rational system is the relation. There is a strong tendency to ask after what it is that is being related, but this tendency, I believe, misses the point of Green's attack on empiricism. What is perceived is only analyzable in terms of relations. To extract an unrelated object from perception is to construct a fiction, for all that we are given in experience is shot through and through by relations.

Metz notes that "the full fruition of [Green's] work does not appear until we come to the systems of Bradley, Bosanquet, McTaggart and the rest". I trust that in pointing out what in McTaggart is due to Green I will be able to show some of the course of that fruition.

Hinkfuss, in the preface to his The Existence of Space and Time, makes special mention of the problem of putting temporal problems:

> "The reader may find in places that he is being led on from point to point without quite knowing where the argument is taking him. This is in general a writing practice to be avoided whenever possible. It is

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[8] Passmore, p. 51n.

> preferable to be able to state the problem succinctly, to state the conclusions one is going to draw and how one is going to go about it, and then proceed to do just that. This is fine given that there is a common enough background between reader and author for the problem to be stated succinctly, but often this is not the case ... Besides, 90 percent of the difficulty with many a problem ... is to be able to state the problem succinctly and unambiguously."

A formalization of McTaggart's doctrines would provide succinct and unambiguous presentations of the problems, as obviously enough, that is the point of formalization. As well, the provision of something like a common background for presentation of conceptual choices may be made possible through formalization. However, it is no easy task to maintain a succinct and unambiguous formalization.

Hinkfuss' comments help clarify a general source of difficulty in the philosophy of time. Many authors present their analyses of time as discussions of the putative problems of time, without taking care to appraise their audience of the point of raising a particular problem, or the overall structure of the conceptual landscape they intend to cultivate. They tend to smuggle concepts in with their choice of how and when to put a problem.

Reichenbach's The Philosophy of Space and Time is a straightforward attempt to demonstrate the geometrization of time which gives a central role (though that is the wrong

metaphor) to gravitation. The Einsteinian shoulders to which Reichenbach's treatment owes its view of time and space are given form and clothing in Einstein's Relativity.

While Relativity is an argument that a certain theory explains the circumstances of observed phenomena, it is also an introduction to the mathematics involved in a model of the behavior of physical objects. Einstein's elegance, and his mathematics, derive from a rebuttal of classical mechanical treatments of space and time as they pertain to the motion of bodies. Both Einstein's theory and the classical theories sought to complete the geometrization of time.

Yet care must be taken not to assume that the Minkowski space-time manifold is a factual account of reality or a fundamental feature of experience. It is a model supported by a physical theory, and as such is subject to a general treatment of space and time. The amalgamation of space and time is a possibility, not an *a priori* necessity.

Without a clear understanding of what time is supposed to be it is impossible to decide if time can be reduced to geometrical principles. If on the other hand we decide that all we can mean by time is something that must be geometrical, then we have assumed one model of space and time to be correct by definition.

Newton-Smith's The Structure of Time allows some

progress toward a general treatment of space and time which does not assume amalgamation. He distinguishes the metric of time from the topology of time. Anyone who has observed that an automobile travels farther from Toronto to Thunder Bay than a crow does will readily see the need for such a distinction in the case of space. Any measurement requires a specification of the topology of the space in which the measurement is made, unless it is assumed that measured space is always Euclidean.

Though we measure time by counting rotational periods we cannot infer from the prevalence of periodic and harmonic phenomena that time is linear. That would be like assuming that a line drawn on a mercator projection map represents the road distance from one end of the line to another. It is because of confusion about the distinction between the metric of time and the topology of time that people often have trouble avoiding the assumption that time is a fourth spatial dimension. By first clarifying the difference between measurement and shape (though strictly speaking, the 'shape' of time is a spatial analogy) we may proceed to clearly spell out the need to geometrize time (without first having assumed it), though that is a task not intended for this thesis.

Hinkfuss argues that the acausality of space and time militates against their existence; a claim seemingly far removed from McTaggart's grounds for rejecting time.

Newton-Smith urges that time and change may only be identified at the expense of the acausality of time, a point which bears directly on McTaggart's premise that there can be no time without change. McTaggart has his own views on causation and on determinism, though no one, it seems, has paid much attention to the linkage between McTaggart's rejection of time and his espousal of determinism.

The most recent work on philosophical questions concerning time is Horwich's Asymmetries in Time: Problems in the Philosophy of Science[9], which attempts schemata for arranging temporal problems in coherent ways, such that an account of one will support an account of the next.

Horwich segregates McTaggart's contribution to just one of his partitioned problems, of which there are ten, consisting of "now", "truth", "laws", "de facto irreversibility", "knowledge", "causation", "explanation", "counterfactual dependence", "decision", and "value". Horwich, like Prior, Schlessinger, Oaklander and Gale, regards McTaggart's rejection of time as a *reductio ad absurdum*, in one way or another, of the account of time McTaggart constructs from two distinguishable accounts of change known as "A series change" and "B series change". It is generally agreed that "time is unreal" is false, but it is not entirely agreed how the argument McTaggart gave for

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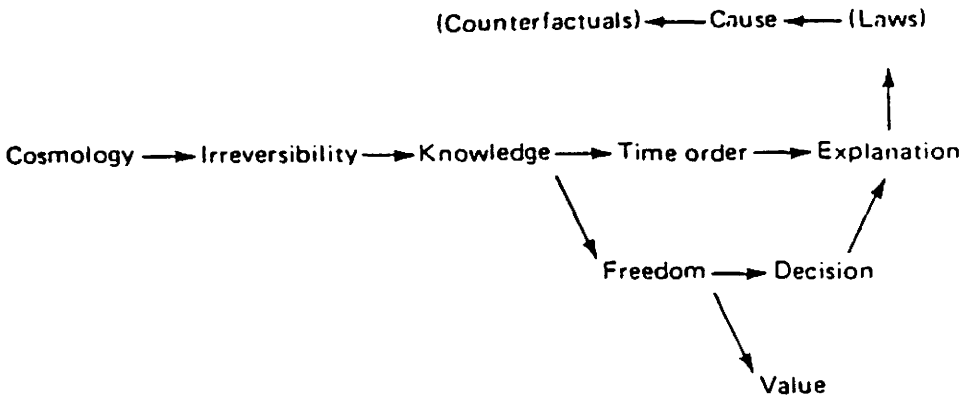
[9] Horwich, Paul, Assymetries in Time: Problems in the Philosophy of Science, (Cambridge, Mass.: MIT Press, 1987).

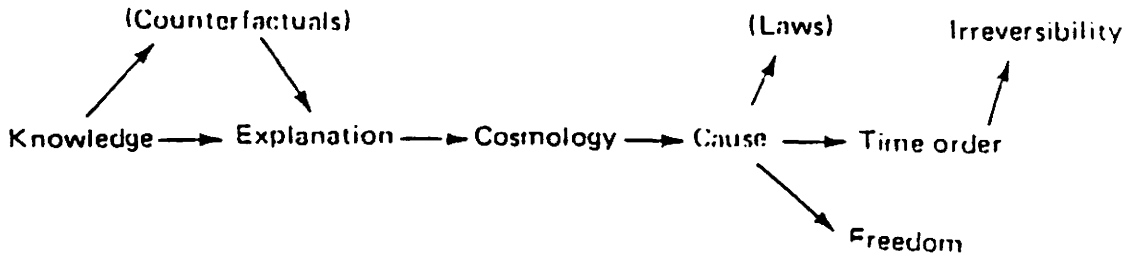
that conclusion is mistaken.

The contention made in what follows is that "time is unreal" is true if time is understood as something which serves to underlie change or if time is conceived as a vector quantity. We tend to believe that things underlying change or vector quantities are in some sense "real". McTaggart can be held to have denied that time is real in the sense that it neither underlies change nor is a physical quantity. To maintain this line of argument we will need to examine what McTaggart took "reality" to consist in and what he maintained as "change".

Horwich has developed the very useful device of an "explanatory map" to demonstrate the arrangement of differing opinions on the dependencies among temporal problems. His own theory he renders as:



The interpretation of McTaggart which will be defended here may be represented with the following "partial map":



Obviously the arrangement is quite different, and this in itself ought to demonstrate the changes in basic concepts which have contributed to the obscurity of McTaggart's system. Further, while Horwich's explanatory map assists in readily identifying differences between McTaggart and others on philosophical priorities, it does not assist in the explanation of why one position should be preferred over another. It should be stressed as well that modern and Victorian terminology differ in respect of what it is about knowledge or explanation that has to do with time.

The account to be outlined here centers on change and draws its contributions from McTaggart's construction of the nature of existence. Change is noticeably absent from Horwich's diagram and should be inserted between "cause" and "time order" on McTaggart's map.

McTaggart's argument for the rejection of time, which hereafter I shall call MART, has a special history. As Mink puts it:

> "An argument so concise, so apparently independent of major metaphysical assumptions, and so outrageous to common sense deserves at least the acclaim of repeated refutation: nor have such answers been wanting. But I

> propose to show, by an examination of such criticisms, that none of them have proved decisive, because critics have accepted McTaggart's brilliant gambit and have, like him, been arguing not about time but about arguments about time. One result of this has been that both McTaggart and his critics have committed the error of believing that descriptions and inferences valid of discourse about time are true of time itself. In a curious way, however, it turns out to be a gambit which cannot be declined, and the question therefore recurs whether McTaggart has not, after all, held his critics in perpetual check".[10]

In chess, perhaps unlike philosophy, the best way to refute a gambit is to accept it. Mink is quite correct in charging equivocation between arguments about time and arguments about arguments about time, but his claim that MART is concise and free from metaphysical assumptions is questionable. Certainly the tendency has been to characterize MART in a few premises and a conclusion, but this only assumes that the remainder of McTaggart's philosophy has no bearing on his rejection of time. Thus while Mink has clearly pointed out the need for careful observation of the use-mention distinction, he, like many others, has given McTaggart's philosophical system short shrift.

