

# THE DEFINITION OF THE GODHEAD

By

DORA MARSDEN

This work is the first volume of a philosophy which claims to effect the intellectual rehabilitation of the dogmas of Christian theology in terms of the characters of the first principles of physics, *i.e.* Space and Time. "Christian theology, art and ritual have meaning," says the author, "no less certainly than the hieroglyphics engraved on the Rosetta stone; and just as the latter were made to yield up their significance in terms of their demotic and Greek equivalents, so can the former be made to yield up theirs in terms of the findings of the science of the first principles read in the light of the findings of the comparative study of religions and mythology." But to solve the riddle of the first principles solutions are required to those age-old problems of philosophy and theology which import into human culture its heavily-tangled undergrowth. This opening work, therefore, presents these solutions, unifying by means of them the whole body of human knowledge and re-interpreting all the great issues of mankind's cultural history.

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DORA MARSDEN, B.A. (Manchester)

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## DEDICATION

To  
THE GREAT NAME  
HUSHED AMONG US FOR SO LONG  
of  
HER,  
HEAVEN,  
THE MIGHTY MOTHER  
of  
ALL

*QUO VADIS ?*

BEYOND ROME,

to

THE ROCK OF AGES  
THE ARK AND COVENANT OF GOD  
GOD'S PROMISE  
THE LOGOS  
THE CROSS AND THE CRESCENT IN ONE





# TABLE OF CONTENTS

## BOOK I

### BOOK OF DEFINITIONS

#### SECTION I

#### PROLEGOMENON TO THEOLOGY

CHAPTER	PAGE
i PREFATORY . . . . .	19
Concerning the method to be adopted in this inquiry.	
ii DEFINITIONS of . . . . .	30
The Absolute ; of Definition ; of the <i>Summum Genus</i> .	
iii DEFINITIONS of . . . . .	49
Being ; of the Mathematical Point.	
iv RELIGIOUS ORIGINS of . . . . .	67
the Euclidean Point ; of the Extensional Spatial Ultimate.	
v DEFINITIONS of . . . . .	76
First Principles ; of " Things-in-themselves " ; of the Causal Nexus.	
vi DEFINITIONS of . . . . .	94
Reality ; of Space ; of Time ; of Motion.	

## SECTION II

## DEFINITION OF THE GODHEAD

CHAPTER	PAGE
vii THE GODHEAD AS THE TWO SUPERNATURES . . . . . Certain considerations preliminary thereto.	108
viii THE GODHEAD AS THE HOLY . . . . .	125
ix THE GODHEAD AS THE HOLY (continued) . . . . . The Cosmic Sacrifices.	137
x "SPACE-TIME" . . . . . This notion incompatible with our definition of divinity.	151
xi TWENTIETH CENTURY MONISM . . . . .	168

## BOOK II

## A HISTORICAL SURVEY:

## THE HISTORY OF THOUGHT RE-INTERPRETED

## SECTION III

## ON NON-BEING

xii THE NOTION OF NON-BEING IN GENERAL . . . . . The illicitness of the term ; its origin ; its function : "to shed a God."	187
xiii PRE-PLATONISTS ON NON-BEING . . . . .	200
xiv PLATO ON NON-BEING . . . . .	212
xv ARISTOTLE ON NON-BEING . . . . .	230
xvi POST-ARISTOTELIANS ON NON-BEING . . . . .	239

## SECTION IV

TRADITIONAL PROOFS OF THE GODHEAD'S  
EXISTENCE

CHAPTER	PAGE
xvii THE ARISTOTELIAN PROOF . . . .	252
xviii THE ONTOLOGICAL PROOF . . . .	267
xix THE COSMOGONICAL PROOF . . . .	285
xx THE COSMOGONICAL PROOF (continued) . . .	301
xxi THE PROOF FROM DESIGN . . . .	311
APPENDIX I (appendix to chapter xvi) . . . .	331
SYMPOSIUM OF MODERN VIEWS ON SPACE.	
Non-Being equated with Space.	
Gassendi to Kant.	
APPENDIX II (appendix to chapter v) . . . .	371
DAVID HUME ON CAUSATION.	
APPENDIX III (appendix to chapter xvi) . . . .	386
HEGEL'S TREATMENT OF THE CATEGORIES OF QUALITY :	
An extract from a paper by the late Professor J. Ellis	
McTaggart.	

BOOK I

BOOK OF DEFINITIONS

## SECTION I

### CHAPTER I

#### PREFATORY

##### CONCERNING THE METHOD TO BE ADOPTED IN THIS INQUIRY

Any author of to-day who publishes a work of a philosophical or theological cast does so assuming (1) that the unravelling of the scheme of the universe has vivid interest for the mind of man; (2) that such unravelling has at present to address itself to a very knotty tangle. Whether such tangle will be regarded as knotted past remedy will be an open question. No doubt the great majority of philosophers would consider it so, holding as they do that no common ground exists in terms of which the several departments of human knowledge can be made to link up with one another to form a cohering cultural unit. This present work, however, holds no such view, the volume here put forward being the first of a series designed to expound a philosophic system which argues that human knowledge forms a unit, its various disciplines uniting in their uppermost reaches to form a single science which may, indifferently, be styled theology or the science of the first principles. Thus, this present philosophic system's central argument is that the universe is grounded in certain radical substances which may, very well, be called first principles; that out of these substances the world of nature is generated; and that, for this reason, they are to be accounted divine. The ascertaining of the identity of the world's first principles is, moreover, held to involve no more of individual preference or idiosyncrasy than does the ascertaining of the identity of the constituents of (say) water. On these grounds, therefore, this present philosophy consistently challenges the current notion that the human intellect is characterised by some inherent limitation which precludes it from excogitating a valid philosophy of existence-in-its-entirety, a limitation which causes the body of human knowledge to shew a non-negotiable hiatus between its various

findings; for instance, between the findings of the three great cultural spheres of theology, philosophy and the science of nature.<sup>1</sup> And it is, besides, argued that this latter notion has become the settled thing it has, very largely because of the existing slovenly method of philosophic inquiry, which allows (prescribes indeed) an habitual plunging into the exposition of the most difficult questions known to man without any of that preliminary getting ready of the logical material which the exposition will require in the shape of strict definitions of the terms that have to figure prominently within it; and what in this opening chapter we propose (this, as indicative of a break-away from the existing state of intellectual slovenliness) is a statement concerning the place that *definition* needs to hold in the exposition of every self-respecting system of philosophy. For instance, we shall contend that the paramount lesson which the last three centuries of philosophic inquiry have to teach is philosophy's need for precision of speech. Not *doubt* (as Descartes taught) but *definition* is (we hold) philosophy's great need at this present moment. For although modern philosophy need born in the storm of abuse which broke upon certain ill-defined terms current in scholastic terminology, Bacon, Hobbes, Descartes, Locke and a crowd of others all saying very pointed things about these; and although, again, the earlier moderns (*e.g.* Hobbes, Descartes, Spinoza, Leibnitz, Wolff) had such faith in the power of definition to help philosophy that they advocated (and in certain notable cases applied) what they called the 'geometrical' method of philosophic exposition, their advocacy was of the letter only, the looseness of their own outstanding definitions permitting such confusion to obtain in their systems that the method itself fell into disrepute and desuetude. Hence, not a display of ostentatiously-headed *axioms*, *postulates*, and *definitions* such as Descartes and Spinoza made, but truly water-tight definitions which can be trusted

<sup>1</sup>We would here point out that this claim that the scheme of existence is intelligible is meant only to imply that it is so if one's desire is set upon discovering intelligibility in it. It is not meant to imply that it is an impossibility for men to continue to see such scheme as hopelessly enigmatical if they so desire to see it. That is, our solution represents a quite adequate way out of the recognised *impasse* into which philosophy has engineered itself. It unravels the recognised *knot*, but does not deprive one of the power to tighten the knot if one's intellectual taste is of the sort which prefers envisaging the scheme of things after that manner.

not to swamp the philosophic barque in confusion the moment it puts out into deeper philosophic waters is what philosophy is most urgently in need of. And not only, indeed, a sharply defined philosophic language; but such language applied to the entities of the universe conceived as geometry conceives them, *i.e.*, under their most radical aspect: which is to say, *extension*. For (as everyone is aware), although Descartes was the stout advocate he was of the 'geometrical' method of exposition in philosophy, he himself caused modern philosophy to open with the formal postulate (making this the central plank of his philosophic system) that there exists in the universe, in addition to extended being (*res extensa*), an opposed type of being, *i.e.*, non-extended being (*res cogitans*), a postulate which, were it true, would itself argue the inadmissibility of the universal application of the geometrical method Descartes was advocating. Hence, the most significant clash in modern philosophic opinion was that precipitated by this Cartesian postulate that *not all* of the universe's entities are reducible to forms of geometrical extension, this being the issue on which not only Hobbes but Henry More and the Cambridge school generally closed with Cartesianism.

We contend, then, that the inaugurator of modern philosophy—Descartes the philosophic geometer—was not nearly geometer enough to meet the needs of philosophy; for not only were his own axioms and definitions not axiomatic and definite enough, but his reduction of the universal content to extensities was not sweeping enough, things such as God, soul and spirit being regarded by him as non-extended. Accordingly, modern philosophy, ushered in though it was by the Cartesian *Discourse on Method* with its advice to trust to the strictest of all known cultural methods of exposition (the geometrical), is to be regarded as never having been furnished with a veritable opportunity to appreciate either the merits of the application to philosophical terms of definition as strict as that which obtains in geometry, or the advantages which accrue to intellectual speculation when that universal reduction to simplicity is made which consists in presenting all forms of being as, fundamentally, forms of extension. As to this second matter,

Descartes' own famous remark : " Give me matter and motion and I will construct the world ! " will furnish the illustration. For what Descartes here ought to have said was : " Present me with the main categories of the extended entities of the universe, and, from among these, I will select those two which, together, have the power to create a world ; " to create, that is, matter (body) ; for matter *is* the world. It is, that is to say, the world but not the universe. For (so we are going to contend) not in its entirety is the universe matter. Only creation (*mundus* : the world) is matter (the latter inclusive, of course, of radiations). Accordingly, matter itself cannot be cited as one of the forms of extension ' creative of ' the world. Rather, other forms of extension must be called in and cited if we are to account for the existence of matter : of the world : of created being in its entirety ; *to wit*, matter's supra-material yet still *extended* creators.

Now (let us point out) geometrical reasoning in its own proper sphere (mathematics) proceeds as effectively as it does for two reasons. On the one hand, it applies itself to entities envisaged under the basic aspect of extension (the aspect which constitutes the lowest common denomination of all being) ; on the other hand, it describes the entities thus extensionally regarded in the simplest known form of language : that of arithmetic : number. On this account all error in statement in geometry slowly tends to a reduction to zero, and geometry makes steady progress. Philosophy, on the contrary, has never had the good fortune to have applied to it the strict ' geometrical ' method of exposition, the laboured display made by certain philosophers of *axioms*, *postulates* and *definitions* having done nothing (or but very little) to import into philosophy that strictness of the ' geometrical ' spirit which the multiplicity of philosophy's confusions so urgently calls for, and this present philosophy certainly will attempt nothing of the kind. For, while our philosophy holds emphatically that the sort of precision which philosophic argument is in need of is the sort which is traditional with the science of geometry, it believes that this is a sort which can exhaust itself in logical precision exclusively, requiring little or nothing from the familiar Euclidean forms and



categories. Accordingly, two things only will this present inquiry borrow from geometry as being indispensable to the fashioning of a competent philosophy. The one is the practice of a *preliminary* definition of terms; the other is the practice of envisaging the universal content, thought as well as matter, the Godhead as well as the world, soul and spirit as well as body, as forms of extension. For (it maintains), an entity which has *no place* in the universe *is not*. 'To be' is to have a place in the universe; hence, to have room: to be extended. Hence the imperativeness of the reduction of all things to forms of extension.

Now, as regards definition, we here give it as our opinion (it was also the opinion of the Pythagorean philosophers twenty-five centuries ago) that, ultimately (*i.e.*, at some far-off date at present only just describable), it will be possible to describe all the propositions which philosophy and religion take note of *in terms of number*. Necessarily—if (as we hold) the entities which these subjects deal with (*i.e.*, the first principles: the Godhead) are (the radical) extensions. However, in this immediate present, this achievement is so remote as to be of little use practically, and we do not here concern ourselves about it. On this account, however, we hold that all the more need exists that philosophy shall aim at the very perfection of precision in its definitions of the *qualitative* terms which have to do duty in philosophy for the mathematical. However (and as we have already said), if philosophy has at present to content itself with makeshift expedients in the sphere of language, it has not to do so in respect of the subject-matter to which it applies its language; for it is as easy for philosophy to envisage the universe as the sum of extensities as it is for geometry. Hence (we say) 'extension' must either be made philosophy's prime term, or philosophy must reconcile itself to incoherence, abandoning all hope of ever emerging from its present condition of muddle and benightedness. This conclusion we can state as follows:—Modern philosophy, if it would share in the tremendous advantages enjoyed by geometry, must cut beneath the Cartesian positions from which it started. For it is in imitation of Descartes' inadequately-based geometrical rationalism (which allowed the attribute of

extension only to one certain favoured entity, matter, denying it to God and the soul and the mind) rather than along the lines pointed out by Descartes's critics (who held that the category of extended entities comprehends more than mere matter), that modern philosophic tradition has been elaborated. For Spinoza (for instance), who attempted on an even more ambitious scale than Descartes to apply the geometrical mode of proof in philosophy, started out from Descartes' own impossible division of the sum of being into *extension* AND *thought*, and, consequently, from the very nature of his initial postulate, was as little able as Descartes to render philosophic argument amenable to geometrical treatment. And similarly with Leibnitz. It was, moreover, in the Cartesian tradition perpetuated by Leibnitz's disciple Wolff that Kant was brought up; and, inasmuch as, with Wolff, the 'geometrical' mode of philosophic exposition had engineered itself into conditions which were farcical, Kant became imbued with a very strong antipathy in respect of what he regarded as the method's necessary puerility. Hence, when, formally, Kant launched his own 'Critical Philosophy,' he not only argued that the human intellect was inherently incapable of arriving at the fundamental truths sought after in the questions which philosophy and theology characteristically pose for us; and not only, again, that the use of the strict geometrical ('dogmatic': 'definitive') method of treatment is inappropriate in philosophic inquiries, but even against any preliminary definition of the main terms to be used in a given piece of philosophic exposition. The philosopher ought not (argued Kant) to start out, in the exposition of his system, with a strict and preliminary definition of the terms he is going to employ as the mathematician would in respect of the terms which *he* is going to employ. Rather, philosophic exposition must think itself out as it ambles along, the mist-enveloped philosopher seeking to talk his way through and waiting to see what will turn up. The following extract, which is taken from one of a group of writings belonging to the period 1763—1766, when Kant was breaking away from the Cartesian tradition perpetuated by Spinoza, Leibnitz and Wolff, will indicate Kant's attitude in the matter.

"What<sup>1</sup> was shown in the (foregoing) contemplation of the mathematical cognition in comparison with philosophy, will likewise be valid relatively to metaphysic. We have seen considerable and essential distinctions which are to be met with between the cognition in both sciences, and in regard to which one may say, with Bishop Warburton, that nothing has been more pernicious in philosophy, than mathematics, namely, the imitation of them, in the method of thinking, where they cannot possibly be used; for, as to the application of them in the parts of philosophy where the knowledge of the qualities occurs, that is quite different, and the usefulness immense.

In the mathematics, I begin with the definition of my object, for example, a triangle, circle, etc.; in the metaphysics I must never begin therewith, and the definition here is so little the first that I cognise of the thing, that it is rather almost always the last. In the mathematics I have no sooner a conception of the object, than the definition gives it; in the metaphysics I have a conception which is already given me, though intricately. I must seek its distinct, ample and precise one. How then, can I begin with it? Augustine says, 'I know well what time is, but if anybody asks me, I know it not.' Here must take place many operations of developing dark ideas, of comparison, subordination and limitation; and I dare venture to say, that, though many true and acute things have been said of Time, the real exposition of it has never been given; for, with regard to it, one understands this word sufficiently not to permute it. Had one as many right definitions as occur in books under this name, how certainly would one draw inferences and conclude therefrom. But experience teaches the contrary.

In philosophy and . . . in metaphysic much may be cognised of an object distinctly and with certainty; also, sure consequences be drawn therefrom, before one is in possession of its definition, and even when one does not at all undertake to give it. Of every one thing we may be immediately certain of different predicates, though I do not yet know enough of them in order to give the ample determination of the thing; that is, the definition. In the mathematics this is, as you know, very different. The signification of the signs in the mathematics is certain, because one may easily be conscious of one's self of that which one wishes to give them. In philosophy in general, and in metaphysics in particular, the words have their signification by the use of speech, except so far as it is more exactly determined to them by logical limitation."

Now, this Kantian mode (the reigning mode) by which the Cartesian approach to the problems of philosophy was displaced, we regard as slovenly beyond all toleration, and set ourselves to discountenance it, holding it to be responsible in

<sup>1</sup>Kant, *Essays and Treatises*. Vol. I. *Inquiry concerning the Principles of Natural Theology and of Morals*.

no small measure for the continuance of that condition of philosophy which, to use Kant's own phrase (in his *Only possible ground for the demonstration of the existence of God*), is like a "dark ocean without lighthouse or shore." As against it, we are going to claim not merely that definitions as strict as those which are employed in mathematics can be arrived at and put to use in philosophy, but that the philosophic definitions themselves can be pressed with such a sharpness as to have, as one of their consequences, the instructing of the mathematicians as to the need which exists for them to abstract from currency certain of their own most ancient and widely-accepted definitions in order that these may be subjected to revision in the light of the definitions of philosophy.

*Definition*, then, we put in the very forefront of our conception of the work of a philosopher, regarding the precise and preliminary definition of such terms as *definition* (itself), the *universe*, the *one*, the *absolute*, *being*, *nature*, *supernature*, *space*, *time*, *motion*, *reality*, *ideas*, as a pre-condition of coherence in the exposition of any philosophic system; while to such an objection as that of Kant that the meanings of these terms emerge only at the close of one's philosophic inquiry, we make answer that only there where the inquiry closes does the exposition begin; and it is, surely, to exposition that the question of the form of exposition is pertinent. Thus, all that preliminary thinking-through of one's subject, all those hesitations and doubts, important as these are for the building-up of a philosophic system, are, like so much scaffolding, to be abandoned and put out of sight when one finally gives definite shape to (*i.e.*, expounds) that system; and for a philosopher to imagine the contrary is (we submit) for him to be too easy with himself and too hard upon his audience. For the task of making his system coherent is surely his task, not theirs. And this means that, when a conclusion of importance has emerged at the end of a careful writing-up of a philosophic matter, the right and proper course for its author to pursue is to make that conclusion the first line of a new writing-up on the strength of that particular finding. Then, when the new conclusion which emerges as the result of being thus treated has been dealt with

in the same manner as its predecessor, a further conclusion will emerge, and so on, and so on, again and yet again, in what will, no doubt, to the onlooker, appear an interminable process. Actually, however, it is the long-drawn-out but incalculably valuable process of assimilating one's own conclusions. Hence, as we think, the appropriateness of that emblematic device of the ancient philosophers and alchemists, *i.e.*, a serpent carrying its tail in its mouth, and (presumably) growing by feeding upon its own length, this emblem being (for us, at least) symbolical of just that assimilation of one's own conclusions which enables these latter serially to play midwife to one another, and so, finally, to bring one to such a coherent body of conclusions as enables one *to know* one can define philosophy's major terms; that is, can distil for philosophy its cut-and-dried *preliminary* definitions. For this assimilation-process is not endless, but quite the contrary. Indeed, very early on in this drastic way of dealing with philosophic notions, one is made aware that, in every fresh churning-through of one's positions, the advances in clarity are more than just appreciable. Hence our absence of scruple in thrusting aside this Kantian plea, miserable and feeble, that definite philosophic conclusions emerge only at the end of a philosophic exposition, and are not existent at its outset. For we know that all that is behind the plea is the error of confusing the building-up of a philosophy with its author's particular form of exposition of it. Hence the form taken by this present work. For, although the work bears the title of *The Definition of the Godhead*, we have not thought it sufficient for the argument to rush on, hotfoot (so to say), to put forward the definition in question, in neglect of the great welter of confusion the question is involved in. Rather, we have considered that one who presumes to define the Godhead must be prepared to define many other things prior to this. He must, for instance, be prepared to offer a definition of *being-in-general*, to the end that he can present *divine being* as an existential species of the former so plainly qualified by its own particular differentium that it is unmistakable in what the Godhead distinguishes itself both from being-in-general and from still less general types of being than itself also. Further,

inasmuch as the difficulties relative to the defining of the term *being-in-general* (which in no way fall behind those of defining *divine being*) arise largely out of misunderstandings relative to the term *non-being*, the examination of this latter term also has been adjudged an integral part of the present effort. We have concluded, that is to say, that only when this triad of terms (Godhead, Being and non-Being), have been made to exhibit their values and interrelations, is there hope of making clear what is the inhibiting factor responsible for the age-long holding-up of a valid science of being-in-general and a like science of theology. However, inasmuch as (according to our reading of the situation) the term *non-being* is not to be truly recognised as a term, being merely a rogue-term (as being essentially non-connotative) masquerading falsely as a term, the consideration of *non-being* has been postponed to a late stage of this present study where we shall (we hope) find ourselves in a better position to estimate the rôle it has been—and is—playing in the production of the existing philosophic confusion. Not a rogue, however, is the term *being*, but a truly valid (*i.e.*, truly connotative) term; and, inasmuch as it is a term of a more general applicability than that of 'divine being,' it is one which calls for examination in advance of the definition of the term Godhead. All these things considered, therefore, the following has appeared to be the best order in which to define the terms requiring to be defined before we set ourselves formally to define the Godhead:—

The definition of Definition ;

- „ „ the Universe (the One ; the Absolute) ;
- „ „ the *Summum Genus* ;
- „ „ Being ;
- „ „ the Euclidean Point ;
- „ „ First Principles ;
- „ „ the Causal Nexus ;
- „ „ Space ;
- „ „ Time ;
- „ „ Motion ;
- „ „ Reality ;
- „ „ Ideas.

We shall not, however, present our definitions as bare definitions, but as linked up with arguments the aim of which is to show the entire universal scheme of things as expressed under these basic notions. As thus presented, such definitions will form the first section of this present work and will constitute, at once, our *Book of Preliminary Definitions* and our *Prolegomenon to Theology*. The three later sections of our work will be devoted to the exposition of our theology proper, which, however, we regard as exhibiting two stages, a primary and a secondary, while of these, the first only—a 'first vintage'—will be presented in this present volume, the 'second vintage' being deferred to subsequent volumes<sup>1</sup> where those dogmas of religion are treated which, going by the name of the Christian 'mysteries,' are implicit in all religious systems everywhere, being none other than (as this philosophy considers) the deeper findings of that science of the first principles with which we shall, ultimately, identify the science of theology in its entirety.

<sup>1</sup>The titles of volumes ii. and iii. are respectively *The Mystery of Time* and *The Immemorial Cross*.

## CHAPTER II

### THE ABSOLUTE

#### I

On first thoughts, the definition which seems to have the strongest claim to be placed first in our list is that of the most comprehensive term in the vocabulary : the universe or absolute. Upon consideration, however, the recollection that a widely-recognised philosophic synonym for the term universe is 'the one' inclines us to deal rather with the definition of *definition* itself prior to this ultimate term 'the universe.' For, in respect of definitions of this notion 'the one,' a difficulty has been asserted to exist the recognition of which is almost as old as European philosophy. Thus it is said something exists in the very nature of predication which precludes one from defining the term 'the one'; something in the very nature of speech which prevents one associating a meaningful predicate with a subject so comprehensive as the entire universe. Such, for instance, was the contention of that most rabid of cosmogonic unitarians, Zeno of Elea, the friend of, and disciple of, the philosopher Parmenides, who was born as long ago as the sixth century prior to our era. Zeno asserted, for instance, that it was not only impossible to define 'the one,' but even, meaningfully, to assert anything concerning it in any form. One has no logical right, he declared, to say that, 'the one is one'; and it would only be by a concession that one might say 'one one': that is, juxtapose synonyms, without going so far as to employ the symbol of predication: *is*. Accordingly, as this Zenonian opinion in respect of definitions of (and even of ordinary predications concerning) the One, has obtained wide philosophic acceptance, it has seemed that we ought, before offering our own definition of the Absolute, to consider the subject of predication; and, in particular, that special class of predications which constitute *definitions*. For thereby we shall, no doubt, discover whether we are attempting the impossible in trying to define the Universe or One. And define it we must, if we are to succeed in the task we have undertaken of presenting the

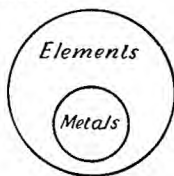


entire body of knowledge as a single cultural unit. For (as was said in the previous chapter) either we must show it possible to reduce the universe in its entirety to extension or agree that it is not possible to present human knowledge as a coherent unit; which amounts to saying that acquiescence in the Zenonian dicta concerning 'the one' means subscription to the dogma of the inherent unknowability of the scheme of the universe. Accordingly, in spite of the fact that (as will quickly become apparent) our philosophic system belongs to the type which is ordinarily called *dualist*, it sets such great store on this *monistic* notion of the One that it finds it an impossibility to proceed any distance without the help of its definition. Hence, howsoever dull we may find the task of defining *definition* (involving as this does reference to certain of the most elementary processes of elementary logic) we must not hesitate to go through with it. Also, indeed, when we are through with this, we must undertake yet another of the same nature: that of showing how the human mind has come into possession of this difficult notion of the One (the universe or absolute). These two preliminary tasks are, indeed, to be regarded as the philosophers' *pons asinorum*, failure to negotiate which aright makes all further travel along the route of an intelligible philosophy of existence impossible:—

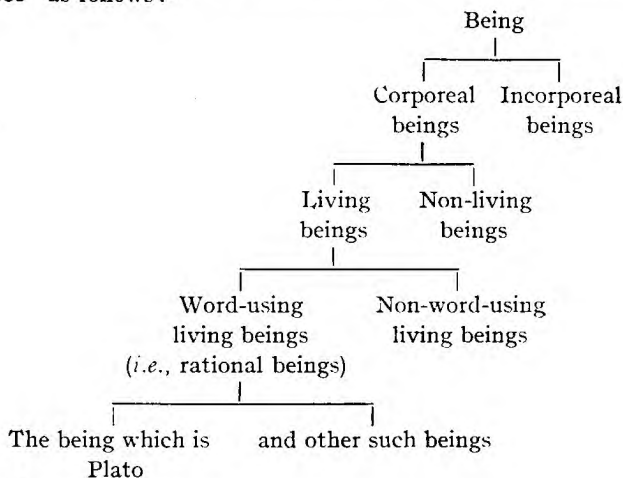
We enter upon our consideration of the definition of *definition* by stating that (in our opinion), the views on this subject which may be generalised as the Zenonian, arise out of a misapprehension which, itself, rests upon a failure to note that there exist, not one but two, radical types of predication; while certain arguments which truly bear upon the one type fail to bear upon the other. Thus, of these two types (they are the 'ratiocinative' and the 'dogmatic' respectively), the Zenonian objections bear only upon the first, *i.e.*, the ratiocinative, and it is by way of a justifying of this opinion that we shall seek to establish the position we desire, *i.e.*, that we may, rightfully, offer a definition of the One or Universe. We begin by stating the nature of the distinction which differentiates these two types of proposition in terms of what they respectively stand for. Every meaningful proposition of the *ratiocinative*

type finds its value in the fact that it represents a move in a certain classificatory, ontological, grouping activity which is inherent in the qualitative type of language as such. That is, the purpose and value of this type of assertion reduces to that of subsuming a particular class of entity (that which is indicated by the subject of such proposition) under that category of wider denotation than itself which constitutes the proposition's predicate ; it reduces, that is to say, to the effecting of a move in that process of classification which leads up, as to a goal, to the widest classificatory group of all, *i.e.*, that subtended by the name of that feature of things which is possessed by every type of entity whatsoever. The ratiocinative proposition thus operates a move forward in that process of classifying things which, inherent as it is in the qualitative order of language, goes to work on the principle of discovering the features of things which are common to more things than one, and which, among themselves, cover a progressively increasing number of the contents of the universe. When such propositions are stated in that particular predicative form which is their typical form (*i.e.*, when they assume the form of the ' universal affirmative ' proposition), they patently reveal the fact that this is so. Thus, when such a proposition is expressed in the form which begins ' all so-and-so are ' it is self-evident that the comprehensiveness of the proposition's subject (*i.e.*, all so-and-so), must be less than that of the predicate which is affirmed of it. For instance, in propositions such as ' all men are mortal ' ; ' all metals are elements ' ; the breadth of comprehension (the denotation as this is technically called) of the terms ' mortal ' and ' elements ' is greater than that of ' all men ' in the one case, and of ' all metals ' in the other ; for more forms of being are mortal than are men ; more forms of being are elements (this refers of course to the ninety-two elements so-called) than are metals : facts which primers of logic represent in diagrammatic fashion by showing the subject (*i.e.* all-so-and-so) of such propositions as a small circle contained within a larger one, thus :-

All metals are elements=



The same fact is also illustrated by means of a 'classification-tree' as follows :-



Thus the terms :

- (1) Plato,
- (2) Word-using living beings,
- (3) Living beings,
- (4) Corporeal beings,
- (5) Being,

taken in the order given from Plato downwards, represent progressively increasing measures of denotation, so that each of these terms could, rightly, be used as the subject of a proposition which has as its predicate any of the terms which follow it ; for, in each case, the basic condition of a typical predication of the ratiocinative type (*i.e.*, that the denotation of the proposition's predicate shall be wider than that of its subject) would be satisfied.