That much of McTaggart's work is ignored is not

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[10] Mink, Louis O., "Time, Mctaggart and Pickwickian Language", Philosophical Quarterly, Vol 10 (1960), p.252.

entirely surprising. Those who continue to attempt refutations of MART do so in the course of their investigation of singular and often insular topics in the philosophy of time. One recent example is Zeilicovici, who notes that:

> "Whenever analytic philosophers consider the issue of temporal becoming they invariably end up with McTaggart. And rightly so, for neither Heraclitus nor Augustine, and certainly not some late eighteenth century Idealists, ever separated with the incisive clarity of McTaggart the static (B) from the dynamic (A) characteristics of moments and events. The worm in the apple is that McTaggart attempted to use his brilliant analysis for proving the unreality of time."[11]

However, it is not entirely clear how much of McTaggart's work is worm and how much is apple, since it is unclear what time is supposed to be, and what the reality of time would amount to. McTaggart sets out to answer these questions first: MART, and the problems it has caused for philosophers considering temporal becoming, or changeless time, or any number of specialized temporal problems, is the result of an application of criteria for existence to something supposed by us to be an existent. By putting McTaggart's house in order we might force the temporal specialists to clean up their basements, in which there may be hiding much fiercer pests than worms.

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[11] Zeilicovici, David, "A (Dis)solution of Mctaggart's Paradox", Ratio, December 1986, p. 175.

CHAPTER II. EXPLANATION OF McTAGGART'S PHILOSOPHY

Two books which discuss McTaggart's philosophy in general, without specific concern for that part which is the rejection of time, are C.D. Broad's Examination of McTaggart's Philosophy and P.T. Geach's Truth, Love and Immortality.

Broad's work, unfortunately, suffers from its depth, and is less accessible than what it attempts to explain. Geach, on the other hand, attempts to publicize McTaggart. He hopes to clarify and shorten what is unique in McTaggart's philosophy, so as to make it more palatable to modern tastes.

As efforts at exegesis these two works are welcome. They do provide, however, second hand information. Geach and Broad stress some of McTaggart's arguments and reduce the apparent force of other parts of his work. In so doing they distort whatever it is McTaggart had in mind to whatever it is Broad has in mind or Geach has in mind.

I have made a similar distortion in bringing attention to Green's use of relations and reality. These treatments of McTaggart's work are refractive: the light beaming from McTaggart's island is scattered by the heated air which separates philosophical continents. Yet we may still use the shadows cast by McTaggart to construct

something recognizable to any philosopher.

As to what McTaggart meant, Broad gets us no further and Geach says too little. Neither gives an account of how the rejection of time stems from the criteria for the nature of existents, and what reality has to do, or not to do, with time.

Geach entitles his book after three topics which are certainly concerns of McTaggart's, but which are by no means unique to him. Truth, Love and Immortality could easily have been the title of a book on Plato. Geach's title is more catchy and intriguing than it is exemplary of McTaggart. As we should not judge a book by its title, neither should we be misled by it.

An informative assessment of McTaggart's overall philosophical ambitions and methods is to be found in Keeling's introduction to McTaggart's Philosophical Studies, which is a collection of McTaggart's essays. Keeling contrasts McTaggart's motives and ambitions for philosophy with Russell's "extremely different and antithetical view of the aim, the problems, and the method of philosophy".[12]

With Green came the advent of Neo-Hegelian metaphysics. With Russell we witness its eclipse. What began in the 1870's as an attack on empiricism ends in the 1920's with the deaths of the leading exponents of Green's

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[12] McTaggart, J.M.E., Philosophical Studies (London: Edward Arnold and Co., 1934) (ed. Keeling).

endowment. McTaggart wrote continuously of his system of philosophy from his education at Cambridge until his death in 1925 -- a period of 35 years. Passmore finds the focus of this period in Cambridge neatly, and offers some consolation for Geach's unfortunate title:

> "The most important of [McTaggart's] Hegelian studies bears the somewhat uncompromising and certainly misleading title Studies in Hegelian Cosmology (1901). This is an elaborate discussion of the ethical and religious questions which lay closest to McTaggart's heart. He felt bound to admit that these were matters to which Hegel had paid the slightest of attention; in particular, Hegel, to McTaggart's evident distress, had adopted an extremely casual attitude toward immortality. Yet McTaggart was confident that the philosophical ideas which his Studies develop, largely by way of criticism of Lotze and Bradley, were Hegelian in spirit, however loosely they might be related to any Hegelian text.
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> These were years in which the Hegelian philosophy was being sharply attacked, especially by McTaggart's Cambridge colleagues, men like Bertrand Russell, who turned sharply against the Hegelianism he had once admired, or G.E. Moore, who while he was not very much interested in Hegel himself, had devoted a great deal of attention to McTaggart's Neo-Hegelian arguments. McTaggart continued to believe that the Hegelian dialectic was of the first importance; the fact remains that when he came to write his major philosophical work ... the method he employed was certainly not Hegelian".[13]

Passmore's historical snapshot is a clear enough

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[13] Passmore, p. 77.

image, but I contend that it has been developed with the wrong film. The solution to McTaggart is to ignore Hegel: to treat McTaggart as McTaggart. Moore was interested in McTaggart, not in Hegel. Below I will argue that we should ignore Hegel.

Keeling's discussion of McTaggart and Russell offers greater detail:

> "The difference in their outlook derives for the most part from their dissimilar estimates of the relevance to philosophy of (a) ethics and religion, and (b) the special sciences, and physics in particular."[14]

Russell, Keeling observes, thought that "'a philosophy derived from ethical notions is never impartial and therefore never fully scientific' and his reason for rejecting the standpoint of Plato and Spinoza, of Hegel and McTaggart, is that they have neither sought nor achieved 'ethical neutrality'".[15]

This is indeed the modern reaction to McTaggart which Geach attempts to overcome by directing our attention to love and immortality. If it were baldly stated that McTaggart's rejection of time stems from an ethical and religious vision, few would be inclined to tackle McTaggart's rejection of time with much vigour.

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[14] Keeling, p. 12.

[15] Keeling, p 13. Keeling is quoting from Russell's Mysticism and Logic, pp. 107-8; 109.

However, Keeling continues:

> "McTaggart agrees ... with the insistence on proof for what is asserted ... He regarded the technical study of metaphysics as concerned, at almost every step, with proving or disproving something, and held that proving was an activity which countenanced no appeal whatever to feeling or to anything other than reason and perception. But he would deny that it follows from this, or that good grounds have been offered to show, that some of the things the philosopher is called upon to prove or disprove are connections between certain existents and goodness. To be sure, he does not maintain, but expressly denies, that there is an 'intrinsic *a priori* connection between existents and goodness'. 'The question of the nature of existence,' he says, 'is the one we are setting out to determine, and we have no right to begin by assuming that nature is good' -- nor, he would have agreed, by assuming that it is 'ethically neutral'".[16]

As for the difference which Keeling finds between McTaggart and Russell on the role of science in metaphysical enquiry, the important point lies in McTaggart's claim that the "The phrase '*ultimate* nature' distinguishes philosophy from science, which systematically studies the nature of reality, and not its ultimate nature".[17] Keeling apparently understands this claim as derived from McTaggart's position on induction as a method of inference:

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[16] Keeling, p.15.

[17] Philosophical Studies, p.273.

> "Since an inductive method involves generalizing some characteristic that has been found common to several members of the same class, that method cannot be applied to whatever is not a member of the same class. But plainly there can be no class each member of which is the totality of existence, i.e. the universe. Hence characteristics appertaining to the whole of what exists cannot be reached by a scientific method. Nor will it help to deny that there *is* any whole which is the totality of the existent. For the denial would itself be a philosophical assertion requiring proof. And even *were* the denial true, it could never be known and proved to be so by an inductive method. We have no right to rule out in advance the reality of such a whole, for it *may* turn out that existent particulars derive something of their ultimate character precisely from their being parts *of* the whole."[18]

With this Keeling points out that what Passmore called the central teaching of the Neo-Hegelians, that existents gain their characteristics in part through being members of a whole, is present in McTaggart and distinguishes him from Russell. This notion of a rational system in which members gain qualities through being related to the whole of which they are a part we found in Green, but it is an idea which has been lost since the advent of analytical philosophy, atomism, positivism, and the resurgence of empiricism.

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[18] Keeling, p.21.

Contemporary philosophical sensibilities are disdainful of the notion that there are available methods for uncovering truth and exposing error systematically. Any method would have to justify its results by making claims which depend on assumptions the method was employed to check. Often we are inclined to think that a set of procedures for determining truth is no more than a way of defining how we are going to separate intuitions and partition concepts when we come to argue that something is true. We distrust methods of philosophy just as we distrust systematic solutions of all philosophical problems. There are no clean sweeps in philosophy: there are just too many ways to spell out the truth or to explain things.

While suspicions as tenuous and all encompassing as those we have about methods and schemes of philosophy are beyond the scope of this thesis to develop in detail, their influence in recent philosophy has pressed the nails deeper into McTaggart's coffin. Two reasons for this are the tendency to associate McTaggart with Hegel and the prejudice that holds that a philosopher only wastes his time trying to construct a useful system of the world from reason and perception and some systematic guiding principles. What we must avoid is the habit of considering one part of what a philosopher says as less important than another part just because it is weird or because we would not do things that way.