So much then for the ratiocinative type of proposition. Now let us consider the second type : that to which we have given the title of dogmatic or definitive :—The first feature relative to dogmatic propositions we will take note of is that they do *not* satisfy the conditions required by the ratiocinative proposition proper, in that they do *not* (not even when stated in

the typical 'universal affirmative' form) present predicates which are of wider denotation than their subjects. Nevertheless, in this class of proposition are assembled assertions which are of exceedingly high value in the prosecution of human thought, for it is the class which contains, pre-eminently, that familiar and important type of assertion known as definitions. Thus, if we take note of the denotation of the subject of a definition and compare it quantitatively with that of its predicate, we shall see that the two are quantitatively identical. Hence, definitions do *not* bring some particular subject-term under a predicate-term having a wider applicability than the former, as the ordinary ratiocinative needs of predication demand that a proposition should. On the contrary, a definition is to be defined as a proposition (so-called) of the universal affirmative type ('the' type) which differs from all ordinary propositions of this type in that the scope, the extent, the applicability, the denotation, of its predicate is *co-extensive with* that of its subject, its diagrammatic representation being that of two circles (representing subject and predicate respectively) so exactly equal in size that, were the two super-imposed the one upon the other (as one can conceive them being in the affirming of the one of the other) they would appear not as two circles but as one. The diagrammatic representation of a definition is, that is to say, the characteristic figure of a tautology. And rightly; for definitions ARE tautologies. We mean, what we have called dogmatic propositions *are* tautologies. Here then is a variant name for the second, dogmatic, definitive type of proposition: the type differentiated from the ratiocinative. It is that of *the tautology*.

Now, as everyone is aware, tautologies are not customarily regarded as assertions of value. On the contrary, they are regarded as valueless. Yet definitions, as we all know, are not valueless. Hence the question: From what source do the tautologous propositions: the dogmatic assertions: which constitute definitions derive the value they undoubtedly possess in the prosecution of thought? What function is it they fill? They are not ratiocinative propositions. They do not aim at being such. They do not aim, that is to say, at effecting a

normal move in the great process of ratiocination or classification which constitutes the function of such propositions. What, then, is their function? The answer is that the function of definitions is *the coining of terms*. Definitions are tautologous assertions the function of which is to establish a convention whereby it is accorded that that one of the two terms of the definition which constitutes its subject may be used as an exact synonym of that other term which serves as its predicate. The purpose of definitions is, therefore, formally to establish the equivalence of certain verbal symbols, and the framing of definitions is, accordingly, a process *preliminary* to the ratiocinative process proper, in that it represents a getting-ready of the verbal material to be used in it. Consequently, we might say that the relation in which the definition stands to the ratiocinative proposition is analogous to that in which the operation of forging blades stands to those of cutting, clipping, cleaving, or any activity whatsoever which involves the use of blades, the two types of proposition being functionally as distinct from one another as are the labours of the cutler and the shearer. To this extent, the definition (a tautologous type of assertion) is to be regarded as the older of the two types in that the very earliest linguistic moves of man must have had the character of the definition, *i.e.*, of word-coining. Yet, on the surface, the making of ratiocinative propositions seems much the older, definition-making seeming a comparatively modern activity. This inversion of the situation is, however, readily to be accounted for by the consideration that the making of definitions in the form under which we are most familiar with it (*i.e.*, its artificial, self-conscious form) is an activity emergent only at a point in time when man is approaching his cultural maturity, and emergent then only because men's instinctive reasonings (*i.e.*, their instinctively-made, classificatory, ratiocinative assertions concerning the entities of the universe) have shown signs of defective functioning, the (artificially-engineered) art of definition seeking to correct this by the application of a greater measure of stringency to the terms used in assertions. As indicating the lateness of the institution of artificial defining, it may be pointed out that the 'father' of definition was, in Aristotle's opinion, Socrates.

Definitions, then, consist in tautologous assertions. To define is to muster synonyms, the usefulness of the process residing in the fact that the synonyms presented for the terms defined are of a plainer, more familiar, less ambiguous character than the latter. Thus do definitions come to have their great value, tautologous assertions though they be. Now, the charge brought by Zeno and his followers against predications made concerning the One, the All, the Universe, the Absolute, was warranted only if it were proposed to make a proposition claiming to be ratiocinative concerning this subject. For, obviously, *no* proposition could be made concerning the All: the One: in which a term, wider in denotation than itself, forms its predicate. For what could be wider in scope than 'the All' which includes everything? Plainly, nothing. The 'One' used as the subject of a proposition, begs in advance the entire 'universe of discourse.' But this does not prevent us from *defining* the One; prevent us, that is to say, from mustering competent synonyms of this term. Indeed, we can submit quite a long list of such, all of them valid. The definition, however, which we desire to present as the synonym proper for the Universe is one which can be adequately comprehended only after we have shewn how mankind has come into possession of the notion of 'the one.' This task, therefore, we now enter upon, taking with us, to sustain us in it, the certain knowledge that 'the universe' is a definable term, and that the philosopher Zeno and his followers were mistaken.

## II

As we conceive, the apprehension of the idea of the One arose automatically out of a certain specific development of human language. To indicate what this development is, let us ask what sort of things those would (most probably) be to which primitive man would apply his earliest names. They would be (so we conceive) such things as possessed distinction in virtue of the character of their *outlines*. They would be the kind of thing which, as possessing distinctly configured outlines in Space, constitute what men now call individuals and which the Aristotelian scholastics called substances: that is to say,

spatially-separate entities. Men would thus, in their naming-activities, follow a path identical with that which the very lowliest of organisms follow in their general activity of distinguishing from one another the various items which constitute the content of Space, distinguishing primarily the hard lines of resistance plotted out in Space in terms of blocks to their own motions in the medium about them. Accordingly, we might say that primitive man found his original linguistic equipment in substantives: in nouns. However, as the abnormally great human power of differentiating between the forms of things (abnormally great, that is to say, as compared with that of all sub-human organisms, and hence congenitally, inherently, great) continued to develop, this early practice of distinguishing mainly only spatially-separate entities (individuals) must have been followed by an intensification of the finer practice of picking out the features of such individuals, the features which the scholastics differentiated from substances as the latter's accidents (their qualities), the aspects of things which, as being features, had no spatially independent existence, but merely inhered in such forms as had. A new department of naming would thus grow up expressible as one which ran to the coining of adjectival rather than substantival names, being one which tended to the coining of names not so much for things (entities or individuals) as for those *features* of things which, sensorily apprehended though they are, yet do not stand up in their own spatial right and, so, constitute individuals.

Now the very earliest of the features (properties) of individuals which the mind of man would seize upon must (we conceive) have been the actions of things. Consequently, one has to say that the earliest adjectival (qualitative) names coined by the mind of man would be the names of the actions of individuals. The earliest form of adjective to emerge (and we can quite well imagine it would be, originally, an acted adjective, *i.e.*, a *gesture*) would thus be the verb: the name for the *active* features of individualised forms. Later, however, the *passive* features of things would lay hold of men's attention, and, in consequence, receive names. Hence the emergence of the

adjective ordinarily so called, as distinguished from that form of adjective which goes by the name of verb. Hence the emergence, that is, of that order of language which ordinarily goes under the title of the *abstract* order of naming. For, as one can readily see, it is precisely this coining of adjectives of any type (the coining of abstract nouns, of verbs and of adjectives proper) which constitutes the process which goes under the name of abstraction. For all those forms of experience (in general, sensorily-apprehended experiences, it should be noted) are termed 'abstract' which, forming the properties, the features or qualities of individualised things, do not stand up in their own right as spatially-distinct entities (individuals), but merely inhere in such, and they are termed 'abstract' to express this fact that it is the features merely (sensory features, chiefly, we again insist) which are being attended to and named, rather than the individuals themselves as spatially-separate wholes. Thus, all that 'abstraction' implies is a narrowing of the attention upon a part of a sensorily-apprehended complex in preference to the entire complex whole. The part (the feature) of an individual is fixed upon, picked out and named, and this partiality of vision, so to say, is expressed by the term 'abstraction': a fact which, in view of the quite gratuitous difficulties which have been made to centre round this logical activity of abstraction, one ought, very firmly, to get a grip on. Thus, an abstract term is *not* a term applied (necessarily) to a non-sensory form of being. It is a term applied (usually) to a *sensory* form, but a sensory form which does not stand up as a spatially independent whole, being merely a (sensory) feature of such. However, this is not the place to go more deeply into the question of abstraction, important though the subject is, for we have stated all that bears directly on the present argument when we have explained (as we just now have) what abstraction implies, and what it does not imply. What we need here to bring into prominence is another matter, the gist of which is the following :—

It is a characteristic of the multitudes of individual forms present in the universe that, while no two forms are ever identical, yet all possess some feature or property the similar



of which is possessed by some other. Whence it comes about that *one* consequence of this new linguistic type of naming-by-feature (this adjectival, qualitative, abstract type of naming) is that the individuals of the universe are not merely NAMED by it but are GROUPED by it also. For, once a feature has received a name, such name becomes, so to say, a clamp, mentally holding together in a single group all the entities which possess that particular feature. Thus, gradually, owing to the continued expansion of this type of naming, men would come to differentiate as many groups of things as there exist distinguishable features in entities, while the size of such groups would vary in accordance with the breadth of distribution of the feature under the name of which the group assembled. Consequently, by dint of fixing (more or less unconsciously) upon features or ever wider and wider applicability, this new adjectival way of naming would successfully launch the process of classifying the entities of the universe according to an order regulated by the breadth of distribution of the various features exhibited by things: a process which has its culmination in the arrival at that group of groups which assembles under the name of a certain feature of things which is possessed by every entity of the universe whatsoever. That is, the crowning term of this new, adjectival, abstractive order of names (which *classifies* as well as *names*) would consist in the coining of a name indicative of that quality, property or attribute of individual things which is possessed by everything whatsoever, and, so, is capable of rallying under its aegis, a group consisting of nothing less than the universe-in-its-entirety (the latter inclusive—for the logician—of even the name itself). And this group it is which constitutes 'the One.' Accordingly, the One (the universe) is that group of groups which is rallied under the name of that feature of things which is possessed by every form of existence whatsoever.

Now, what the unique feature is which is possessed by everything in the universe, and what the name it goes under is, we know; for the latter was long ago coined. Thus, inasmuch as 'everything which is' possesses is-ness, esse-nce, being, it is the attribute BEING which is the universally-possessed one in question, and which, as the culminating-term of the

adjectival order of naming, is capable of assembling that supreme group the name of which is (variantly) the All, the Absolute, the Universe, the One. That is to say, the genius peculiar to the type of language which constitutes the adjectival (hence the *qualitative* since it is the function of adjectives to qualify the spatially-separate entities they inhere in), the genius which does not exhaust itself in the mere naming of the qualities named but broadens out into that intellectual activity of high importance, *i.e.* the classifying or grouping of the entities of the universe, develops to its climax in the coining of the term *being*. This, accordingly, is the term which serves men in the capacity of a clamp, capable of holding together, conceptually, for their minds, the whole universe as a single whole, and its uniqueness in this regard is indicated by the assigning to it of a distinctive title: that of the universal *summum genus*. The universal *summum genus*, then (the term *being*), constitutes the pinnacle of that process of classification (an art-process, we would point out, not a process of science) the animating principle of which is the grouping of like with like. And, inasmuch as the classification-process is the ontological process, it follows that, in the group subtended by the term *being* we are required to recognise the master-term of ontology. The master-notion of ontology is, that is to say, the One, holding its title in indication of the fact that it signifies the universe considered as a unit-group: the unit-group which rallies under the *summum genus*: the term *being*.

Now, it is usual to describe a philosophic system which recognises (as ours does) the validity of this notion of the One as a *monistic* system. Nevertheless, although this is so, it will be a main labour of this present philosophy to secure the dismissal of the doctrine of monism in the only sense in which the term monism is now recognised; for we hold such monism to be the one great outstanding error of the philosophy of the last twenty-five centuries. Let us be more explicit about this. We begin by stating that our philosophy has no quarrel with monism as such. On the contrary, here, at the very outset of our study, we express our view that there exists a truly valid monism no less than an impossible monism, and we have shewn

what it consists in. We mean, there are two sorts of monism, the one constituting a true and valuable philosophic analysis; the other an intellectual perversion which teaches as a truth what is, actually, a physical impossibility. Now, the more cleanly to keep separate these two opposed monisms, we distinguish them as follows:—

(1) Ontological monism (true monism);

(2) Cosmogonical monism (false monism);

As the very titles themselves of these two monistic varieties suggest, our two monisms emerge out of the two highly differing intellectual inquiries of ontology and cosmogony respectively. Let us therefore note the difference which exists between these two activities, for this will help us to see why, while it is a quite proper thing that monism should attach itself to the one activity (ontology), such attachment in the case of the other (cosmogony) cannot fail to prove philosophically incapacitating. Now, concerning ontology, we have to say (in accordance with the definition which we shall later have to give of science itself) that this intellectual activity is not to be regarded as a science, for all forms of the latter are activities bent upon the discovery of the generative factors which go to produce things. Ontology, on the contrary, is an art. It is the art of classification, of grouping, of arranging the universal content on a plan *not* of a genealogical-table linking up parents and offspring: effects with their causes: but of a segregating (mentally) of like form with like form. That is, ontology is not a search for the causes of things as every science is, but a search for the likenesses which exist between things, to the end that all the entities possessed of any given feature may, mentally, by aid of such feature's name, be grouped together into a class. But, if ontology is not a science, cosmogony certainly is. It is, indeed, the science of sciences: the science *par excellence*; being the culmination and basis of all the sciences in that, in it, culminates the pedigree-building process which is all that science is essentially. Thus, in ontology and cosmogony respectively, we are confronted with two intimately connected, two profoundly interesting, but (also) two profoundly-differing intellectual activities. And, inasmuch as these two activities have existed side by side

throughout the whole of European history, they have been rival interests competing simultaneously for men's best attention ; a state of affairs out of which it has resulted that, at the first serious hitch occurring in the explanation-process, men have not hesitated to make a most inadmissible compromise whereby these two highly differing activities have been confounded together ; and, more especially, the two highly differing master-ideas in which the two activities respectively culminate have been confounded together. Let us indicate these :—The master-idea of ontology (the art of classification) is, as we have already seen, that of the group which is rallied together by the *summum genus* of the universe as identified with the term *being*. It is the idea of a class or group of things so absolutely comprehensive that it contains everything which is, and, so, forms a group describable as the All : the Absolute : the Universe. The culminating-idea of ontology is therefore of such a character as appropriately to receive the name of *the One*. But the culminating-idea of cosmogony is *not* that of the One, the All, but of a type of existence highly specific, a type differentiated out of the All by a most noteworthy characteristic. It is the idea of the eternally-existing elements of the universe out of which all the compounded parts of the latter are generated, which elements are capable of functioning productively<sup>1</sup> only when there exists a plurality of them (at least *two*). Whence it follows that the culminating-idea of cosmogony is such as to invite the name of *the Two*. Accordingly, when it is said that men have confounded together the culminating-ideas of these two activities, what is asserted is that they have confounded together the diverse notions of :—

- (1) The all-comprehensive, non-specialised ONE ;
- (2) The highly-specific, elemental TWO.

That is, they have confounded together the two wholly differing conceptions of the *universe-in-its-entirety* and the generated world's indestructible and ungenerable *elements*. That is (again), they have confounded the valid monism which rightly emerges out of ontology (of which the master-idea is the One) with impossible monism which consists in attributing to

<sup>1</sup>On this, see chapter v.

cosmogony as its master-idea this ontological idea of the One in place of its own true and proper dualistic master-idea, the world's dual ultimate elements: the Two. They have thus made the blunder of imagining that monism is, unqualifiedly, a true doctrine, whereas actually it is true only when the specific sense in which it is employed is indicated. We mean, monism *sans phrase* cannot rightly be declared to be either true or false. But ontological monism *can* be declared to be true; while cosmogonical monism *can* be declared to be false; for cosmogony culminates not in a monism but in a dualism.

Here then are the definite formulations of our position as regards monism:

- (1) The conception of an *ontological monism* is a wholly true and right conception.
- (2) The conception of a *cosmogonical monism* is a devastatingly false conception.

Having, accordingly, made clear that there is no question here of an argument against monism-in-general, but merely against an intellectually-incapacitating cosmogonic monism (which is the reigning monism), we bring this present matter to a close in a formal definition of the One:—'The One is that all-comprehensive group which is subtended for the mind by the name of that feature (*i.e. being*), which is possessed in common by every entity of the universe whatsoever.' But this term *being* itself requires definition and this it will receive in our following chapter. Before taking leave of this present subject however a word should be added concerning the term *being* relative to that aspect of it in virtue of which this term is the universal *summum genus* :—

### III

In the foregoing we have spoken as if it were an unquestioned truth that the term 'being' constitutes the *summum genus* of the universe, and what we have now to point out is that this is far from being so: so far indeed that almost all those thinkers of Greece to whom after ages have gone to school (and thus the thinkers who have given European speculation its bias and lead) are to be quoted in opposition to it. They are to be quoted, that is,

in opposition to this contention that the term *being* is the veritably culminating-term of the ontological (classificatory) system, and, as such, is constitutive of the *summum genus* which rallies the universe-in-its-entirety into the single group having the name of the One. Not, of course, that this opposition is expressed explicitly and formally, but implicitly, in terms of this fact, that the Greeks consistently recognised the credentials of the terms *non-being*: an attitude which does not comport with the recognition of the term *being* as the veritable *summum genus*. Hence, were we required to state in a single assertion the difference which exists between our own ontological position and that of the Greek ontologists, we should say it turned upon the point that, whereas we say that the term non-being is a bogus term, the Greek thinkers, one and all,<sup>1</sup> recognised the credentials of the term, giving it standing-room in their general vocabularies and in their ontological systems equally. Whence it is that (as we hold) failure has to be written across the whole of Greek ontology. For success can be ascribed to an ontological system only when such system can produce its master-term and indicate the latter's peculiar mark and idiosyncrasy. Now the ontological master-term is the universal *summum genus* which exists to assert that all, *all*, is covered by it and grouped under it, and that nothing which can be so much as named or thought is excluded from it. Hence the inescapable consequence that the term which constitutes the *summum genus* is a term which *can possess no contrary*. That is, whatever term may prove to be the *summum genus*, the function and meaning of the latter is such that it can tolerate no prefixing of itself by the mark of negation (of differentiation: of division: of opposition) *i.e.* the symbols *not* or *non*. Hence, the formal definition of the universal *summum genus* is that it is that term unique among terms in that it admits of no contrary. If, therefore, we are right in saying that everything which is *has being*, so that the latter term *being* is the *summum genus*, it follows that men are forbidden the very formation of the term non-being, in that such a term would, at once, contravene the law of contradiction and the one rule which expresses the unique

<sup>1</sup>Parmenides seems an exception, but his position is dealt with in detail in chapter xiii. (on *Non-Being*) of this present work.

and essential characteristic of the *summum genus*. Hence (we say) nothing but a diseased ontology (and diseased in the head) can harbour the term non-being. For (to repeat) everything which IS must BE, and 'everything which is' must be groupable under the term 'being' which, accordingly, constitutes the *summum genus* which, by definition, cannot be prefixed by the terms not or non. Or (to put the matter variantly) the term being, functioning as the *summum genus*, stands for the undivided totality of the entities which compose the universe, there being nothing which is not included under it. But, wheresoever the symbols *non* or *not* stand in front of a term, they stand there automatically to proclaim the fact that division has taken place in the totality of being, and that the term in front of which they stand represents one part only of the dual products yielded by the splitting-process which is division, its remaining part constituting its antithesis, its opposite, its contrary. Consequently, when we are confronted by the proposal that non or not (the symbols of division : of contrareity) shall be prefixed to the term *being* (the undivided by definition), we are confronted with a proposal to commit a plain, unvarnished contradiction in terms. Let us then re-iterate the truth that being : the *summum genus* : tolerates no contrary, and, hence, no prefixing of itself by the symbols of contrareity which are symbolic of the acts of division and separation.

But, it may very well be asked, if there be no valid, significant term non-being ; if, that is to say, this word be a bogus word, a mere noise or meaningless scrawl (itself a form of being certainly, but not of connotative being : not a word), how comes it that this term is to be found in current, and, presumably, quite serviceable use, in our common language ? Now the answer to this question is that the term non-being is used in two quite different senses, a philosophic and a popular, and it is in the philosophic sense only (*i.e.* as implying a contrary to the universe) that it is a mere noise, a mere scrawl, put into currency through a mis-understanding on the part of the philosophers, misled (no doubt) by analogous practices legitimate enough in respect of every other term but quite illegitimate in respect of this one unique term. As to what, on the other

hand, so-called 'plain-minded' men refer when they use the term non-being, this is not the (supposed) contrary of the all-comprehensive term *being* constitutive of the *summum genus*, but a different contrary altogether. For what men mean when they say (as they quite commonly do) that such and such a form 'is not,' is that the form thus referred to does not exist in some one particular and preferentially-regarded category of being. For there are manifold types (categories) of being in the universe, and when men say that such and such a form *is not* they mean that the form they refer to (which certainly 'is' in some one of the many categories) 'is not' in a quite specific category, for instance, the category of *real* forms, the category which (probably) they have, at the moment, uppermost in their minds. For it so happens that, among the many varieties of being with which men are acquainted (the real variety, the imaginary variety, the hypothetical variety, the false variety, and the like) there is one to which they accord a highly preferential status: the variety they call *the real*: the kind which makes its being known to us through the avenue of some one or more of our 'lower' senses: the senses of sight, scent, sound, taste, touch, motion, space and relation. Accordingly, owing to the preferential status thus attributed to the real variety, we all tend to adopt the common, non-philosophic habit of saying that forms possessed of the other varieties (*e.g.* the imaginary, the hypothetical, the false and the rest) *are not*, whereas all that we mean is that such forms (which certainly *are* in their own particular brand of being) do not exist in that special variety called 'real' which admits of being apprehended by some one or other of our lower senses of apprehension. To give an example, men will say that a horse has being, whereas a centaur (they will say) has not. But such a mode of speaking is merely careless. A centaur has being, just as certainly as a horse, and it is on this account that we are aware of what is implied by the term centaur; but it just as certainly *has not* being in that sub-section of being known as the real. All of which (to sum the matter) means, that we commonly allow ourselves to say that a form is destitute of being when what we truly mean is that the form in question



has not a place in that category of sensorily-apprehensible things to which the most exalted status is accorded in the hierarchy of being.

Now, in the terminology of everyday life, a perfect precision is scarcely to be looked for. In that of philosophic argumentation, on the contrary, the measure of the falling-away from absolute perfection of precision is the measure of the confusion therein prevailing. But, so far as the actual history of philosophic speculation is concerned, and, in particular, so far as the use of this term of sorts 'non-being' is concerned, the philosophers have exhibited no greater delicacy of nomenclature than their non-philosophic neighbours. Indeed, it is probable that they have been seduced from that strict logicality of speech which is proper and necessary to them by the fact that the term non-being exists in popular language in a meaningful sense (that of the non-real). But, while this may explain their action, it does not condone it, the case with them being as if they (in so far as they are ontologists), had said: "Let us establish a term which shall have for its meaning the 'totality of being.' Let this be the term being *quâ* being, the universe, the sum of things, the One, the All, the Absolute. Let us thus coin a term in respect of which the whole process of differentiation (division) is expressly forbidden by our own convention: by the very meaning of what we are doing and proposing. Let us coin the term which will function as the absolute *summum genus*." Then, forgetting wholly their own convention as to what was assumed in the coining of the term, they have proceeded to apply to the latter the symbols of difference: of division: of contrareity (non or not), and have deluded themselves into believing that they have thereby furnished themselves with a meaningful term. And, in the sequel, they have coiled themselves round with arguments which seem to them to be, at once, of profoundest subtlety and of the most utterly insuperable difficulty; whereas, as a matter of fact, the 'difficulties' in question are the antinomies (*i.e.* the nonsensical, contradictory statements) which accrue from their own procedure in simultaneously seeking to maintain and to contravene their own logical convention. Now, it is in this regard that the Greek

philosophers are such arrant sinners. Consequently, inasmuch as all subsequent philosophy—being based on the Greek—has suffered so greatly from the fact that they did so sin, we shall set ourselves the task, later on in this study, of exhibiting the dealings of the Greeks with this arch-roogue among terms, non-being. Here, however, we must give our own definition of the term *being*.

## CHAPTER III

### BEING

The argument that definitions are essentially tautologies used in the foregoing chapter to dispose of the Zenonian claim that the universe is indefinable we shall find of service here where what we attempt is the definition of the term 'being'; for it will assure us that all the requirements of sound definition have been met when we have discovered a synonym for this term the special associations of which enable it to light up the mind on the subject of being more than the term 'being' itself does. Accordingly, our only difficulty in defining the term being *quà* being will be that of discovering a term which, while truly synonymous with being, yet has this much-needed illuminative potency; and the one question of importance is: is this difficulty insuperable? Our belief is that it is not, and that one quite competent synonym of being *quà* being exists which, as required, lights up the mind on the subject. Let us indicate this:—We begin by asking what we mean when we say that a thing 'is'? Do we not mean that the something in question is *somewhere*, *i.e.* has a *place* in the universe? And does not this mean that this declared 'existent' is, basically, something which has extent, in that it requires, and is provided with, *room*? We think so, and, accordingly, put forward this attribute of 'being extended,' of 'being possessed of magnitude,' as representing that which is truly essential in every type of being whatsoever. What we mean is that nothing in the universe 'is' save as a somewhat possessed of size: magnitude. Thus, all Space, all Time, all matter, all form whatsoever, is extended. Divine and mortal beings, real and conceptual beings, merely hypothetical and frankly imaginary beings, are, one and all, magnitudes, equating their existence with the fact that somehow and somewhere in the universe they take up room. That for which the universe has no place has no being, we say. For instance, those things which exist only 'in the mind' ('in the head') have their essence

(their being as magnitudes) in a particular form of play of the extended matter of the brain of the imaginer, and it is precisely the play of this extended substance constitutive of the brain-stuff of the imaginer which gives to thought, to imaginary images, to errors, to hypotheses and the like, the being they possess. Were there no such extensions-in-play, these things (these thoughts, imaginations, errors, hypotheses and the rest) would have no being. There would be no 'they.' Wherefore (we urge) the verb 'to be' is merely a docketed form of the verb 'to be extended,' the following equations holding universally :-

To be = to be extended.

Being = extension.

Now (we here formally submit), this reduction of all forms of being to forms of extension constitutes the prime affirmation of philosophy. Hence, the scientific impulse, allowing itself to become bewildered and uncertain here, made the first of that long series of capitulations which history displays it making to the spirit of nescience which has now grown so disastrously unashamed and militant. Let us indicate the nature of this capitulation :-

No sooner does one affirm the above equivalences than an arresting thought presents itself. Indeed, the very word *extension* precipitates it. For one can scarcely think of extension without thinking also of the science of extensities : of the science, that is, of *geometry*. And, when we think of geometry, we think of a certain set of elementary principles which provides all the data men may avail themselves of in the building up of the truths of geometry, the very paucity of which (the mathematical definitions, axioms and postulates) is the geometer's pride. But, among such data, all rather and rare as these are, there figure conspicuously assertions which flatly contradict the definition of being *quà* being as extension. The entire edifice of geometry rests, indeed, in the last resort, upon a single definition : that of the point, the 'Euclidean'<sup>1</sup> definition of which is 'that which has position but no magnitude *i.e.* no extension.'

<sup>1</sup>This is not the geometer Euclid's own definition but that of later geometers who overwrote Euclid. Euclid himself defined the point as 'an indivisible.' See Sir Thomas Heath's *Euclid in Greek*.

Hence, if (as we hold) all being is fundamentally extension, the very foundation upon which our most basic science rests is *nothing at all*. That is, either geometry must be regarded as a science in the air destitute of any proper basis or our own definition of 'being' must be wrong. Between these alternatives we have to choose. Now, this philosophy urges without any uncertainty, that it is the logical bases of geometry which are faulty, the sole reason that the defects in these bases do not reveal themselves in the superstructure being that the geometer has rarely, if ever, need to take the geometrical definition of the point seriously. And, whenever he comes within range of having to do so, he is always prepared, tacitly, to substitute a quite different definition. And, indeed, the fact that there is something profoundly unsatisfactory in the theoretical bases of geometry is amply recognised in geometry itself. Thus, approaching the matter from a quite different angle, our modern mathematical philosophers have taken full account of the fact that the 'Euclidean' definition of the 'point' as 'that which has position but no magnitude' brings into dubiety the validity of all the propositions of geometry. Nevertheless, of the two means conceivable as remedies for this state of affairs (*i.e.* the *abandoning* of the current definition of the mathematical point and the *doctoring* of it), it is the latter, less satisfactory, complex course rather than the former, simpler, bolder and (as we hold) truer way which modern mathematicians have adopted. Thus, what, in our opinion (and it is an opinion grounded, as we shall shew, in inescapable findings of philosophy) this logically-disreputable current definition of the mathematical point calls for is not defence but abandonment. However, before going into this matter, let us point out that, in this regard, the science of geometry is not differently situated from religion, philosophy, or the science of the first principles in its entirety. What we mean is that, precisely as geometry is in difficulties in respect of 'points,' so theology (for instance) has been hopelessly handicapped as a science by the spurious notion of a Godhead situated nowhere and destitute of extended parts. And so, too, high science, which, in the modern Cartesian period, took for its first principles a *res extensa* and a *res non-extensa* (*i.e.*

some supposed *res cogitans*) conceived as having no extension. Indeed, the whole force of those objections which that unrecognised genius Henry More<sup>1</sup> (happily the inspirer—howsoever indirectly—of Newton) brought against Descartes' philosophy, turned upon this very matter of 'nullubism' ('no-where-ism') as he styled the faulty Cartesian feature, and it is ten thousand pities that Descartes had not the intellectual sensitiveness to see the force of them and disband the modern army of nullubists (no-where-ists) at the very moment of their modern re-assembly. For, as it thus transpired, the blunder represented in the 'Euclidean' definition of the mathematical point was given its direct modern equivalents in philosophy and theology, and it is for this reason that the inquiry into the mathematical point cannot properly be treated in isolation from its translations into the spheres of philosophy and theology. That is to say, the inquiry into the definition of the mathematical point needs to be integrally linked up with these translations of nullubism into other spheres in a general defence of the position that 'all being is extended,' and that anything non-extended ('destitute of magnitude') will be that contradiction in terms *i.e.* a non-being. Our present argument accordingly is that all entities, be these mathematical, philosophical or theological, must perforce have a place (*i.e.* position), in the universe, while *to have place is to have size*. For that which has *no size at all* cannot have any position (place), and the mathematical point constitutes no exception to this broadest of all generalisations concerning being. Indeed, so far as the current definition of the mathematical point goes, we have to say that it embodies contradiction many times over in that the 'that which' phrase occurring in it (designating as this does a species of being) itself designates a magnitude, while the attribute of 'position' accorded it as its essential feature likewise

<sup>1</sup>As Henry More and his argument against Cartesian 'nullubism' has been a butt for gentle ridicule during the last three hundred years, one feels pleasure in using his own odd-sounding term in framing the contention that the Cartesian *res cogitans* he so detested must suffer dismissal along with the current definition of the mathematical point. And we might also here point out that it was their common objection to the non-extended Cartesian *res cogitans* which formed the otherwise strange-seeming bond of sympathy between Hobbes the 'materialist' and More the 'immaterialist.' The entity which More accused Descartes of allowing no place for, and (therefore) of denying the existence of, was Space as virtually identified with the Deity. For Descartes conceived Space to be full of matter, and, so (as More correctly contended), denied the existence of Space. no room in the Cartesian universe having been left for such.

bespeaks magnitude. Hence, duly paraphrased, the current definition runs: 'A point is a magnitude which has magnitude but no magnitude.'