McTaggart is at pains to distinguish his method from Hegel's in The Nature of Existence. His earlier work, such as Studies in Hegelian Cosmology, does not present major methodological differences from Hegel. The building blocks of The Nature of Existence are in place in the earlier work, and we may suppose that in trying over the course of his life to put these pieces together McTaggart found that the Hegelian system suited his purposes less and less. That he even retained mention of Hegel in his final version may have been due to the need to employ the normal points of reference for his readers, or to the persistent conviction that there is a point to be made by Hegel somewhere, or to the exegetical value provided by contrast to Hegel. But none of these reasons is sufficient for keeping the monkey on McTaggart's back: Hegel must go if we are to make sense of McTaggart's work and of the role of his method in the rejection of time.

We have seen that McTaggart rejects induction as a method by which to reach "any conclusion about those characteristics which belong to everything which exists".[19] McTaggart also notes that the validity of inductive inference is unsubstantiated. It may be safely conjectured that there is in this concern to repudiate inductive method a response to Mill's methods of logic, and a desire not to be hobbled by arguments from that quarter. In other words,

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[19] Nature of Existence, S. 43.

the empirical method, in so far as it rests on induction, cannot provide any account of what is real, nor of what the nature of existents in general is. Another method is needed.

McTaggart claims that:

> "Each characteristic demonstrated in the course of our process will remain there at the end of the process. None of them, of course, will be the whole truth, but that will not prevent all of them from being quite true. We shall be led on from one stage to the next, not by any contradiction involved in asserting the first characteristic to be true, but by the contradiction between asserting the first to be true and denying the second to be true."[20]

There is in this a straightforward preference for deduction. McTaggart's method is deductive, in so far as what comes next follows by implication from what comes before. However, McTaggart points out that on occasion clarity and convenience require some deviation from strict serial order in the determination of the various characteristics of the existent.

McTaggart distinguishes two parts of his philosophical system for which separate methods are required. These parts correspond to volume one and volume two of The Nature of Existence. McTaggart sets out in volume one (books two through four) to:

> "determine successively various characteristics of the existent. The order in which they will be determined

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[20] Nature of Existence, S. 48.

> is largely a necessary order -- the characteristic Y will be determined after the characteristic X because the only possible demonstration of the occurrence of Y is one which starts from the fact of the occurrence of X."[21]

It is this method which McTaggart distinguishes from Hegel's. And as we have seen, McTaggart favors deductive implication over Hegelian synthesis. Thus in volume one of The Nature of Existence McTaggart seeks to determine deductively the necessary characteristics of existents.

In Volume two, he sets himself to :

> "enquire what consequences of theoretical or practical interest can be drawn from the general nature of the existent with respect to various forms of the existent which are empirically known to us."[22]

It is this latter division which contains MART (specifically, book five). McTaggart's intention there is to:

> "consider various characteristics as to which our experience gives us, at the least, a *prima facie* suggestion that they are possessed, either by everything which exists, or by some existing thing."[23]

Time is one of the characteristics given a *prima facie* appearance by our experience of being a characteristic

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[21] Nature of Existence, S. 47.

[22] Nature of Existence, S. 53.

[23] Nature of Existence, S. 53.

possessed by everything that exists, or by some existing thing. However, the enquiry into the characteristichood of time begins with "our conclusions as to the general nature of the existent, as determined by the previous enquiry."[24] Therefore, the results of books two through four, which are a set of conditions for being possessed by anything existent, are applied to those candidates for characteristichood treated in book five, and these include time, matter, sensa and spirit. It turns out of course that time, matter and sensa fail, though for different reasons, to pass the test, and hence are not characteristics of everything that exists or of some existing thing.

For McTaggart, the best that any set of characteristics of the existent suggested by experience may achieve is a high degree of probablity. The introduction of empirical claims reduces the certainty McTaggart can ascribe to his results, for:

> "it is possible that some characteristic, which could only be known empirically, and we have had no chance of knowing empirically, might be the key to an alternative possible solution, and that solution might be the one which was actually true. In problems of this sort, therefore, our arguments may possibly attain a high degree of probability, but can never hope for certainty."[25]

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[24] Nature of Existence, S. 53.

[25] Nature of Existence, S. 54. Good candidates for McTaggart's "possible characteristic" might be gauge invariance or isospin.

The break between McTaggart's methods, and between his two volumes, comes with "the introduction of the empirical". While volume one admits two empirical premises at the outset, namely that something at least exists, and that whatever exists has parts, it then follows a course of rigid demonstration. At that point at which what has been demonstrated is put to use McTaggart shifts gears and admits the possible falsity of his conclusions about those candidate characteristics of the existent suggested by experience. The rejection of time therefore employs a strictly demonstrated set of criteria, but issues in a highly probable conclusion. The difference lies in just what it is that experience suggests to us *prima facie* about time, and it will be my task to spell out what McTaggart had in mind on this point.

We cannot simply assume that McTaggart is rejecting all possible accounts of what time could be. Just as there are possible solutions to temporal problems which may be unknown to us empirically, there are possible interpretations of what time is that pass McTaggart's test for being characteristics of the existent and some possible interpretations which fail. My argument will be that McTaggart rejects only one possible interpretation of time and ignores, since he had no choice, other interpretations unknown to him.

McTaggart evidently took MART to be of some

importance, though this may be due to its singular degree of distance from ordinary understanding, or to the difficulties which arise from trying to consistently hold a position which rejects time. MART should be treated, however, as just another application of the criteria for characteristichood, and not as the make it or break it argument many have taken it to be. If we put the argument in its context it becomes clearer what it presupposes, what it implies, and what is wrong with it.

A final note of some importance should be made about McTaggart's method. The two empirical premises he introduces at the outset are established by arguments from perception. McTaggart distinguishes perception from awareness, and notes that:

> "Perception is the awareness of what Mr. Russell calls particulars, as distinct from the awareness of what he calls universals. In the terminology which I propose to adopt, it is the awareness of substances as distinct from the awareness of characteristics."[26]

McTaggart employs empirical premises drawn from considerations of perception as basic points of departure for his deductive scheme. As he explains it:

> "the basis of our certainty will be empirical and not *a priori*. This, however, will not make it less certain. A judgement which is based on

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[26] Nature of Existence, S. 44. McTaggart also notes, as will I, that the distinction between substances and characteristics will be addressed below.

> perception may be as certain as one which is evident *a priori*. And in the cases before us our judgments will not be based on induction from the results of various perceptions -- which would be untrustworthy for the reasons given earlier in the chapter. A single perception is sufficient to prove either of them. If I perceive anything at all, and so can judge that the thing perceived exists, that is sufficient to prove the proposition "something exists," which is all that is wanted in the first case. And if I have a single perception which is such that I am entitled to judge that the thing perceived is differentiated into parts, that is sufficient to prove that the whole of what exists does not form one undifferentiated whole, since two parts, at least, are to be found in it."[27]

In some cases perception grants certainty. In others, such as my perception of a clock, things are not so clear. We will do well to make note of the distinction between awareness and perception which McTaggart employs here, for when it comes time to evaluate the rejection of time, the role of our experience will require careful consideration. The alleged certainty of the two empirical points McTaggart introduces at the outset is given by the fact that we have some perceptions which entitle us to make judgments; yet it seems the entitlement to judge provides proof of what is judged. I shall return to this point about perception, judgement and provability in Chapter III.

I will proceed through McTaggart's central doctrines

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[27] Nature of Existence, S.45.

by taking each step of "An Ontological Idealism"[28] one at a time. I will proceed in the order in which McTaggart proceeded in order to preserve clarity. I will not recount everything in "An Ontological Idealism", but will restrict myself to those doctrines which are the major players in McTaggart's metaphysics.

McTaggart begins "An Ontological Idealism" by declaring that:

> "Ontologically, I am an Idealist, since I believe that all that exists is spiritual. I am also, in one sense of the term, a Personal Idealist. For I believe that every part of the content of spirit falls within some self, and that no part of it falls within more than one self; and that the only substances are selves, parts of selves, and groups of selves or parts of selves."[29]

McTaggart distinguishes ontological concerns from epistemological concerns: or, to put it another way, he distinguishes what there is from what we can or do believe that there is:

> "I should say that epistemologically I was a Realist. I should say that knowledge was a true belief, and I should say that a belief was true when, and only when, it stands in a relation of correspondence to a fact. I do not think that this particular relation of correspondence can be defined further, but it may be remarked that it is not a relation of copying or of similarity. Of facts I

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[28] In Philosophical Studies, pp. 273.

[29] Philosophical Studies, p. 273.

> should say that whenever anything is anything, using both 'anything' and 'is' in the widest possible sense, it is a fact that it is so."[30]

McTaggart takes reality to be an indefinable quality. Yet reality is not a quality of just anything at all, for there are cases of application of the quality "unreal". As an example, "the present Duke of London is unreal."[31] He is unreal because he is not. There is no present Duke of London. McTaggart suggests that "the present Duke of London is unreal" is said in order to assert "that the description 'the present Duke of London' is a description which applies to nothing."[32]

Russell and Moore, among others, have been most influential in ridding philosophy of curiosities about being and not being and being described, denoted or referred to. Alternative accounts of existence, predication and description may run into the thousands. Our concern is with what McTaggart's account was and with what reality and relations have to do with the rejection of time. It is as difficult to describe one variation amidst thousands as it is to find hay in a stack of needles. We should try, as best we can, to stay with McTaggart's account, and ignore the

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[30] Philosophical Studies, p. 273. Geach tries to explain McTaggart's notion of facts by analogy with Frege's. Geach admits, however, that Mctaggart was not entirely acquainted with Frege's work.

[31] Philosophical Studies, p. 273.

[32] Philosophical Studies, p. 273.

stack of needles until McTaggart's doctrines require stitching.

We begin exegesis of McTaggart's doctrines by noting that McTaggart writes that:

> "Existence appears to me to be another indefinable quality, which is such that all which is existent is necessarily real, but all which is real is not necessarily existent."[33]

McTaggart holds that cases of being an existent are different from cases of being real in the way that cases of being a species differ from cases of being a genus.