On the understanding, then, that we are using the argument from geometry merely for convenience, recognising fully that the question of the nature of the mathematical point is merely an instance: a special case: of the wider philosophic question of *being* as identified with *extension*, we enter upon a consideration of this important matter:—We begin by drawing attention to the fact that, when we define the entire universe of being in terms of extension, we are defining it in terms of the 'continuity' of being. That is, the universe *as the extended* implies and means the universe *as the continuous*. Or, as we might put it (using the word which Aristotle used to confound the 'Democriteans'), the universe *as the extended* implies and means the universe *as 'the full'*; while this means that the universe *of being everywhere is being*, containing no gaps representative of absolute and utter emptiness of being. Thus, to say that the universe is continuous, means that where one type of being is absent from some particular part of the universe, the place is filled by some other type. For instance, where no material entity is, *there* is either Space (immobile immaterial substance: the *full* as Aristotle called it in order to correct any misconception relative to the Democritean 'void'); or Time (motion), which latter is immaterial substance of the mobile variety. Thus (as our philosophy holds), these three varieties of being (Space, Time and matter), are all equally *substances*, and are related to one another extensionally in such a way that the three of them fill the entire universe, leaving not the smallest gap vacant of being in the whole universe. This, then, is the meaning which (we say) has to be read into the attribution of *continuity* or *extension* to all the contents of the universe.

Now we specially stress this interpretation of the meaning of extension (continuity) in that it is from misconceptions about the meaning of this important term that so much of the trouble about the geometrical point has arisen. For the implication of the universe's attribute of continuity is not (so we maintain)

the usually-accepted one *i.e.* that Space, Time and matter admit of 'infinite divisibility.' It is not, that is to say, the implication read into it by European scientists in general from the fifth century B.C. to 1928 A.D. For this particular misconception of the meaning of the universe's essential and indefeasible continuity (extendedness) took its rise as long ago as the age of that very profitless misdirector of European philosophy, the Zeno of Elea whom we have spoken of already, and it is still dominant. Indeed, modern thought is only too familiar with that one (of the several) of Zeno's conundrums concerning continuity which is stated in terms of a race between a hare and a tortoise, and which claims that, if (for instance), a tortoise starts with the least spatial advantage whatsoever over the hare, it will be an impossibility for the latter ever to catch up with it. For (argued Zeno) extended being being continuous, it must perforce *be divisible into an infinite number of points*. That is, Zeno argued that, between any two points whatsoever, howsoever near to one another these might be stipulated as being, an *infinite* number of points have their existence; and, inasmuch as one can never arrive to the end of an infinite series of numbers it follows that the hare, having to pass through an infinite (*i.e.* endless) number of points in order to get even with the tortoise's initial advantage of (say) a quarter of an inch, could never accomplish this; for in order to do so, he would have to pass through an infinite number of points, and to the end of an infinite series one can never arrive. [This argument forms (we might add) one of Zeno's equally notorious 'proofs' of the claim that motion is an impossibility.]

Now there is a very easy way of dealing with this particular Zenonian argument about motion, which is, flatly to deny that Zeno's interpretation of the universe's feature of *continuity* is the correct one; and mathematicians are (we contend) still struggling to answer this particular riddle only because they still accept Zeno's interpretation of the meaning of the universe's aspect of *continuity*. And that they do accept this is beyond any question. Let us give examples. Let us quote, for instance, Boscovich (1711-1789), the Italian (or Serbian) atomist whose views of a 'non-extended atom' have so powerfully



influenced modern conceptions (in particular, by way of the philosophic views of Faraday) :

" Between<sup>1</sup> two real points of position of any sort there are other real points of position possible, and these . . . approach them without any determinate limit. There will be a real divisibility to an infinite extent of the interval between two points ; or, if I may call it so, an endless 'insertibility' of real points. However often such real points of position are interpolated by real points of matter being interposed, their number will always be finite . . . and there will be no gap that cannot be diminished by adding fresh points in between."

To this let us add a passage with a like import from that very influential 19th century mathematician, W. K. Clifford, which runs as follows :

" The idea<sup>2</sup> expressed by that word *continuous* is one of extreme importance ; it is the foundation of all exact science of things ; and yet it is so very simple and elementary that it must have been almost the first clear idea that we got into our heads. It is only this : I cannot move this thing from one position to another, without making it go through an infinite number of intermediate positions. *Infinite* ; it is a dreadful word, I know, until you find out that you are familiar with the thing which it expresses. In this place, it means that, between two positions, there is some intermediate position ; between that and either of the others, again, there is some other intermediate ; and so on without any end. Infinite means 'without any end.' If you went on with that work of counting for ever, you would never get any further than the beginning of it. At least you would only have two positions very close together, but not the same ; and the whole process might be gone over again, beginning with those as many times as you like. [Here substituting Euclid's definition of a 'surface' for that of the 'point' Clifford goes on in the same strain.] If you were to split—not this sheet of paper, for that would be impossible—but the sheet of space in which the paper is, into a million sheets, and to-morrow one of these again into a million sheets, and the next day one of those into a million sheets, and if you kept up that process for a million years, the inconceivably thin sheet that you would have at the end would still be room, with a surface above and a surface below ; it would be no nearer to being itself a surface than when you began. You see, it is quite easy to say that a surface takes up no room ; but it is not so easy to realise the enormous gulf that is fixed between very little and none at all. And when Euclid tells you that a surface has length and breadth, but *no thickness*, he means exactly what we have just been observing . . . It seems a very natural thing to say that space is made up of points. I want you to examine very carefully what this means, and how

<sup>1</sup>Roger Joseph Boscovich (1711-1789). *A Theory of Natural Philosophy. Supplements on Space and Time.* English Translation by J. M. Child. pp. 393-409.

<sup>2</sup>W. K. Clifford, *Seeing and Thinking.* pp. 134, 135, 145-9.

far it is true. And let us first take the simplest case, and consider whether we may safely say that a line is made up of points. If you think of a very large number—say, a million—of points all in a row, the end ones being an inch apart, then, this string of points is altogether a different thing from a line an inch long . . . . If you take two points on a line, however close together they may be, there is an infinite number of points between them. The two things are different *in kind*, not in degree. The failure to make a line does not mean that you have not taken a large enough number, but that *number itself*<sup>1</sup> is essentially inadequate to make points into a line. However large a number you imagined, we might divide an inch into that number of parts, and each of these parts would be a little piece of line-room with a point at each end of it, and an infinite number of points between them . . . . Between two lines on a surface, however close together they are, there is always a strip of surface-room, in which an infinite number of lines can be drawn on the surface. And so, if you took any number of surfaces, it would be utterly impossible to make a solid with them. Two of your surfaces must either be distinct, in which case there would be solid room between them; or they must coincide, in which case they would take up no more room than one surface, that is to say, absolutely none at all. So far, then, it would appear that we must answer *no* to the question 'Is space made up of points?' . . . . Try now to count the points in a piece of line. You count, one, two, three, four, a million points; and your task is not even begun. The line is all there, exactly as it was before; absolutely none of it is done with. The million points take up no more line-room than one point; that is to say, absolutely none at all. When then we are talking of the points in a piece of line, we must say not merely that there is a never-ending number of them (which there is), but that they are out of the reach of number altogether."

To this let us add the opinion of a writer of this present hour, Mr. C. D. Broad:—

"We<sup>2</sup> can see at once, that, whatever a point may be, it is certain that it cannot be part of a volume, in the sense in which a little volume can be part of a bigger one . . . . Points, however defined, could not be parts of volumes. Divide a volume as long as you like and you will get nothing but smaller volumes. Put points together as much as you like (if this permission conveys anything to you) and you will not get any volume, however small. In fact the whole notion of 'putting together' points is absurd, for it tries to apply to points a relation which can only hold between volumes or areas. 'To put together' means to place so that the edges touch; and a point, having no area or volume, has no edges. We see then that, whatever definitions we give of points,

<sup>1</sup>We may note how Clifford is, so far as its bases are concerned, here robbing geometry of its language (*i.e.* *number*) as well as of its characteristic subject-matter (*i.e.* *extension*).

<sup>2</sup>C. D. Broad, *Scientific Thought*. pp. 48, 49.

we must not expect them to be parts of volumes in the plain straight-forward sense in which the Great Court is part of the college buildings of Trinity. It is therefore no special objection to our definition of points that points, as defined by us, could not be parts of volumes in the plain straight-forward sense."

We take as our final example a passage from the work of Professor Alexander :

"The<sup>1</sup> entities called points of which Space is composed . . . are, it is said, commonly regarded by mathematicians as fictions . . . . Under these circumstances we may ask ourselves the following question : When is a fiction fictitious . . . . Now the assumption of points as elements of Space in a continuous series is an attempt to describe . . . the given or empirical fact of the continuity of Space that any stretch of Space, however small, is divisible and that there is no smallest part. So far as the point is thought to be a self-subsistent entity by aggregation of which with other points Space is constituted, the point is fictitious. But such an assumption is not in fact and never need be, made . . . . Space is not merely infinitely divisible in the sense that its division admits no end, but is in itself infinitely divided in the sense that between any two elements there exists another element ; so that no two elements—we may call them points—are next or adjacent . . . . In this way the point, which is an unextended entity with a fictitious self-subsistence, is brought into conformity with facts by the correction of the conception. The definition of continuity, starting with separate points, screws them or squeezes them up into that degree of closeness which is needed to express the nature of Space. Even this degree of closeness is not enough for the perfect definition of the continuous. But the further criterion which ensures that the series of points shall be not merely 'compact' but 'dense' is more technical than I can take upon me to reproduce here."

Now what, against this, we propose to say is that the notion of continuity has nothing whatever to do with the notion of a point conceived in the manner above described, and that to bring this wholly valid and important notion into association with the illicit notion of an unextended mathematical point (and this to the extent of pretending that the notion of the first emerges out of the second) is to play havoc with the fact of the intelligibility of the universe. And not less so is it to bring it into connection with the very questionable notion that extensities admit of *division to infinity*. Thus (we submit), no philosophic system could, possibly, stand the strain of this double handicap in respect of the mind's play about science's most basic notion (extension : continuity), nor is there need

<sup>1</sup>S. Alexander. *Space, Time and the Deity*. Vol. i. p. 145 ff.

that any should try. For, as we contend, everything of importance which appertains to the notion of the universe's continuity has been taken account of when it has been allowed that the universe knows nothing of gaps in that it is filled up everywhere with extensities of one sort and another (*e.g.* with Space, Time or matter). Let us however examine in some detail this unwarranted claim unwarrantedly urged in the name of the universe's *continuity*, that extensities are to be conceived as divisible to infinity:—We begin by pointing out the elementary fact that, in the notion of division, we have, not a single notion, but a complex, consisting of three components *i.e.* that which is to be divided, the quotient resulting from the division, and the *divisor*. That is, in all division, there must exist that which is divided, the resulting parts emerging from the act of division applied to the former, and the *instrument of division* itself. Now, of these three, the one towards which we would especially direct attention is the last, *i.e.* the divisor. What follows will exhibit our reason:—Setting aside that particular extension which is Time, the question of whether 'divisibility of extensities' obtains to infinity can be regarded as an experimental question relative either to the extension 'Space' or to the extension 'matter.' That is, the claim 'extensities are divisible to infinity,' would mean that, in the one case, any piece of matter, however minute, and, in the other case, any stretch of Space however restricted, admits of the insertion within the bulk prescribed of a dividing-instrument which would, thereby, reduce these *minutiae* to a couple of extensions of still more minute dimensions. Hence, to disprove this claim, we should have to prove, in the one case, that matter is indivisible beyond a point, and, in the other case, that Space is indivisible beyond a point, in that there exists no 'insertible' capable of effecting a division. That is, the entire question resolves itself into one of experimental science, turning as it does into a question of ways and means as regards competent divisors: instruments of division; and from this standpoint we propose to investigate the two cases before us, making use, however, in the one case and the other, of two quite different images. We consider first *matter*. Now, to persuade ourselves

that matter, at least, does not admit of an infinite divisibility, we are going to borrow an image employed in an illustration used by a writer who believes that extension is divisible to infinity. This is the image of a series of spherical Chinese boxes fitted one inside the other, and, so, converging to a definite point forming the common centre of the boxes. The question here at issue accordingly will be whether anything exists in the nature of material things which must convince us that the point converged upon constitutes a last term in the sense that the instrument of division (here the boxes themselves), having arrived at this point, will find its divisions brought to a stand in the existence of an 'indivisible' which cannot be penetrated (that is, cannot be divided), and, so, will not admit of that 'insertibility' which Boscovich and the others would have us believe is limitless. Now, holding as we do by the atomic theory of matter, we say at once, that such a material series (series of 'insertibles' : divisors) as the boxes here imagined form, must perforce end in a last box of the series, which same will be, not a *hollow* box like the series' larger members, but an impenetrable—and therefore solid—box (or sorts), consisting in that native (*i.e.* cosmic) nucleus which makes the core of every single material atom. Our answer, that is, is that, so far as the divisibility to infinity of that extension which is *matter* is concerned, the atomic structure of matter itself confronts us with an indivisible which is the core of the atom, and which is, indeed, the entity responsible for that important feature characteristic of all matter *i.e.* its *impenetrability*. Accordingly, in so far as science is prepared to countenance the atomic theory, no difficulty obtains in rebutting claims about some supposed divisibility of *matter* to infinity. However, before going on to consider the second case, let us show how the opposing view interprets the argument illustrated by the Chinese boxes, adding that, in our opinion, such interpretation gratuitously renders a quite clear situation obscure by its determination to retain, at all costs, the existing indefensible definition of the 'point' :—

" We<sup>1</sup> are naturally tempted to define points as the limits of certain series of areas or volumes—and these attempted definitions *are* steps in the right direction. But they are not ultimately satisfactory, because they

<sup>1</sup>C. D. Broad, *Scientific Thought*. pp. 41-42.

leave the existence of points doubtful. Let us illustrate this with regard to points. We saw that, as we take smaller and smaller areas or volumes the relations between them become simpler and more definite. Now we can imagine a series of areas or volumes, one inside the other, like a nest of Chinese boxes. Suppose *e.g.* that it was a set of concentric spheres. As you pass to smaller and smaller spheres in the series you get to things that have more and more approximately the relations which points have in geometry. You might therefore be tempted to define a point, such as the common centre of the spheres, as the limit of this series of spheres one inside the other. But at once the old difficulty would arise: Is there any reason to suppose that this series has a limit? Admittedly<sup>1</sup> it has no last term; you can go on finding spheres within spheres indefinitely. But the mere fact that it does not have a last term is no proof that it does not have a limit. The limit of an endless series might be described as the first term that comes after all the terms of the endless series. But this implies that the series in question forms part of some bigger series; otherwise there is no beyond. Now it is not at all obvious that our endless series of concentric spheres does form part of any bigger series, or that there is any term that comes after every sphere in it. Hence, there is no certainty that points, defined as the limits of such series, exist. How is such a difficulty to be overcome? It was first overcome for irrational numbers, and Whitehead then showed that it might be dealt with in the same way for points. The solution will, at first sight, strike those who are unfamiliar with it as a mere *tour de force*; nevertheless it is perfectly valid, and really does the trick. Instead of defining  $\sqrt{2}$  as the limit of the series of rational numbers<sup>2</sup> whose squares are less than 2, it is defined as *this series itself*. . . .

<sup>2</sup>The definition of irrationals defines something that certainly exists. And this something has all the formal properties and will do all the work of irrationals. The *sole* objection to it is that it is paradoxical, in so far as it assigns a complex internal structure to irrationals which we did not suspect them of having. But that objection is really unimportant, because of the general principle that in science it is only the logical properties of the relations between our terms that matter, and not their internal logical structure. The objection is just a prejudice to be got over, like our feeling that the inhabitants of Australia must be precariously hanging on to the earth by suction, like flies on a ceiling.

Now we deal with the difficulty about points in an exactly similar way. We should like to say that points are the limits of series of smaller and smaller volumes, one inside the other, like Chinese boxes. But we cannot feel any confidence that such series have limits and therefore that points so defined, exist. Now there is no doubt that such series themselves exist; ordinary perception makes us acquainted with their

<sup>1</sup>This is the question, of course. We, for instance, do not admit that the series has no last term. See chapter iv on 'extensional ultimates.'

<sup>2</sup>*Ibid.* pp. 43-44.

earlier and bigger terms, and the assumption that Space is continuous guarantees the latter ones. We see, on reflection, that it is of the very nature of any area or volume to have parts that are themselves areas or volumes. We, therefore, boldly define points, not as the limits of such series, but as such series themselves. This is exactly like the procedure adopted in defining irrationals . . . . ”

But now let us suppose that the extension supposedly divisible to infinity is Space itself:—If this supposition means anything, it means that, if we take any two points whatsoever of Space, it will be possible for something to be thrust (say, a ‘point’) between these points without merging into one another the outlines of the three points which are involved. The question therefore is: What could such an ‘insertible’ (a ‘point’) be? What is there in the nature of things which could successfully divide an exceedingly small interval? Certainly not uncharacterised Space itself, for we cannot divide Space by such Space for the very good reason that we cannot get a hold upon it. Accordingly, our ‘insertible’ here must be, if not matter itself (for instance, an atom) yet one or other of the two component elements involved in the structure of every atom. That is, our insertible in respect of an interval of Space declared to be divisible must either be an atomic nucleus or an electronic quantum. But, as we have just now pointed out, the nucleus of an atom is, according to the atomic theory, an ‘indivisible,’ it being just this ultimately indivisible island or nodule of Space surrounded by its ring of electronic energy which (as we have said) is responsible for matter’s basic feature of impenetrability. However, the nucleus of an atom, though small and indivisible, yet has a definite size, and cannot be squeezed into smaller dimensions. Accordingly, when the Space-interval requiring to be divided is smaller than the fixed divisions of the atomic nucleus, the latter becomes useless as a divisor, and, so far as it is concerned, the interval in question must be regarded as small beyond the limits of division *i.e.* indivisible. There is, however, a still smaller and less stocky (less pronouncedly three-dimensional) entity than the smallest atomic nucleus *i.e.* the far lighter entity which consists in the ‘linear’ electron which, coursing round the atomic nucleus, fructifies the latter into a compound (*i.e.* material) entity *i.e.*

the atom. Yet, even the electron is a body (*immaterial*, of course) and possessed of determinate size; and, moreover, when moving, it generates along its line of route encircling spatial 'lines of force' which themselves take up room, forming as they thus do a body-guard for the electron, which same must be accommodated along with itself. Consequently, if the spatial interval between the two points fixed on to be divided is too small to accommodate such an entity (and, still less, its *entourage*), then *the last conceivable divisor* is pronounced incompetent, and we have to say that spatial intervals small beyond certain quite definite limits are indivisible in that there exists in nature no 'insertible' capable of making a clean split of them. But, *inscribability* is, recognisedly, the one essential characteristic of the point, constituting as it does its peculiar function so far as the process of division is concerned, effecting that cleaving of the one extension into two separate extended portions which must either obtain or there is no division. Hence, indeed, the reason that the point came into possession of its earlier, pre-Euclidean (Greek) name *i.e. stigma*, the 'puncture.' Hence, too, as we contend, the utter lack of responsibility in those views we quoted earlier about extensions admitting of division to infinity, such being, at bottom, so many bold assertions made in the absence of the preliminary calculations as to necessary ways and means. Hence (again), brought down to the level of experimental science (and geometry is an experimental science<sup>1</sup>) they have to be dismissed as destitute of any adequate scientific (experimental) warrant, being just so many loose assertions

<sup>1</sup>Mathematicians are very prone to overlook the fact of the experimental character of geometry, misled, no doubt, by the fact that the type of language (*i.e.* number, letter and sign) in which the truths of geometry are clothed is one of still unexplored possibilities, with the consequence that the essays in the 'literary' (so to say) exploration of the possibilities of this language are confounded (all undigested as so many of such essays are) with the *real* facts about the *nature of extension* which exist independently of any form of language whatsoever. What we would imply is that geometers are not at pains to discriminate, with the required niceness, between their activities as linguists, and their activities as experimental scientists. Their situation is thus analogous here, in respect of the 'point,' to that in which mathematicians found themselves in respect of 'non-Euclidean Space' prior to the advances made by Gauss and Lobachevski. Moreover, as regards the 'literary' side of the work of mathematicians, the following from Clerk Maxwell is not irrelevant: "Mathematicians may flatter themselves that they possess new ideas which mere human language is as yet unable to express. Let them make the effort to express these ideas in appropriate words without the aid of symbols, and, if they succeed, they will not only lay us laymen under a lasting obligation, but, we venture to say, they will find themselves very much enlightened during the process, and will even be doubtful whether the ideas as expressed in symbols had ever quite found their way out of the equations into their minds." (J. Clerk Maxwell, *Scientific Papers*, vol. ii, p. 328.)



about the division to infinity of extensities made out of relation to the act of dividing these.

However, it is not only the shortcomings of the argument for the 'infinite divisibility of things' on the experimental side which are so striking. Those on the purely logical side are so conspicuously so as to be explicable only in the light of the fact that what is behind this entire argument is the mentally-inhibiting force of a 'fixed idea': in this case, the idea that the current definition of the mathematical point must be retained what though the Heavens fall. For the state of mind of those who, while recognising fully the difficulties which attach to the accepted definition of the mathematical point, cannot persuade themselves to abandon it, appears to have its roots in an obsession relative to this term 'indivisible' under which Euclid himself defined the mathematical point. Thus, instead of conceiving the latter as an integral entity so possessed of the power to resist invasion (so possessed of the power, that is to say, to remain a unit) that its extent cannot be divided, they conceive it as something which is indivisible *only because there is nothing to divide*. So deeply, that is, has the notion that all extensities must perforce be divisible to infinity bitten into men's minds that (the atomic theory notwithstanding) they appear incapable of conceiving an extensity as an *invasion-resisting integer*: an inherent individual or unit: a native 'monad' possessed of specific situation (as the Pythagoreans indeed regarded the point). Their reasoning thus appears to run:—

*Every extension or magnitude is divisible.*

*The Euclidean point is not divisible (i.e. is an 'indivisible').*

∴ *A Euclidean or mathematical point is NOT a magnitude: NOT an extension.*

Now, while, on the surface, this argument appears to be valid, it is, basically, invalid in virtue of the fact that it contravenes the law of contradiction in that its major and minor premisses are *themselves* mutually contradictory. Thus, the proposition: 'every extension is divisible' is the denial of Euclid's indivisible. It asserts, that is, that *there is no such thing* as Euclid's 'indivisible': no mathematical point as originally defined by Euclid. But, concerning 'what

is not ' no affirmation should be made. Hence, if it be agreed that the major premiss of the foregoing syllogism shall be accepted, it follows automatically that its minor premiss must be ruled out as being nothing better than sound without meaning, the true form of the major premiss running : ' Every extension is divisible, ID EST, Euclid's conception of an indivisible (his conception of the mathematical point) is an inadmissible conception.' Therefore, it is one about which we are precluded from making any predications ; still more from making it one of the premisses of an argument the conclusion from which will have a most important scientific bearing. That is, *if* the major proposition of the above syllogism be true, its minor premiss, being the direct contradiction of it, is excluded from the argument by the simplest rule known to formal logic.

Now, contrary to our own belief, let us suppose for a moment that the proposition constitutive of the major premiss of the above argument be true ; let us suppose, that is, that everywhere the possibility of division to infinity holds, and that Euclid's conception of an ' indivisible ' was a blunder on his part. Yet, even so (and this is the one matter here of importance), the situation, so far as our contention goes that the mathematical point (divisible to infinity as we are now supposing it) must have magnitude will not be materially altered. For, even if we took a spatial magnitude as small as anyone might choose to stipulate, it would still be possible (according to the hypothesis) to obtain from this minute magnitude two magnitudes smaller still, and so on, and so on, indefinitely. That is, the statement that ' the division of extension to infinity is possible ' itself implies that such division will yield *magnitudes* to infinity. Otherwise, the postulate of divisibility to infinity would have ceased to be meaningful : would, indeed, have given way to the contrary postulate of Euclid *i.e.* that there exists a spatial ' indivisible,' it being precisely the inability to yield dual *magnitudes* which negates the postulate of the possibility of a division of extensities to infinity. Thus, all that the postulate that ' spatial extension is divisible to infinity ' provides us with is a denial of the existence of ' indivisibles.' It does *not* provide us with the grounds of an argument for the estab-

lishment of the claims of an extensionless point. On the contrary, it provides us with an argument for the refutation of any such claim, in that it provides us with the formula that, given any extensity, always, from it, we shall be able to obtain two other and smaller *extensities*. In this regard, that is to say, it is absolutely on a level with the postulate of an 'indivisible.' Accordingly, whether we hold spatial extension to be divisible to infinity or hold by the contrary, the conclusion is inescapable that geometry's definition of the point is faulty and unacceptable.

Further, it is (we hold), truly suicidal for mathematical philosophers to seek to prove the contrary. As reasonably might they throw away the institution of the multiplication-table and the rules behind the processes of addition and subtraction; for no more intimately bound up with the genius of mathematics is the numerical type of language than is the extensional aspect of the entities of the universe to which such language is pre-eminently applicable. Hence, the position which it would profit mathematicians securely to establish is that the point *must* have magnitude, and that, as having such, it is the constituent element of the line, while the line is a constituent of the plane, the plane of the volume; just the position, that is, which the general practitioner in geometry normally assumes. For the non-philosophising geometer *does* regard the point as the constituent element of the line (*i.e.* as having magnitude), and conceives lines as built up out of points, planes out of lines, and volumes out of planes, regardless of the fact that, in doing so, he is abandoning the accepted definition of the mathematical point as that which has position but no magnitude. Hence (and in compensation for his illogicality), the line has never been for him an incomprehensible miracle made up of 'ghostly' points (as it must be, for instance, for W. K. Clifford and Mr. C. D. Broad), but a normal construction made up comprehensibly from extended entities *i.e.* from points conceived as 'quanta of extension.' Thus, a point is (we should say) a modicum of extension so satisfyingly well-defined as to its relative position among other extensities as to suit the convenience of the term's user. For points need not all be of the same size but may have sizes varying through a wide range.

But, if the mathematician (for instance), requires for his purpose a very fine point indeed, then he, like everyone else, must define for himself the kind (or size) of point he requires—let us say, the smallest modicum of extension conceivable. But, however small he may conceive his basic point as being, he should not deceive himself into thinking that it is smaller than the smallest conceivable. He can, therefore, in right, only define the point as (relatively) 'that which has magnitude suitably restricted,' or (absolutely) 'the spatial quantum': 'that which constitutes the extensional ultimate or absolute minimum amount of magnitude' (which is, indeed, how Euclid himself defined it), thus adding to its essential characteristic of '*insertibility*' that of '*impenetrability*.' He might thus say that the point was that ultimate extensity which can divide but cannot itself be divided. And, to this definition, he would need to tack on the rider that the point is an extension which is *three-dimensional*: a consideration which carries us forward from the consideration of points to that of lines. For the mathematical point being (as thus regarded) *truly* the constitutive element of the line, the latter must (necessarily) be a three-dimensional entity. Hence, it ceases to be correct (and *never* has it been intelligible) to define the line as that which has length without breadth or thickness. Rather, the correct definition of the (mathematical) line will be 'that which has length, but only *minimal* breadth and thickness.' That is, theoretically, the mathematical line (like the point), is to be regarded as a three-dimensional construction having the breadth and thickness of the point. And so also with plane-surfaces. That is, if the geometer wishes, rightfully, to arrive at his end-conception of a volume, or even to arrive at the intermediate conceptions of lines and surfaces, he must *begin* with a volume *i.e.* with the point as a real, three-dimensionally-extended *magnitude*. Accordingly (we maintain), the time has arrived for a frank recognition of the fact that, in the accepted 'Euclidean' definition of a point, geometry has always harboured a fundamental contradiction, and, in consequence, has not been what it has been asserted to be *i.e.* a body of teaching which (save for the theory of parallels) was spotless and without blemish.