McTaggart continues:

> "It has been said that propositions, possibilities, qualities, and relations are real without being existent. I do not think that the independent reality of propositions or possibilities can be justified. But qualities and relations (which may be grouped together under the general name of characteristics) are in themselves real without being existent."[34]

Characteristics in themselves are "independently real" "without being existent". McTaggart adds the caveat that:

> "The qualities and relations of existent substances, however, may be called, as such, existent".[35]

The qualities of things are also characteristics,

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[33] Philosophical Studies, p. 273.

[34] Philosophical Studies, pp. 273-4.

[35] Philosophical Studies, p. 274.

though we note that only characteristics of existents themselves exist.

As for types of qualities:

> "Some qualities are Simple, and do not admit of analysis. Others are compound, consisting of an aggregate of simple qualities. Others are Complex, which do not consist of simple qualities, but can be analyzed and defined by means of simple qualities and simple relations. (Negative qualities are complex.) The non-compound qualities possessed by anything may be called the Nature of that thing."[36]

Here we have a definition for the nature of a thing. A quality is the nature of something if that quality is the set such that all its members are qualities of the something and are not compound qualities.[37]

We turn now to McTaggart's account of substance:

> "I hold that the existence of qualities involves the existence of Substances. I should define a substance as that which has qualities and is related, without being itself either a quality or a relation, or having qualities or relations among its parts. (The first part of this is the traditional definition of substance. The last part is added to exclude facts.) By this definition many things would be called substances which are not usually called so, such as a sneeze or a group consisting of

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[36] Philosophical Studies, pp. 274-5.

[37] Cf. Philosophical Studies, p.275.

all red-headed archdeacons."[38]

McTaggart asks, rhetorically, "Is there only one substance, or are there more?" To answer this, he notes that:

> "Here, for a second time, and the last in the first part of my system, I appeal to perception, which shows that more substances than one exist. But, at the same time, all the substances which exist may be taken together as a single substance."[39]

The conclusion McTaggart wishes to draw from this I shall call the Plurality of Substance Doctrine, which I will discuss in further detail below.

McTaggart continues:

> "Since there are more substances than one, they must exist in relations to one another -- though, of course, relations also exist between qualities and relations, just as both qualities and relations have qualities. The conception of relation is indefinable, like the conception of quality. It is as fundamental as the conception of quality, and it is impossible to dispense with either of them in favour of the other."[40]

We now proceed to the notions of derivative qualities and derivative relations:

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[38] Philosophical Studies, p. 275. The exclusion of facts is motivated, presumably, by a criticism of Moore's. Cf. Moore, G.E., "Mr. McTaggart's 'Studies in Hegelian Cosmology", Proceedings of the Aristotelian Society, 1901-02, pp. 177ff.

[39] Philosophical Studies, p.275.

[40] Philosophical Studies, p. 275.

> "Every relationship generates a derivative quality in each of its terms -- the quality of being a term in that relationship. In the same way a derivative relationship is generated between any quality and the substance which has it, and between every relation and each of its terms. Thus infinite series of characteristics are generated, but these infinite series are not vicious."[41]

A doctrine of considerable importance to McTaggart comes next:

> "It seems clear to me that two substances cannot have exactly the same nature. (The difference, however, may not be a difference in original qualities, but may consist entirely in original qualities, together with the difference in the derivative characteristics generated by those relations.) This result may be called the Dissimilarity of the Diverse."[42]

Another important notion for McTaggart is that of description, and discussion of various types of description follows next:

> "Substances, being particular, cannot be defined, but may be described. A description which applies to only one substance is an Exclusive Description of it. An exclusive description which is entirely in terms of qualities and relations, without introducing undescribed substances, I call a Sufficient Description. Since no two substances have exactly the same nature, every substance has an exclusive description, and it can be shown to follow from this that, to avoid a vicious infinite regress,

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[41] Philosophical Studies, p. 275.

[42] Philosophical Studies, p. 276.

> every substance must have a sufficient description."[43]

We next introduce extrinsic and intrinsic determination:

> "Some characteristics clearly imply others, since it is sometimes true that, if one substance has the characteristic X, that substance, or another which stands to it in some definite relation, will have the characteristic Y. This may be called intrinsic determination. But besides this there is a relation between all the characteristics of the same substance, such that, if any one of them were not a characteristic of that substance, we could not assert that any others of them were characteristics of that substance. This relation I have called Extrinsic Determination."[44]

Extrinsic and intrinsic determination are relations among characteristics of substances.

We might render extrinsic determination as the relation which holds between characteristics of substances such that if it be denied of one characteristic that it is of that substance, we must deny of others that they are characteristics of that substance. As an example, consider spatiality and blueness. Intrinsic determination is a relation between non-spatiality and non-blueness; Particular blues and spaces fit the extrinsic case.

McTaggart remarks that:

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[43] Philosophical Studies, p. 276.

[44] Philosophical Studies, p.276.

> "The nature of any substance may be regarded as a unity compounded of the particular characteristics which constitute it. But it may be regarded with equal truth as a unity which is manifested in those characteristics."[45]

We will develop a more illuminating picture of substances and their nature below. Here however we wish to point out that the nature of a substance may be understood as a compounding of constitutive characteristics: an underlying unity which explains the occurrence of those characteristics together. Either of these two ways of regarding the nature of a substance is acceptable to McTaggart.

We have reached the point in McTaggart's argument at which he introduces the theory of groups. It is important to emphasize that McTaggart is concerned with the naming of parts of things and the philosophical implications of infinite divisibility; topics McTaggart introduces in his discussion of groups of substances and groups of parts of substances.

McTaggart reserves a full account of his theory of groups for The Nature of Existence. The statement of the theory in his earlier work consists of several distinctions and a few examples.

In An Ontological Idealism McTaggart distinguishes a group from a class. The former "is determined by denotation", while the latter "is determined by a class-

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[45] Philosophical Studies, p. 276.

concept".[46] Groups have members, and these are to be distinguished from parts, which belong to wholes.

McTaggart explains that:

> "By a group I mean any collection formed of substances, or of collections of substances, or of both. The substances or collections which form the collection are Members of the group."[47]

It is tempting to treat McTaggart's groups as sets. However, McTaggart uses the word "set" in connection with parts, and these are distinguished from groups. To avoid confusion I will retain McTaggart's terminology. We should not change his use of terms until we can show that our substitution is warranted.

In total then, there are groups, which have members, and are determined by denotation, and there are wholes, which have parts.

> "A Set of Parts of any whole is any collection of its parts which together make up the whole, and do not do more than make it up, so that the whole would not be made up if any of those parts, or of their parts, should be subtracted."[48]

We will be safe in using the term "proper part" in the usual fashion in order to refer to a part of a whole which is not the entire whole.

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[46] Philosophical Studies, p.276.

[47] Philosophical Studies, p. 276.

[48] Philosophical Studies, p. 276.

As an example, let us consider a baseball team. Let us call each player on the team a substance. The team would then be a collection of substances, and the major leagues would be a collection of collections of substances. Thus our team and the other teams in the league, as well as the league itself, satisfy the definition of groups.

Baseball provides examples of the majority of the doctrines we have recounted thus far. The distinctions McTaggart draws can be clearly related to the ordinary world and our experience of it, or at least to ordinary baseball and our experience of it. However, as with any metaphysical discussion, arbitrary limits must be set to confine the description of objects to workable size.

We can refine our baseball universe by stipulating that it contains only players from the 1934 season. In honour of the St. Louis Hegelians our group of example players will be the 1934 St. Louis Cardinals. Each of the players may be referred to by name, position or number, and each has statistics recording baseball performance for that year. Thus our baseball universe may be treated as a data set containing records for each player. The physical existence of the players themselves must be treated with some care, however, so as not to beg the question of Idealism either for or against McTaggart.

Outfielder Ducky Medwick satisfies McTaggart's definition of substance. We recall that S is a substance if

and only if it has qualities, is a term of some relation, is not itself a quality or a relation, and it is not the case that there is some part of S which is either a quality or a relation. It should be noted that the last conjunct is intended to rule out facts as being substances, and may be satisfied vacuously if the substance in question has no parts. Since McTaggart holds that all substances have parts, some attention should be paid to vacuous satisfaction of the definition of substance by entities which do not have parts. These should not be substances.

Ducky Medwick "hit .319", thus let us say that he has the quality of hitting .319 (or, a .319 batting average is a quality of Ducky Medwick). Our candidate substance is also the term of at least one relation, since he has more triples than Pepper Martin. Ducky Medwick is not, as a baseball player, a quality or relation, nor does he have parts which are qualities or relations. As a member of our hypothetical universe he may be a relation or a quality, being only hypothetical. However, we may describe the actual Ducky Medwick who did play baseball in 1934, and that entity was not a quality or relation but did have qualities and was a term in many relations. The baseball player does satisfy the definition of substance, though the entity which is a member of a hypothetical thought experiment may not.

By similar reasoning we can show that all the players in our hypothetical baseball universe satisfy the

definition of substance.

Let us review McTaggart's doctrines in the form of baseball examples, beginning with the empirical claims with which McTaggart begins his argument.

The players in our baseball team do satisfy the definition of substance but that does not immediately entail their existence.

We have shown thus far that the 1934 Cardinals are real, but we have not shown that they exist. We may proceed to demonstrate qualities and relations of which players of the 1934 Major Leagues are participants, but we should not be establishing their existence in the process.