## CHAPTER IV

### RELIGIOUS ORIGINS OF THE EUCLIDEAN POINT<sup>1</sup>

If our interest in the subject of points were due to the needs of geometry solely, or were it even primarily so, our study would not need to go beyond the point arrived at in the preceding chapter. But (as we have said) our interest in the question of the extendedness of points takes its rise in a consideration much more comprehensive than the geometrical as ordinarily understood. Hence the need to continue the inquiry into the consideration of *where* and *in what* this neglected 'philosophy of points' originated; for only by so doing shall we be able to re-invest 'points' with that cosmic character which, as we consider, originally belonged to them, but of which the narrowing, non-philosophic attitude of post-Euclidean mathematicians has robbed them:—As we believe, the philosophy of points originated in remote ages of mythopoeic thought in the form of a religious doctrine, and a doctrine which had the good fortune to be carried over into the mathematical thought of Europe by thinkers (the 'Pythagoreans') who, themselves, were strongly impregnated with the old philosophic outlook. Hence our opinion that, if we would get down to the fundamentals of the notion of the mathematical point, we must get to understand the primitive religious ideas it originated in. What these ideas were we propose to show by way of a reference to that atomic theory of the structure of matter which (as already suggested) itself reduces to a philosophy of points or indivisibles: such theory advocating, on its very surface and, indeed, by its very name (cp. Gr. *atomos*, indivisible), the notion that there exists a limit to divisibility so far as matter, at least, is concerned. What, however, we are now going to suggest is that the atomic theory itself had its origin in a notion which claimed not only that there was a limit to the divisibility of matter, but that the latter was grounded in an atomicity of (certain portions of) Space, and

<sup>1</sup>This chapter is an interpolation in a *Book of Definitions*. Its purpose is to illustrate the fact of the inadmissibility of treating the definitions of geometry as matters out of integral relation to the foundations of science philosophy and religion.

was, indeed, true only to the extent that the latter was true. The atomic theory of matter was thus (we contend), at bottom, at once a theory of the *genesis* of matter and a theory of the characterisation of Space.

Now, let us say, as applied to Space, the atomic theory is extremely old, and it is by delving into primitive notions about spatial indivisibles (witnessed to by some of the most ancient of human monuments, literary and other), that we have been brought to realise that Euclid and Democritus (and still more Plato), in grafting upon European culture the conception of an 'indivisible,' were working up exceedingly ancient cosmogonic (theological) material, and were, thereby, establishing European speculation in the most ancient groove of philosophic culture. We mean, when Euclid, for instance, formally gave the notion of the 'indivisible' standing-room on the sphere of geometry, the notion had already had a long history in Greek and pre-Greek culture. Hence, if (as there are reasons for believing) this notion of a spatial indivisible is going to prove itself a real entity in the shape of the magnetic proton (the latter, in our opinion, the spatial analogue to the temporal indivisible with which our own philosophy identifies Planck's quantum), our modernest experimental science is going to join hands with mankind's most ancient theology in terms of the notion of the supra-material point or 'inherently indivisible spatial extension.' But now let us try to indicate what this ancient conception of the spatial indivisible was:—It had to do with the conception of a cosmic law of motion: a conception which the Greeks, for instance, were acquainted with in the notion of the *Logos* (as also under a great number of other forms<sup>1</sup>). As to this latter notion, we need, in the first place, to note that the cosmic law of motion (*logos*) was not anciently conceived, as it is in modern times, as a mere formula. It was conceived as a sort of spatial sluice, or road, or canal; and not simply an empty sluice, but one possessed of a content (a *seminal* content) consisting in points, nodules or knots of Space. Accordingly, the Greek *Logos* was the *Logos Spermatikos*: the *seminal* law: while the notion of the *Logos's* seminal content (the *logoi*

<sup>1</sup>These Greek variants of the *Logos* notion are gone into in vol. iii: *The Immemorial Cross*.

*spermatikoi*) was the form under which the primitive doctrine of 'doubles' (*i.e.* of the indestructible supra-material souls of things) entered into the qualitative culture of Europe. The *logos spermatikos* with its *logoi spermatikoi* was thus the elaborated notion, at once, of the immemorial doctrine of the immortality of the soul, and of the latter's periodic resurrection in the flesh. It was, that is to say, the elaborated notion of the doctrine of the *incarnation*, being the ancient *rationale* of this most important : indeed fundamental : religious doctrine. It was thus the *rationale* of that doctrine which primitive peoples everywhere gave expression to in the *cult of ancestors* and *cult of souls* : cults which were, themselves, the outcome of the primitive belief that all persons (and things) have supra-material (*i.e.* spatial) 'doubles' which constitute their irreducible and (therefore) immortal 'residues.' The primitive belief in 'doubles' or souls was thus a belief in native (cosmic) *integers* or *indivisibles*, which same were called *seeds*, and this belief in supra-material, death-surviving 'seeds' was absolutely world-wide, being as much in evidence in the ancient Egyptian papyri as it is, for instance, in the Greek *logos spermatikos*, and is not to be disguised by the vast multiplicity of names which it has been made to take refuge under. Thus, we have to understand that, when the ancient Egyptians (for instance) worshipped their equivalents for the *logos spermatikos* *i.e.* their sacred symbolic beetle, the *scarabaeus* and their holy *ankh*, piously depicting the latter in the hands of their Gods, their pharaohs, and their mummified dead ; and when (again), the Vedic hymn-writers sang of the virtues of *their* equivalent of the *logos* *i.e.* the *rita*, and a later age taught those of *dharma* ; when, also, the Chinese subscribed to the doctrine of the *Tao* ; when the organisation of the Roman army signified its dead legionaries with the mark of the *Tau* ; when the ancient Israelites ran a spit lengthwise through the body of the *paschal lamb* and another horizontally through its breast and sacrificed it ; when the Pythagorean geometers taught that the bases of things were '*numbers*,' these were, one and all, perpetuating a primitive theological teaching which we can, indifferently, describe *either* as a philosophy of irreducibles (of ultimate, supra-material, extended integers : of indestructible

world-indivisibles) *or* as world-points, *i.e.* indivisibles in the Euclidean sense. In all cases, the teaching in question reduced to an account of an indestructible, death-surviving, supra-material (*i.e.* spatial) *residuum* of things, as brought into connection with a cosmic law of motion conceived as a cyclic road which, perforce, caused the matter-begetting stream of cosmic motion (the Time-flow) *eternally to return upon its traces*. To sum the matter, we might say they were, one and all, perpetuating a teaching explicative of a problem which, in modern times, we know under any one of the following equivalent titles :-

- (1) The problem of the resurrection of the body ;
- (2) The problem of the incarnation, *i.e.* that of the genesis of matter ;
- (3) The problem of the cosmic law of motion ;
- (4) The problem of the ' inner seat of gravitation ' ;
- (5) The problem of the cause of the causal nexus ;
- (6) The problem of ' why emergents emerge.'

For they were teaching a *theory of evolution* which same was based on a conception of a cosmic law of motion consisting in a certain select region of Space having the character of a road running *through* Space ; a region which served the Time-stream as the Time-path (bed of cosmic motion), compelling Time (motion) to take the cosmic course it does rather than any other, and, so, causing the evolution of the cosmos to take the shape *it* takes rather than any other. For (as we have said), primitively, the law of motion (the Logos or Cross), was not conceived as it is by so many modern thinkers (*i.e.* as a mere formula), but as a road bestriding the Heavens and filled with the world-indivisibles or supra-material irreducible integers, and, *therefore*, with the universe's natively indestructible individuals. *Two* notions were thus involved in this primitive doctrine about points. In the first place, in virtue of the compulsion exercised by the cosmic law over the Time-flow, the *direction* of the latter was held to be not haphazard, but to be thus and so, Time journeying, in obedience to the law, along this pre-determined spatial route in which eternally stand (or should stand) the supernatural individuals, indivisibles, the world-points or world-



seeds. Hence the second notion involved. For the irreducible world-integers lodged in the Logos were conceived as capable of achieving incarnation (*i.e.* becoming *matter*) only in response to the embroidering action about them of rills of the Time-flow (rills of the cosmic stream of motion or mobile principle of the universe). This primitive 'point-theory' was thus a theory of the origin of (and dual constitution of) matter *i.e.* of the *material* atom, and it is on this account that it is a theory of the incarnation.

Such, we conclude, was the conception of 'evolution' as framed by an early human civilisation. It was a conception based, as we have seen, on the ideas (1) that the stream of cosmic motion (Time) may not run wheresoever it will but only as the law of motion (the Logos: Time-bed) permits it; (2) that the law (Logos) of motion is not an empty sluice in the sense of containing only non-differentiated Space, but a 'full' in the special sense that it is the house and home of the irreducible spatial knots or seeds: the *logoi spermatikoi* or *world-points*. The ancient theory of evolution (the theological doctrine of the Logos) was thus one directly opposed to the modern doctrine of *natural selection*, being essentially a teaching about *supernatural selection*: a teaching to the effect that evolutionary developments are supernaturally guided by an 'inner seat of gravitation' (the Logos) which exercises compulsion over the Time-flow or mobile principle. The 'primitives' accordingly taught that the lines of growth of the 'organism' which is 'nature' are predetermined by the existence of a cosmic law which imposes direction on motion (on Time). Hence the instinctiveness of the feeling given utterance to by the theologians of the last century (how very rancorously, one knows) that religion (theology) was being challenged and undermined by the advocacy of the doctrine of *natural selection*. For the Logos-doctrine was basic to primordial theology, while this doctrine was essentially a doctrine of *supernatural selection*. [It is this same doctrine which (we may add) appears, multiply-translated, in Christian theology as the Rock of Ages (the Time-course), the Cross, and the Everlasting Arms, which latter not only give substance to nature and sustain it, but (as the underlying design

or pattern of the law of motion) dictate the lines of its development.] How the Logos-doctrine was supposed not only not to clash with the doctrine of the freedom of the human will but actually to necessitate and impose this (precisely as a normal parent imposes upon a normal child the educative burden of personal responsibility) is a matter which cannot here be gone into where the assurance must suffice that the strict determinism which the Logos imposes on the courses of nature in the latter's earlier stages cannot obtain in her highest *i.e.* the human. The matter is treated later in this present volume. It is no riddle but a very straightforward argument. Further, how the cosmic law of motion with its seminal content (the world-ark with its cargo of souls: the *logoi spermatikoi*) is also the *Cross*, the contents of which alternately put on and put off Christ, the Time-substance (the World-Father), suffering thereby incarnation and disincarnation alternately, are matters which can be profitably gone into only after we have given our definition of the Godhead. So, too, is the teaching according to which the law of motion is, in Matthew Arnold's phrase "a force, not ourselves, working for righteousness." We therefore leave this aspect of our subject and concentrate attention upon another *i.e.* that aspect which led us, thus prematurely, here to introduce it. This is that the Logos-doctrine, theological as it is, is pre-eminently a scientific doctrine, being concerned with such obviously scientific concerns as the ultimate definitions of geometry, the origin and constitution of matter, and the question of the 'inner seat of gravitation.' Conversely, we claim that these latter concerns, scientific as they are amply recognised as being, are, likewise, *essentially theological* concerns: concerns having to do with the world's *first principles*, and, accordingly, concerns on which theology is not, and cannot be, neutral. What, obviously, we are suggesting is that high science is theology and theology is high science; while traditional theology, all the world over, is just the *débris* of that one particular interpretation of the character of the first principles of which this doctrine of the *logos spermatikos* with its content of supra-material *logoi spermatikoi* is the *pièce de résistance*. For the Logos was conceived as a

world-palladion and a world-saviour in a double sense (1) as conserving the substance of the stream of cosmic motion (*i.e.* guaranteeing the law of conservation of energy) by confining Time's flow to limited parts of Space only, and, so, preventing it from straying into the uncharted wastes of Space ; (2) as forming the refuge of souls : the shelter and home (ark) of the intrinsic ' knots of Space ' which are the irreducible world-seeds (world-points), these being a grade more ultimate than the material atom, which latter is a creation only : a compound only (*i.e.* not an atom in the true sense), and enabled to make its entry into the world of creation (*mundus*) only as a result of a seed's (a ' point's ') embroidering-about by a length (quantum) of the Time-substance duly brought into the seed's vicinity in the law by the right leading of the latter.

Now (let us add) this ancient theological doctrine of the seminal law of motion made its entry into the channels of European thought in four easily recognisable but utterly disjointed and non-identified streams. These are the streams of (1) the atomic<sup>1</sup> philosophy ; (2) the geometry of Euclid ; (3) the supernatural ' forms ' of Plato ; (4) the dogmas of Christian theology ; and what we suggest is that this disjunction of an identical notion into four supposedly unrelated forms is responsible for the later total misunderstanding of the geometrical notion of the point or indivisible in that it screened the fact of the immense cultural importance of this mathematical notion, divesting it utterly of its ancient genius, and, thereby, impoverishing human culture incalculably. For, had the Euclidean notion of the point (Gr. *semeion*<sup>2</sup> ; cp. Latin *semen*, seed) been read in the light of the Democritean notions of the *panspermia* and the *atomos* (the latter the ' indivisible ' by express name), and, again, in the light of the still earlier atomism of the Indian atomist, Kanada (1200. B.C.), the truth must,

<sup>1</sup>It is our opinion that the traditional estimate of the philosophy of Democritus calls for revision in the light of this ancient notion of ' world-seeds,' the extended but indestructible and supra-material souls of things which constituted the primitive indivisibles : the spatial quanta : the Euclidean points.