Let us turn to McTaggart's discussion of existence in Book II of The Nature of Existence. There he says:

> "It would be possible, no doubt, without discussing [the question 'does anything exist'] to consider what characteristics are implied in the characteristic of existence, and then to say conditionally, that, if anything does exist, it has these characteristics."[49]

This is indeed the point we have reached with Ducky Medwick. McTaggart continues:

> "But the whole practical interest and importance of our inquiry depends on the answer to the question "does anything exist?" and it is with the consideration of this question that we will start."[50]

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[49] Nature of Existence, S.55.

[50] Nature of Existence, S. 55.

Again, this is the point we have reached with our candidate substance. "Practical interest" demands a concrete proof of the actuality of our baseball teams -- our discursive demonstration, as it is thus far conditional, lacks some measure of practical impact.

McTaggart chooses to transmute the question:

> "All that concerns us now is whether anything exists. It does not matter how much exists, or what kind of thing it is. All that is wanted is to determine the truth of the statement "something is". And that statement, of course, is true if any other statement asserting existence is true."[51]

The conclusion McTaggart reaches is of course that something exists. His argument is essentially of a Cartesian nature, and he concludes that:

> "Although its denial is not self-contradictory, and its truth is not self-evident, the statement that something exists is about as certainly true as any statement can be. It is, of course, possible for a judgement based on a perception to be erroneous, because it is possible for the judgment to misdescribe what is perceived. But such an error could not invalidate this particular judgement, for as we have seen, if any judgement that X exists is erroneous through such a misdescription, then that misdescription must exist, and thus the judgement that something exists

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[51] Nature of Existence, S.55.

would still be true".[52]

So it is no good to claim that "something exists" is false. This does not tell us what does exist however.

Compound qualities consist "of an aggregate of simple qualities".[53] Those qualities which are not compound will be qualities which are not aggregates of simple qualities. Qualities which can be the nature of a substance are compound qualities, however, for they consist of an aggregate of non-compound qualities of the substance concerned. Hence, if we have a "compound quality which is the aggregate of all the non-compound qualities"[54] of S, then that compound quality is the nature of S.

The non-compound qualities of Ducky Medwick are his batting average and the qualities derivable from his relations with other baseball players. The compound quality which is the aggregate of all these qualities is the nature of Ducky Medwick. Hence the nature of a thing involves the qualities of all other things. To say what the nature of Ducky Medwick is we need to list infinitely many qualities. The list may be made finite by not including repeating

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[52] Nature of Existence, S.58. Recall our earlier note that judgments and perceptions have a special relationship with the truth. We see here now that certain judgments are limited to the special case of judgments about the existence of anything, and judgments are not inviolable windows on facts. CF. p. 29 above. Again, more on this subject will be given in Chapter III.

[53] Philosophical Studies, p. 274.

[54] Philosophical Studies, p. 275.

qualities (derived from relations), but we have as yet no explicit justification for this.

Complex qualities "do not consist of simple qualities, but can be analyzed and defined by means of simple qualities and simple relations" which do not admit of analysis. The quality "is not a quality of Ducky Medwick" is a complex quality, since "is-not-a-quality-of-x" is not parsable.

McTaggart's doctrine of the Dissimilarity of the Diverse is the claim that that there is no compound quality which is an aggregate of the non-compound qualities of two substances. The converse also holds: if there is no z which is an aggregate of the non-compound qualities of x and an aggregate of the non-compound qualities of y, then x and y are distinct substances. Since the simple quality of batting average distinguishes Ducky Medwick and Pepper Martin, they are distinct substances. McTaggart notes that:

> "The difference, however, may not be a difference in original relations, but may consist entirely in a difference of original qualities, together with the difference in the derivative characteristics generated by those relations."[55]

Let us call a list of the qualities of a substance (including derivative qualities) a description of that substance. Using the name "Ducky Medwick" designates a substance, but is not a complete description, which would

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[55] Philosophical Studies, p. 276.

list infinitely many characteristics of Ducky Medwick.

"Hit .319" describes Ducky Medwick but does not describe Pepper Martin, who had a lower batting average. "Hit .319" is an exclusive description of Ducky Medwick, unless there is another baseball player in our universe who also has that batting average. A quality not had by other baseball players, such as having the name "Ducky Medwick", would serve as a sufficient description of Ducky Medwick. But the quality of having the name is not always sufficient, as there may be more than one player of that name.

I will briefly review the important doctrines and what they claim, and give them short names. These will form our working set of doctrines with which we will proceed to examine McTaggart's theory of parts, wholes and substances, in preparation for our exegesis of McTaggart's views on change and the ontological status of the characteristic of "being in time".

RULE ONE claims that everything existent is necessarily real, but not everything real is necessarily existent.

E1 and E2 are McTaggart's empirical claims that something exists and that whatever exists has parts.

S is a definition of substance, and the Plurality of Substance doctrine claims that there is more than one substance. McTaggart claims that there is a substance which is all substances. This and E2 together suggest that each

substance is a part of a universal substance.

DD is the doctrine of the dissimilarity of the diverse, which holds that no two distinct substances have the same nature, and that different natures entail distinct substances.

NAT is the doctrine that the nature of a substance is the compound quality which is the aggregate of all non-compound qualities of the substance. From DD and NAT together we infer that no two distinct substances have the same set of non-compound qualities. Since qualities are characteristics, no two distinct substances have the same characteristics.

ED is the definition of exclusive description, which holds that a description of a substance which is not a description of any other substance is exclusive.

A sufficient description of a substance is one which does not introduce undescribed substances, but uniquely describes a substance simply by listing characteristics. It follows from DD and NAT together that there are sufficient descriptions available for any substance, though specifying what one might be requires either a limited universe or a great deal of time.

ID is the doctrine of intrinsic determination, which holds that characteristics may be related by virtue of their joint possession by a substance, or by two substances which are related. If two characteristics are present in the same

sufficient description, these will be related by intrinsic determination. Extrinsic determination is:

> "a relation between all the characteristics of the same substance, such that, if any one of them were not a characteristic of that substance, we could not assert that any others of them were characteristics of that substance."[56]

Extrinsic and intrinsic determination are closely tied to the nature of substances. The compound quality which is the aggregate of all non-compound qualities of a substance is the nature of that substance. Listing the members of that aggregate is equivalent to giving a description of the substance. If an exclusive description of a substance can be stated without reference to other substances then the nature of that substance can be given in a sufficient description. All substances can be given sufficient descriptions since they are all distinct from one another in virtue of at least one characteristic, hence a sufficient description need only specify the distinguishing characteristics of the substance in question.

Let us attempt to formulate a calculus of substances by combining the calculus of individuals[57] with the operating assumption that McTaggart's substances may be

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[56] Philosophical Studies, p. 276.

[57] Due to Lesniewski, Cf. Tarski, Goodman, and Lewis.

treated as individuals without simple parts.[58]

Russell complained that:

> "For the comprehension of analysis, it is necessary to investigate the notion of whole and part, a notion which has been wrapped in obscurity--though not without certain more or less valid reasons -- by writers who may be roughly called Hegelian."[59]

McTaggart may certainly be roughly called Hegelian, and it is our contention that by peeling off the wrapping we may find that McTaggart's more or less valid reasons might be treated formally with sufficient success to delineate valid from invalid.

There is no clear and immediate historical connection between McTaggart and the work of logicians in Poland in the 1930's. The connection between them can be seen in hindsight only because they shared a common subject of study. There has been a steady use made of the work of Lesniewski, Lukasiewicz, Kotarbinski and Tarski in recent years.

We will employ a version of Goodman's calculus of individuals interpreted over a universe of McTaggart's substances to construct a calculus of substances.

Our first concern will be to find a suitable

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[58] Broad claims that McTaggart's substances are equivalent to a construal of particulars which Broad advocates in his Examination of McTaggart's Philosophy, cf. p. 132.

[59] Russell, Bertrand, The Principles of Mathematics, (London: George Allen and Unwin, 1903), p. 137.

primitive relation for our calculus of substances. Goodman[60] chooses the overlap relation; we will choose the discreteness relation, from which the overlap relation may be defined. That the relation of overlapping is primitive to most systems derives from the fact that Tarski used Lesniewski's calculus for the treatment of a geometry which took spheres as fundamental and did not use the notion of points, or of lines or surfaces. As Tarski notes:

> "The specific character of such a geometry of solids -- in contrast to all point geometries -- is shown in particular in the law according to which each figure contains another figure as a proper part".[61]

However, the plasticity of the formal system we will call the calculus of substances is such that we need not use it simply for geometry.

To prepare the construction of the calculus of substances we note that the variables of the calculus will range over existent substances.

In Goodman's account of the calculus of individuals "xιy" is defined as x's being discrete from y. Discreteness is a symmetric and irreflexive relation. Goodman's account takes the "overlap" relation as primitive, and Goodman is able to define discreteness in terms of

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[60] Goodman, Nelson, The Structure of Appearance, (Indianapolis: Bobbs-Merrill, 1966).

[61] Tarski, Alfred, Logic, Semantics, Metamathematics, (Oxford: Clarendon Press, 1956), p.24.

overlap, the two relations being duals. For our purposes it will be simpler to take discreteness as primitive, given that we are following McTaggart's hypothesis that all existents have parts and that there are no simple parts.

We have then:

MM1: $(x)(y)[x \iota y \equiv (z)(\exists w)(w \iota z \& (w \iota x \vee w \iota y))]$

and:

MM2: $(x)(y)[x \iota y \equiv \tilde{}(x \circ y)]$,

where "$x \circ y$" means "x overlaps y".

Newton-Smith notes that the postulates of Tarski's theory of mereology:

> "provide those truths about the relations between parts and wholes of things which obtain regardless of the kind of thing in relation to which we are talking of wholes and parts. The basic postulates are intended to be true if we interpret the whole-part relation in terms of spatial inclusion, temporal inclusion and so on. Tarski adds certain further postulates which relate specifically to spatial parts and wholes in order to develop three dimensional-euclidean geometry of solids. By taking the whole-part relation and the notion of a solid as basic he is able to define the notion of a point in terms of the notion of a solid."[62]

Newton-Smith demonstrates the construction of instants from Tarski's postulates interpreted over intervals, which are, he claims, temporally extended and have temporal parts. The addition of certain temporally

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[62] The Structure of Time, p. 135.

specific postulates to Tarski's general theory allows a construction of instants as "infinite nested sequences of inner parts of intervals".[63]

These results are just what are required for our Mereological McTaggartese. If there are no simple parts, every substance will be associated with a set of parts which will be a dense set. We have taken discreteness as the primitive relation in our set of MM postulates. Ordering relations are dense if for every two discrete things there is a third thing discrete from the first two which occurs earlier in the ordering than one of the first two things and later than the other. The ordering relation which McTaggart employs is the relation of Determining Correspondence, which is a dense ordering relation of sufficient descriptions of sets of parts of substances.

We may quickly complete the mereological rendering of McTaggart's doctrines.

E1 and E2 become, respectively:

$$MM3: (\exists x)x=x$$

and:

$$MM4: (x)(\exists y)[y<x].$$

We will distinguish a proper part, or what McTaggart calls a set of parts, from a part. McTaggart's claim that all substances are distinct and that each has parts requires that some parts of a substance at least are distinct from

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[63] The Structure of Time, p. 137.

the substance itself, and this is so only when a substance has at least one proper part. Thus we will require:

MM5: $(x)(y)[x<y = (z)(z\iota x \vee \tilde{}(z\iota y))]$,

which is a definition of parts in terms of discreteness, and:

MM6: $(x)(y)[x<<y = x<y \ \& \ \tilde{}(y<x)]$,

in which we introduce "<<" as our notation for "proper part" and define it in terms of parts.

The remaining McTaggart doctrines concern characteristics of substances and their relationships. Since parts of substances are substances, these doctrines also apply to characteristics of parts of substances. The two concepts of most importance to us in explicating McTaggart's notion of Determining Correspondence are the relations (between characteristics) of Sufficient Description and of Intrinsic Determination.

McTaggart claims[64] that a contradiction arises from the supposition that all substance is infinitely divisible unless sufficient descriptions of substances intrinsically determine sufficient descriptions of all proper parts of the substance, and these in turn determine intrinsically sufficient descriptions of proper parts of those parts, and so on to infinity. When sufficient descriptions of the proper parts of a substance are related in this way characteristics of the substances are related by determining

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[64] Nature of Existence, Chapter XXIV.

correspondence.

In other words, McTaggart is claiming that all substances are infinitely divisible into parts and that each proper part can be sufficiently described by a description which implies (through intrinsic determination) sufficient descriptions of any proper parts of those parts. Substances of which such implicative sufficient descriptions can be given McTaggart calls Primary Wholes.

Primary Wholes are, though the terminology is foreign to McTaggart, mereological sums of a densely ordered set of parts. McTaggart's conclusion is that the universe is composed of Primary Wholes which have primary parts, which have secondary parts, etc.

McTaggart accepts the doctrine of determining correspondence as proven, for he conceives no other means by which the supposition of an infinity of divisible substances may be described without contradiction. Wisdom[65] offers three other means by which the relations among descriptions of sets of parts and their parts may be generated and described without contradiction. Thus McTaggart's eliminative argument for the doctrine of determining correspondence may be unsupportable.

However, Wisdom has not shown that the idea of infinite divisibility of substances into parts is faulty; in

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[65] Wisdom, John, "McTaggart's Determining Correspondence: A Refutation", Mind, 1928, p 414.

fact, he has given some legitimacy to the idea by supplying various methods for working with the supposition. On the other hand, Wisdom claims that not all substances can have sufficient descriptions, which if true would seriously undermine much of McTaggart's position.

CHAPTER III: CHANGE

The ideas which I am attempting to weave into an interpretation of McTaggart's metaphysics find their locus in McTaggart's account of change.

The argument among theorists of temporal becoming has on the one hand those who favour Russell's account of change. Temporal becoming theorists hold that Russell's account reduces temporal becoming to descriptions of discrete events. On the other hand, there are those who hold that Russell's reduction is incomplete.

The debate on becoming has borrowed McTaggart's distinction between the A series and the B series. Zeilicovici (Cf. footnote #11) considers McTaggart's distinction "brilliant" and "incisive". The argument over the Russellian reduction of becoming is entangled with the argument over McTaggart's Paradox[66] for two reasons: first, McTaggart's terminology has been borrowed by those who debate Russell's reduction, and second, McTaggart's development of his argument incorporates several explicit points of distinction from Russell, so it is convenient to compare and contrast the two positions.

I am claiming that the disentanglement of these

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[66] See Oaklander, p. 31.

debates requires a comparison of Russell and McTaggart on change that takes place on the ontological level. The particular ontology of Russell's I have in mind here is the one which McTaggart makes reference to, namely that of Russell's The Principles of Mathematics. The relevant questions to ask, I contend, are about what these arguments profess there to be, and how what there is changes.

In discussing what McTaggart takes there to be and how what there is changes it is useful to take a look at Aristotle[67].

Let us begin with Aristotle's account of generation and corruption:

> Since, then, we must distinguish (a) the substratum, and (b) the property whose nature is to be predicated of the substratum; and since change of each of these occurs; there is alteration when the substratum is perceptible and persists, but changed in its own properties, the properties in question being opposed to one another either as contraries or as intermediaries ... But when nothing perceptible persists in its identity as a substratum, and the thing changes as a whole ... such an occurrence is no longer alteration. It is a coming-to-be of the one substance and a passing away of the other... If however, in such cases, any property persists in the thing that has come-to-be the same way as it was in the thing which passed-away, ... the second thing, into which the first

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[67] I will not discuss the details of Russell's ontology or his account of change. See Oaklander, Temporal relations and Temporal Becoming, and Russell's Principles of Mathematics, p. 469 ff.

> changes, must not be a property of this persistent identical something. Otherwise, the change will be alteration."[68]

Here Aristotle makes reference to several things to which McTaggart also refers. First among these is substance, or as Aristotle has it, Substratum. McTaggart's account of substance is not the same as that of philosophers who regard change as the alteration of properties embedded in an unchanging underlying essence. We will find that McTaggart's metaphysics does not support Aristotle's "alteration".

To compare Aristotle and McTaggart, we need to look to McTaggart's doctrines governing the relation between a substance and its characteristics (sufficient description) and that governing the relations among characteristics of a substance (extrinsic determination), which together comprise the postulates of the theory of Determining Correspondence.

In the Aristotle fragment there is substance and there are properties. There is also another substance, which can be "coming-to-be" when the first is "passing-away". Such an occurrence is distinct from alteration, in which the properties of a substance change and there is only one substance.

These Aristotelian doctrines are motivated by a need to distinguish (a) change in the substratum, and (b) change

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[68] Aristotle, "On Generation and Corruption", quoted in Brody, Baruch, Identity and Essence, (Princeton: Princeton University Press, 1980),p. 77ff.

of the property whose nature it is to be predicated of the substratum.

Our account of McTaggart's doctrines did not thoroughly outline the relation which holds between terms such that the first is a quality of the substance which is the second. These qualities can be sufficient descriptions of the substance, or exclusive descriptions. If they are complete descriptions then they are also compound qualities, and as such may constitute the nature of the substance. Or they may be run of the mill qualities of the substance such as the quality of being in a relation to another substance.

The qualities of a substance which are of concern to us in our construction of McTaggart's theory of change are those which constitute sufficient descriptions. A sufficient description of a substance is a quality or compound quality which describes the substance without introducing undescribed substances, and distinguishes the substance from any other substances. A description of a substance is a list of its qualities. Thus a description may be a compound quality, or a single quality, or it may be a complete description or an exclusive description. A list of the qualities of a substance is an exclusive description when that list contains qualities no other substance has. Every substance has an exclusive description, for every substance will have at least one quality not had by another substance. The relation between that quality and that

substance is a relation of sufficient description.

McTaggart's relation of sufficient description links substances to special qualities all their own. McTaggart's doctrine of extrinsic determination holds that there is a relation among the qualities of a given substance which "unifies" the qualities of a substance. Sufficient description pairs qualities with substances.

Aristotle observes that there is change in the properties of a substance. He also observes that there are occasions for the passing away and coming to be of substances. Both of these types of change are to be accommodated by the distinction between alteration and becoming.

Alteration is change among the properties of a single substance. McTaggart's doctrine of extrinsic determination unites the characteristics of a given substance. McTaggart's metaphysics does not support Aristotle's concept of alteration, since whenever the qualities of a substance change this determines a new substance.[69]

McTaggart's denial of the possibility of Aristotelian alteration is evident in this passage from his discussion of objections to the doctrine of extrinsic determination:

"A substance which had today a

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[69] The Nature of Existence, Section 108.

> different height from that of the actual Snowdon could not be the same substance, since it would have a different nature".[70]

McTaggart does not recognize the validity of the "notorious" claim that:

> "Some characteristics of a substance can often be changed, and often are changed, without changing the substance, or the other characteristics."[71]

Such a claim was made by Descartes in his Meditations in regard to the melting of a ball of wax. It is also the claim made by some interpreters of Aristotle, such as Baruch Brody, who notes that Aristotle's:

> "theory of substantial change is perfectly compatible with the view that there is something that persists through all changes."[72]

These remarks on Aristotle and McTaggart serve to delineate the relationship between substance, description and change in Mctaggart and the differences between McTaggart's thought on these subjects and the classical treatment. It is important as a useful propaedeutic to the unravelling of the confusion over Mctaggart's role in the debate on temporal becoming to have shown that McTaggart's position is fundamentally at odds with classical

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[70] Nature of Existence, S. 110.

[71] Nature of Existence, S. 110.

[72] Identity and Essence, p. 72.

Aristotelian treatments, though the unravelling itself will not be attempted here.

McTaggart addressed a concern which might have been voiced against the deduction of a great deal of information from only two empirical propositions. In distinguishing himself from Hegel, he considers the necessity for a justification of the fertility of his own procedure, and does not think a justification is required:

> "The fact that empirical data are introduced, not only at the beginning, but also at one point later on in the process, will not by itself remove the difficulty, for, by the time we reach the end of the process, we shall have reached a great deal which was not in the first stage, and is not due exclusively to the single element (the differentiation of the existent) which was added empirically after the first stage. But the fertility of the *a priori* process will not excite wonder or doubt when it is remembered that various synthetic propositions are evident *a priori*. And, consequently, when we have established that whatever exists is B, we may be able to establish that whatever exists is C, because it is evident *a priori* that whatever is B is also C."[73]

These "various synthetic propositions" evident *a priori* cause McTaggart all sorts of problems when he attempts the transition from deductive metaphysics to explanatory hypothesis. How does one tell a synthetic proposition evident *a priori* from an empirically derived hypothesis? One way is to ban induction, for then no

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[73] Nature of Existence, S. 51.

synthetic proposition can be derived from empirical cases, and the only source of synthetic propositions would be strictly confined to perception and non-inductive argument from perception.

For Green, perception is permeated by relations, and the construction or supposition of a simple is a fiction. There is no justification for induction since there are no simple cases on which to base an induction.

What role does experience play in the distinction McTaggart maintains between the *a priori* and the empirical or synthetic? McTaggart regards induction as a means by which perceptions and experiences might be constructed to form justification for synthetic propositions, but regards such a construction as fallacious since each perception of a thing, or experience of several things, is a part of the whole of a perceptive experience. A part, or set of parts, considered in abstraction from the whole of which it is a part, or in abstraction from its relations to other parts, is a fiction. A construction of a whole from abstracted parts will be in error, for the description applied to the sum of such parts will not include characteristics of the whole of which the abstracted parts are perceived, believed, or claimed to be actual parts. Thus induction allows the construction of synthetic propositions, but an argument which supposed an inductively derived claim about a whole from a construction of its parts would be fallacious in

McTaggart's eyes.

In the absence of induction, McTaggart fertilizes his argument with a theory of implication among characteristics. That theory is called determination, and intrinsic determination is a kind of determination. Specifically, it is a relation among the characteristics of a substance. The characteristics of a substance can be relations, or qualities, or derivative relations or qualities such as the quality of being in a relation. For any substance there will be a dense set of associated characteristics. Characteristics which imply one another are related by intrinsic determination. The sense of implication McTaggart uses in his doctrine of intrinsic determination is the same as that he uses when he defends against the need for a justification for the fertility of his argument: there are synthetic propositions evident *a priori*. Among these are propositions such as "5+7=12". Such a proposition implies, in McTaggart's sense, the proposition "12-5=7".

On a fair reading of 'determination', the important point is that if the first were true the second could not be false. McTaggart's method proceeds by implication from one concept to another.

It might reasonably be claimed, with hindsight, that what a philosopher such as McTaggart takes to be synthetic propositions evident *a priori* depends upon how he distinguishes what he knows to be his experience from what

he knows but cannot imagine having experienced. The former will be what he takes as empirical; the latter he will call synthetic propositions evident *a priori*.

But to claim this throws the basis of McTaggart's method into disarray. I am claiming instead that McTaggart has nothing of interest in common with Hegel, and that a charitable interpretation of McTaggart's system may be given which uses a procedure indifferent to the distinction between empirical and *a priori*.

However, when the topic is time there is no obvious neutral ground among temporal experience, temporal logic, temporal language and temporal ontologies. We have to say that while one claim is empirical, and another one is synthetic, or a third is evident *a priori*, this is all the same, for what the proposition expresses about time will be part of a model which describes temporal phenomena. That model either accounts for temporal experience as veridical, or if it is a model at odds with experience, it will have clauses for accommodating the difference between the model and observation.[74]

McTaggart's doctrines may fit together in various

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[74] McTaggart's rejection of time, matter, sensa and space is at such odds with generally held assumptions that the larger part of volume two of The Nature of Existence is taken up by the explanation for vast numbers of erroneous perceptions. As well, McTaggart decided that the fact that almost all statements about time and change would be false on his account was of such grave importance that it warranted the most attention in the explanation for error.

ways. I have argued that an Hegelian interpretation should be proscribed. I have favoured an interpretation which allows a coherent assembly of the various claims McTaggart makes. But we should avoid placing too much weight on McTaggart's own justifications for his reasoning when those justifications concern the source of knowledge or the status of judgments based on perceptions.

To put it plainly, I am not compelled by McTaggart's epistemology,[75] though whatever he was up to epistemically has apparently interesting and powerful results. Furthermore, it would complicate our already intricate pastiche of methods to attempt a resolution of McTaggart's struggle with perception for him.[76]

This will not have undesirable consequences for the status of McTaggart's two empirical claims regarding the existence of substance and the differentiation of the existent. What we will say is that however he came to them, these doctrines form an integral part of McTaggart's final system, and as such must stand on their own as metaphysical claims. It might be debated that these claims can be justified, but their admission into McTaggart's system is

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[75] Which, strictly speaking, is a challenging flux of Neo-Kantian and Hegelian intuitions, odd applications of Russell's paper "Knowledge by Acquaintance and Knowledge by Description", sense data, and a vivid imagination. The Russell may be found in Mysticism and Logic and Other Essays.

[76] Geach makes much the same apology for McTaggart's mention of sense data. See Truth, Love and Immortality.

unquestionable, and we have not time or space to establish the soundness of McTaggart's support for them, given the complicated and obscure epistemic methodology he employs to give evidence of the truth of his two empirical postulates, though I have given sketches of McTaggart's argument on these points.

I have attempted to show that McTaggart's rejection of time is intimately related with the debate over Russell's reductions and the classical question of alteration and becoming. I have also argued that McTaggart's claims about the whole-part relation may be treated mereologically, thus clarifying an area which Russell thought obscure, and linking McTaggart's metaphysics to contemporary questions about temporal parts and the ontologies necessary to supporting them.

Further, I have maintained that there is a fundamental distinction between McTaggart and Russell which may be developed in terms of the influence of Green's attack on Empiricism and McTaggart's subsequent rejection of induction. As that distinction concerns the relation of whole and part and the supposition or abolition of simples, it is again useful to have developed some formal treatment of wholes and parts which will make the difference explicit. To be able to show that the notion of density, with its associated trans-finite cardinal sets, is compatible with McTaggart's theory is an interesting and potentially

powerful result of our analysis.

However, none of these contentions has been thoroughly worked through to the end. Instead they have been brought together in an effort to make a persuasive case for a reëvaluation of McTaggart's rejection of time in the light of his full metaphysics.

To this point we have indicated a number of points of disagreement between Russell, McTaggart and Aristotle. Our claim is that these points,together with the earlier discussion of McTaggart's thought, amount to these:

1. There are no simples in McTaggart's universe.

2. Any change is a becoming, since new characteristics describe a new substance.

3. We should ignore Hegel and tolerate McTaggart's epistemology.

4. McTaggart rejects induction as a form of valid argument.

5. Sufficient description and extrinsic determination are McTaggart's most important doctrines, and they comprise the theory of determining correspondence.

6. McTaggart's substances are unified by intrinsic determination, delineated by sufficient descriptions, spawned by change, and must be in a relation of determining correspondence with their parts in order to be primary wholes.

7. The universe consists of primary wholes, with

primary parts, for no other kind of thing could be infinitely divisible and still resolvable as an individual, since infinite divisibility is contradictory unless the theory of determining correspondence is true.

These are the results of our study of volume one of The Nature of Existence. Our next concern would be the extent to which these results inform our interpretation of MART, were we to address that topic in formal detail.

McTaggart attempted to:

> "enquire what consequences of theoretical or practical interest can be drawn from the general nature of the existent with respect to various forms of the existent which are empirically known to us."[77]

My contention is that the consequences of theoretical or practical interest of McTaggart's metaphysics are different today than those of Victorian and Edwardian England. Today there are different "forms of the existent which are empirically known to us".

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[77] Nature of Existence, Section 52.

CHAPTER IV:

McTAGGART'S ARGUMENT FOR THE REJECTION OF TIME

The A series is a relation among terms such that if any member of the series is present, there will be another member which is past and another which is future. The A series is a dense ordered relation. The B series is a relation which holds among members of a series such that if any member is later than another member, that other member is earlier than the first. The B series is ordered by a transitive and asymmetrical relation.

McTaggart introduced the terms A series and B series in order to define the two apparent features of our temporal experience which appear *prima facie* to be true of things which are in time or are temporal.

Many writers treat the A series as representative of dynamic aspects of temporality and the B series as representative of the static features of temporality.

Much has been made over the possible reduction of the one series to the other. Any such reduction would show that there is no distinction between the two series. Others have held that the distinction is inviolable. My claim is that the distinction, inviolate or not, is not the most important feature of McTaggart's work on time. I believe that an equally good or better account of time may be drawn

from McTaggart's account of the C series than from any account of the A and B series. I believe that McTaggart argued the same position indirectly, but was unclear about doing so because he attempted to account for intuitions and assumptions about temporal experience prevalent in his day, but not clearly appropriate to our day. It is crucial to what follows to recognize that the A and B series are not exhaustive alternatives. McTaggart is rejecting conceptions of time which assume that the A and B series constitute an exhaustive account of temporal phenomena, experience and explanation. His aim was to substitute for the A-B theory of time his own inclusive theory and the C series. Any critique of McTaggart's account of time which assumes that the A and B series are exhaustive alternatives is therefore either a straw man argument or is completely amiss about the terminology McTaggart employs and the meaning of his conclusion that time is unreal. Of course, McTaggart might have been more helpful in making this point, but he was very likely led astray by demands to support his negative thesis at the expense of his positive account.

McTaggart's argument against time may be stated succinctly: Time is just change, so we may evaluate the reality of time by evaluating the reality of change. Change is not possible without the terms involved in the change being members of an A series. Yet it is not possible, without contradiction, to order substances or events in an A

series, hence change is impossible and time is unreal.

Since McTaggart's rejection of time is actually a rejection of change, we may reasonably ask after the implications for his rejection of time of the various points we have discussed previously on the subject of change in McTaggart's metaphysics.

McTaggart's rejection of the B series proceeds *reductio ad absurdum*. If we suppose that:

> "In a time which formed a B series but not an A series, the change consisted in the fact that the event ceased to be an event, while another event began to be an event..."[78]

then "we should certainly have got a change". But if there are only characteristics ordered in a B series, that is, if only ascriptions of "earlier than" and "later than" are true of temporal items, and if N is earlier than O and later than M, these relations will not change.

> "N will always be in a time-series, and as, by our present hypothesis, a B series by itself constitutes time, N will always have a position in a time series, and always has had one. That is, it always has been an event, and always will be one, and cannot begin or cease to be an event."[79]

The suggestion that events merge meets a similar fate. On the hypothesis that the B series alone constitutes time, "M and N may have a common element, but they are not

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[78] Nature of Existence, S. 310.

[79] Nature of Existence, S. 310.

the same event, or there would be no change."[80] To get change out of B-series-only time would require that M cease and N begin, but as above, "on our present hypothesis, this is impossible".[81]

Since the B series "depends upon permanent relations", the contents of positions in a B-series-only time would not alter in any way. No matter what time it is now, if A is earlier than B then no derivative characteristics of A and B ever alter in B-series time. The universe remains static: substances sit quietly in the absence of change.

This permanence of derivative relations suggests McTaggart's doctrines of sufficient description and intrinsic determination. The relations in which a substance, or event, are involved are parts of the description of that substance or event. Some such relation will be part of the sufficient description of that substance or event if it serves a role in distinguishing that event or substance from others. As well, those relations will be involved in a relation of intrinsic determination with other relations and qualities which make up the nature of the substance or event involved.

A change in any characteristic of a substance is tantamount to the creation of a new substance. But in a

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[80] Nature of Existence, S. 310.

[81] Nature of Existence, S. 310.

world in which there are only B series orderings, no such creation is possible, or better, no loss or gain of a quality by a substance or event is possible, since B series ordering is permanent, and the quality of being in a B series ordering is ineliminable.

This will help inform our discussion of the A series:

> "If the characteristics of an event change, then there certainly is a change. But what characteristics of an event can change? It seems to me that there is only one class of such characteristics. And that class consists of the determinations of the event by terms of the A series."[82]

The "determinations of the event" are intrinsic or extrinsic, and give the event in question its nature, which will be distinct from the nature of all other events, just as intrinsic and extrinsic determination of characteristics unifies substances. McTaggart rejects the A series on the ground that it requires contradictory determinations of events. On the one hand, "past, present and future are incompatible determinations. Every event must be one or the other, but no event can be more than one." Nevertheless, "every event has them all. If M is present, it has been future and will be past."[83] A characteristics should be exclusive and events should thereby be distinguishable by different

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[82] Nature of Existence, S. 311).

[83] Nature of Existence, S. 329.

determinations of their A characteristics. But events cannot be so distinguished, for every event is determined by more than one A characteristic.

This paradox rests on the claim that "If M is present, it has been future and will be past ". The objection that:

> "The characteristics are only incompatible when they are simultaneous, and there is no contradiction to this in the fact that each term has all of them successively,"[84]

is met by a challenge to "what is meant by 'has been' and 'will be'". For McTaggart:

> "when we say that X is Y (in the temporal sense of 'is'), we are asserting X to be Y at a moment of present time."[85]

Hence, "I will be bored" means that at some future time "I am bored" is true, and "I am bored" means that I am bored at a moment of present time. My future boredom, according to McTaggart's analysis, is present in the future, and hence has more than one A characteristic.

> "The attribution of the terms past, present, and future to the terms of any series leads to a contradiction, unless it is specified that they have them successively. This means, as we have seen, that they have them in relation to terms specified as past, present, and future. These again, to avoid like contradiction, must be

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[84] Nature of Existence, S. 330.

[85] Nature of Existence, S. 331.

> specified as past, present, and future. And, since this continues infinitely, the first set of terms never escapes from contradiction at all."[86]

If an event is past, the characteristic 'past' could not be part of the sufficient description of the event, for that event has all three A characteristics, and no one of them will therefore distinguish one event from any other, as all events have all three characteristics.

Furthermore, the relation of intrinsic determination cannot hold over A characteristics, since if it did, all events could be intrinsically determined by the same characteristics, as all events would be past, present and future. Hence A characteristics can neither unify nor distinguish events. Yet we know that there are more than one substance or event, since all events and substances have parts which are distinct from them.

MART (McTaggart's argument for the rejection of time) has been treated by many philosophers, among them Broad, Schlessinger, Dummett, Lowe, Gale and Oaklander. All of their treatments, with the exception possibly of what Dummett calls 'a defense', have been carried on in the spirit of Mink's "acclaim of repeated refutation" (Cf. footnote #10). None of these treatments take more than a cursory glance into McTaggart's metaphysical doctrines of description and determination, and hence in a sense they

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[86] Nature of Existence, S. 332.

have little to do with the topics we have pursued thus far.

The explanation I want to offer of MART involves sufficient description and intrinsic determination, the part-whole relation, Mereological McTaggartese, and the C series. I believe that McTaggart had interesting things to say about time, but that he went astray when he attempted to justify himself against conventional opinion on experience and description of temporal phenomena.

One method of distinguishing the A and B series is to equate dates with the B series and tenses with the A series. In this fashion MART becomes a verbal argument, and its central concern is shifted from the question as to the characteristics of what there is to a question about language practices and reference.

Yet, it is McTaggart's opinion that dates are not sufficient descriptions.[87] The B series cannot of its own support the descriptions and implications necessary to compile a list of characteristics of what there is. If existent substances are in time, then sufficient descriptions of these existent substances will be arranged in a series, and if not the substances themselves, their sets of parts must be arranged in a series.

When there is a change, one list of characteristics loses members and issues in a new list. The metaphor of passing away and coming to be is unfortunate, however, for

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[87] Nature of Existence, S. 103.

it connotes the destruction and generation of substances and suggests questions about where substances go to and where they come from.

A better metaphor is that of inclusion. When there is a change, some characteristics are removed from or added to a list. There is then left over a new list such that either the second list is a proper subset of the first or the first is a proper subset of the second. Thus one list will include the other. McTaggart called the series which has as members terms which include one another the C series.

Tenses may be equated with members of an A series, as tenses are a means of specifying which characteristic, either 'past', 'present', or 'future', is to be found on a list of characteristics of a substance or an event which is the subject (or object, or dative) of a tensed statement. The most straightforward approach to tenses is tense logic, and that subject is well renowned enough without further comment here.

Tense logic, happily enough, is consistent with mereological inclusion. Dates will be compatible as well, in that a construction of the series of dates may be achieved mereologically when there is a rigid designator about.

McTaggart thought that the vast majority of tensed statements and dated utterances were false not because they were inherently contradictory or impervious to sense and reference, but because they did not describe reality.

McTaggart thought that he had discovered certain conditions which any description must meet in order to be true of reality. He held that truth was a relation of correspondence between a belief and a fact, and that facts were cases of the possession by "anything" of "anything".[88] He also held that characteristics imply one another, materially or otherwise, and described such implication as "determination".[89] Determination and correspondence together are the name for McTaggart's doctrine of the form of the characteristics (a set of facts) and its relation to other forms of characteristics (other sets of facts), such that a description which fits the form is in a relation of truth (correspondence) with the facts that are in that form (a well-ordered set of facts). Well ordering is determined by the avoidance of contradiction, in this case, the requisite form of sufficient descriptions and determinations holding between substances and their infinite sets of sets of parts.

Given his recipe for the well-formedness of descriptions of reality, McTaggart attempted to explain the divergence of descriptions of reality from descriptions of appearances as we ordinarily make them. He believed that the prevalence of error had its roots in the perception of time and change, which of course is misperception when all is said and done. It is in his explanation for such vast error

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[88] Nature of Existence, S. 10.

[89] Nature of Existence, Chapter XII.

that McTaggart's epistemology, phenomenology and ontology become horribly confused. We can salvage something of his effort in describing reality by noting that his account of inclusion is indeed a candidate theory for change which is distinct from the Aristotelian account. We also note the close parallels between McTaggart's account of the part-whole relation and Tarski's, and by constructing a mereological McTaggartese we are able to link McTaggart's account of change with work being undertaken in the ontology of possible worlds, particularly those schemes which employ the notion of temporal parts and dense nested sets of sets and so forth.

The thesis defended here is that MART cannot be treated in isolation from McTaggart's doctrines about description, determination and differentiation. Many doors have been opened onto other topics, but none has been fully entered. We do not need to fully explore the house and grounds to determine that MART is not isolated in a closet, but occupies the same rooms as Mctaggart's major metaphysical doctrines. The point is not that McTaggart's doctrines are right or wrong but that they are interdependent. I have attempted to show this interdependency and extend it to MART and other topics in the philosophy of time.

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