<sup>2</sup>This is the term which Euclid used for the ' indivisible.' Democritus's term was ' *atomos*.' A pre-Euclidean Greek term for the point was ' puncture ' (Gr. *stigma*, from *stizein*, to prick). Plato called a point " the beginning of a line " ; also an " indivisible line," a definition according to which (as Aristotle pointed out), the point, though indivisible, is credited with size, being possessed of differentiable extremities.

almost inevitably, have suggested itself that the philosophy of points was not an isolated matter in science but one inextricably linked up with the profoundest of all anthropological notions: that behind the primitive 'cult of souls' and the age-long conception of the immortality of the soul; the conception, that is, that there appertains to material forms an indestructible, irreducible, spatial residue after such forms have suffered the very worst from death and dissolution. For, inalienably possessed of size as the soul (being the indivisible) was supposed by this primitive philosophy of points to be, it must eternally maintain its *place* in the universe. Hence, such philosophy was the anchor of man's hopes for a resurrection of the body and of his belief in a life still to come. [As we said above, the belief in the resurrection of the body was based on the ancient teaching that the law (canal) of motion was cyclic as to shape, with the consequence that the Time-flow must inevitably *return upon its own traces*.] The philosophy of the mathematical point would thus have continued its career in the history of European science in the form it began *i.e.* as a frankly religious doctrine: an integral part of the science of the first principles: a metaphysical matter, therefore, rather than a physical; while mathematical science in its entirety would have remained as closely in touch with religion as when it flourished under the Pythagorean brotherhood (the latter, confessedly, first and foremost, a theological institution). In this way, also, a unification would have been effected of the mythopœic cultures of India, Babylonia, Egypt and Greece with the qualitative culture of the latter as including the systems of the Stoics, Plato, Democritus (as *we* construe the latter's philosophy) Anaxagoras, Heracleitus and Thales. Also of the scholastic theology of the middle ages. For these same seeds (*logoi spermatikoi*: indestructible souls) of the Logos which (as we contend) were in Euclid's mind when he substituted for the earlier term *stigma* ('puncture') the term *semeion* ('dot'), are the *rationes seminales* about which the mediæval scholars debated, this being the term by which the latter rendered the *logoi spermatikoi* of the Stoics, the *ideai* ('forms') of Plato (at least, so *we* contend), the constitutive 'numbers' of the Pythagoreans, the *panspermia* of

Democritus (also as we contend), the *spermata* of Anaxagoras, and the 'souls which filled all things with the divine' of Thales; for these Greek notions had their equivalents in the conception of the 'atom' put forward by the atomist Kanada of the India of the second millenium prior to our era, in the 'immature forms' harboured (according to the mythopœic notion) in the body of the Babylonian Tiamat whom Berosus tells of, and in the Egyptian notion of the immanifest seeds of things harboured in the body of the Egyptian Goddess Nun (Space: Heaven) told of in one of the ancient Egyptian papyri. One and all, they are presentations of the notion of 'atoms' conceived, not as material but as the spatial prototypes ('forms') of the material, constituting the ground of the absolute identity of the latter, and requiring, in order to become the latter, to be worked round with their appropriate quantum of the Time-thread. That is, these spatial seeds were souls: disembodied entities: which, in that they were indivisibles ('points') were held to be indestructible ('immortal'), as capable of maintaining their place in the spatial orb of Heaven after (and before) incarnation as during it: after, that is, disintegration (death) has done its uttermost to the carnal body. This entire subject profits (we might add) by being re-read in the light of the Pythagorean (and Platonic) doctrine of 'the great and the small,' the meaning of which (we conceive) is to be found in a teaching of a *spatial maximum and minimum*, the latter ('the small') being the point (the soul: the seed: the indivisible); the former, the finite orb of Heaven, the 'walls' of which are the firmament (the 'sphere of the fixed') which (as Aristotle so persistently taught) are situate at a finite distance from the world-centre, thereby separating the vault of Heaven from the unlimited ranges of Space which stretch to infinity beyond the world-walls. But now let us direct our efforts to another matter: that of defining the universe's *first principles*.

## CHAPTER V

### THE FIRST PRINCIPLES

#### I

Defining the first principles in terms of their function, we say that these entities are the ultimate substances of mundane things, being the supra-mundane<sup>1</sup> entities which modern philosophy knows as *things-in-themselves* and modern science as *the elements*<sup>2</sup>. They are those substances which compounded things reduce to after these latter have suffered the last analytic reduction they admit of. They are the universe's inherently irreducible, indecomposable, 'incorruptible' substances. Accordingly, they are the universe's permanently-existing foundations; or, as we commonly say, its *eternal* foundations. For this is the construction which time has revealed as the correct one to put upon the term 'element,' being the construction of the term which has evolved naturally out of that pragmatically set upon it by the chemist Boyle in the seventeenth century: a quite different meaning, of course, from that which the term carries when it is said that there are ninety-two 'elements.' What, rather, in this latter case, ought to be said is that there are ninety-two primary compounds. For (as physical chemistry in modern times has been able to convince itself), these ninety-two bodies are not elemental; they are, one and all, compounds, compounded out of simpler stuffs which latter (so we claim) are elemental in that they are indecomposable. Now this reduction in the number of the elements truly so called is very drastic: so drastic that the tendency has been to overshoot the goal of the reduction-process by advancing the postulate that there exists

<sup>1</sup>*Mundus* we identify with the world of creation.

<sup>2</sup>We might point out that a philosopher imposing a definition upon a dubious philosophic term is in a position analogous to that of a physician diagnosing an ailment. The physician's diagnosis may occasion surprise, but that will be neither here nor there. What will matter will be the response which the patient's condition makes to treatment based on the diagnosis. So in philosophy, with its age-long intellectual sickness. It is to be noted, however, that this apparently very unusual definition of the first principles as the elements ought not to be regarded as excessively so in that it is (as we shall show) precisely the construction which was put upon the term by the earliest known European philosophers. This same matter is dealt with, from a different angle, in chapter vii below.

one element (one first principle) only : a tendency which (so we have been persuaded) is so inimical to the progress of the explanation-process that the impugning of it is made a foremost labour of this entire philosophy. However, not to diverge here from the direct line of our immediate inquiry, let us content ourselves with the bare affirmation of the position we have adopted, *i.e.* that, be the number of the elements what it may (*e.g.* ninety-two, one, or two) an element is, by definition, a cosmogonic first principle. Conversely, a cosmogonic first principle is an element.

Now here (it is to be noted) we have introduced into our definition of the term 'first principle' the term 'cosmogonic,' and what we thereby seek to indicate we shall explain by reference to the fact that the universal content in its entirety is classifiable into two great categories : the elemental and the non-elemental respectively. Now the second of these two categories is made up of one single (collective) member solely : the member to which we limit the title of cosmos (*mundus*), which same member is related to the elemental entities occupying the first category as an offspring or product is to its generative factors. Necessarily so, in that the elements are the *sole* basically-existent stuffs of the universe, with the consequence that any other entity which contrives to obtain an existence in the universe must be one resulting from a union (combination) entered into by the radicals. Only in this way (*i.e.* as the expression of that intimate—but varying—compresence of the radicals to one another which we call union), can the presence in the universe of the latter's third entity (the cosmos) be accounted for. Hence the explanation of the fact that the universe's first principles are cosmos-generating (are, that is to say, cosmogonical), for they are those entities which, uniting together their respective substances, give birth to (and in this sense are, at once, the qualitative factors, the first causes and the parents of) the cosmos ; and they are those back into which the cosmos (regarded as a collective unit) will ultimately be refunded, *i.e.* when the dual elements now existing in intimate union with one another mutually withdraw from such union. Now (let us say), it is the study of the manner in which these two

processes (the processes by way of which the first principles periodically give birth to the composite unit which is the cosmos and periodically do away with it) which constitutes the *science of cosmogony*, the variant title of this science being, accordingly, the *science of the first principles (elements)*, while it is the characters of the elements which furnish the clue to the manner of these processes. Hence, it is *the characters* of the elements which have to be looked to to give the ultimate explanation of those unions and dis-unions (*births* and *deaths*) associated with all natural forms (individually as well as in the mass) the explanation of which forms the prime task of cosmogony. However, before we seek for this explanation, let us advance our definitions of the processes of *birth* and *death*. To the cosmogonic question: what is birth? our philosophy replies that the birth-process means essentially a *blending*. Essentially, birth means that intimate yoking together and mixing of mutually differing substances of which one particular sphere of birth (the organic) furnishes a well-recognised instance under the title of fertilisation. Accordingly, we define the birth-process in its broadest sense as a *mingling-together of the diverse*: a mingling so intimate that the blended results present themselves as compound units differing from each and every one of their component factors. Apart from such mingling, such blending of the diverse, no birth whatsoever (no creation: no causation) could ever transpire, and the entities of the universe would, of necessity, remain precisely what they were. What we have in mind we can throw into a familiar form in terms of a certain well-known formula which was, actually, formulated by the ancient Greek philosophers but the truth of which was implicitly assumed by thinkers of a far earlier age than the Greek. This is the familiar formula that 'nothing is born of nothing,' the meaning of which is that every offshoot, every effect, has at least 'a' parent, 'a' cause. It is the formula which implies that, if aught exists which has 'come into' existence *viâ* the birth-process, then it has had (*must* have had) 'a' parent. Conversely, it means that, if aught exists which has no parent [no factor(s)], then such existence stands high above the birth-process as an eternal being: a radical: an indestructible, uncreated element or first principle. So much,



then, for the significance of the formula 'nothing is born of nothing' as it stands. However, it was not to make use of this formula as it stands that we introduced it into the argument. For (as we hold), it is not sufficient merely to say that nothing is born of nothing: that everything born has 'a' cause, 'a' parent. Rather, in view of our definition of birth as the 'combining of the diverse,' we must go further and say that, causation meaning birth, and birth meaning mixing, every born, caused form must have at least two parents: two causal factors. Hence the emergence of another and much more thorough-going formula than this which asserts that 'nothing is born of nothing.' It is the formula that 'nothing is born of one'; nothing is born of ONE cause; nothing can be born off one exclusively homogeneous type of substance; since, in order for fertilisation, generation, birth, causation to have place at all, there must be a plurality of substances. Wherefore, in order for the single collective entity: the world of nature we exist in: to exist at all, at least TWO prime *i.e.* non-born, parentless, elemental substances must have been in play upon one another from all eternity. That is, the bare existence of a world in which born forms are, is such as to demand, for the explanation of its existence, at least dual prime agencies (first principles: elements: first causes). Hence, were the first causes or elements of things what, throughout the entire period of European culture, there has been a tendency to conceive them as being, *i.e.* MONISTIC, the universe would perforce (*i.e.* for lack of the means to bring about a mingling in respect of the world's radicals) have been an unvarying, change-bereft institution exhibiting no changes, no development, no birth of the new; accordingly, an institution totally different from the universe we live in. Hence (we say) inasmuch as on all hands we find causation, birth and change, there emerges a call to our intellects to negative this widely-accepted tenet of European philosophy according to which the world's first principle(s) or cause(s) is monistic, and a like call to affirm the position that the first causes must be, at least, twofold; but, being radical, need not be—and, by the law of parsimony, will not be—more. But this amounts to saying that a call emerges for us to affirm the notion of a trinity: the cos-

mogonic trinity which consists in two eternal (elemental) world-parents (the world-mother and the world-father) *plus* the world-child or cosmos. A call emerges, that is to say, for us to recognise in the two increate and imperishable elements [which latter we, following a practice common to the mythopœic and classical world-ages equally, identify respectively with Space (Heaven the world-matrix) and Motion (Time, the world-stream of fertilising motion) ] the parents of the cosmos or world of creation (*mundus*) in its entirety. And this is the same as saying that the mysterious-seeming notion of the (cosmogonic) trinity<sup>1</sup> rests upon nothing more alien to the thought of modern science than this, that the scheme of the universe is one which contains elements (of which, however, there must be two), and that, therefore, the created world (*mundus : cosmos*) is neither co-extensive with the universe nor yet what the universe is radically.

In defining the universe's first principles as the created world's increate and indestructible elements (its *noumena*, or what the world is radically), and in asserting these to be dual in number, we find ourselves back at a position which is as old as the oldest stratum of Greek philosophy<sup>2</sup>, the one according to which a *pair of contraries* was held to constitute the (eternal and imperishable) first principles. We are back at the position, that is, which Aristotle attributes to 'the ancients' in his account of the philosophy of the ancients in his *Physics*<sup>3</sup> :—

"Without exception, all [the ancients] take contraries as their principles. For instance, those for whom all is one and immobile (for Parmenides himself, indeed, takes as his principles the hot and the cold which, at times, he styles fire and water) do so ; so do the partisans of the rare and the dense ; so does Democritus with his full and the void, the former of which, in his opinion, is *being*, whereas the latter is *non-being* . . . . We see then that all the philosophers, each after his own manner, take contraries as their [first] principles. And rightly . . . . To this extent . . . there is a general agreement, an almost unanimous consent . . . . All take contraries as their elements (as their *principles*,

<sup>1</sup>The cosmogonic is not the sole form of trinity known to (ancient) theology. There are several forms. On this, see chapter entitled *Triads and Trinities* in vol. ii (*The Mystery of Time*) of this series.

<sup>2</sup>The notion is, needless almost to add, very much older, being plainly discernible in the mythopœic cultures of nations existent long prior to Greek civilisation as history knows it.

<sup>3</sup>Aristotle, *Physics*, I.7.

as they say) though they do so without any reasoned motive . . . Some take such contraries as are the most readily apprehensible by the exercises of our reason ; others take such as are most readily apprehensible by the play of our senses ; some take the hot and the cold ; some love and strife . . . There is thus to a certain extent agreement between them, and to a certain extent disagreement. There is a superficial disagreement, but an essential agreement on the main theme [which is] that the principles or elements must be contraries [*i.e.* dual]."

Even as to the philosopher Empedocles, with his supposed *four* elements, we have Aristotle's express pronouncement that these were, in practice, *two*. Aristotle's words are<sup>1</sup> :—

"Empedocles differed from his predecessors in being the first to introduce this case in a double form . . . He was also the first to assert that the number of the so-called material elements is four. Yet he does not employ them as four but as if they were only two, treating fire on the one side by itself, and the elements opposed to this—earth, air and water—on the other, as if they were a single nature. One can discover this from his verses by careful reflection. Such, then, were the nature and number of the principles<sup>2</sup> assumed by Empedocles."

In the same place, Aristotle also says :—

"If one follows out the statement of Empedocles with attention to his meaning, and not to its lisping expression in words, it will be found that he treats 'Love' as the cause of good things, 'Strife' as the cause of evil. Hence, if one said that, in a sense, Empedocles designated . . . Good and Evil as [the] principles, the remark would be just."

This being so, we can readily understand what this old Greek thinker, Empedocles, has in mind when he says :—

"I've one thing more to say ! Mongst mortals there  
No Nature is ; nor that grim thing men fear  
So much called Death. There only happens first  
A mixture, and mixed things asunder burst."<sup>3</sup>

And again :

"When from mixed elements, we sometimes see  
A man produced, sometimes a beast, a tree,  
Or bird, this birth and geniture we name.  
But death, when this so-well-compacted frame  
And juncture is dissolved. This use I do approve."

<sup>1</sup>*Metaphysics*, A. 985 b. ; cp. also *Met.* B. 996, a.7. and *Met.* B. 1001, a.12.

<sup>2</sup>In reference to this passage Taylor (*Aristotle on his Predecessors*) gives Aristotle's own definition of the term element (*stoicheion*) as "an ultimate factor present in a complex, not further divisible in respect of its kind into factors which differ in kind."

<sup>3</sup>Plutarch's *Morals*. Vol. v, p. 348. Boston edition, 1870.

Or again :

“ Fools and of little thought we deem  
 Those who so silly are as to esteem  
 That what ne'er was may now engendered be  
 And that what is may perish utterly . . . .  
 No prudent man can e'er into his mind  
 Admit that, whilst men living here on earth . . . .  
 They being have, but that, before the birth  
 They nothing were, nor shall be when once dead.”<sup>1</sup>

It is the idea according to which the constitutive items of the entity creation (*kosmos* ; *mundus*) are, one and all, compounded beings, owing their advent into the world of embodied things to the intertwinings of parts of the substances of the two elemental beings (which latter, while they are substantial, energetic, extended forces, are *not* material ; which is to say, are not compounds), and their departure out of the world of embodied things to the disengaging of these same supra-material substances from their temporary unions with one another. It is the view according to which there exist two elemental substances, the one of which (Empedocles' *sphairos* : the element *philia* : Aphrodite : ' love ' ) is the three-dimensional continuum, Space or Heaven, which, though static, yet is capable of moving so as to yield room to its complementary element (Empedocles' *neikos* : *eris* : the element ' strife ' ), which is a linear formation and essentially mobile, which, traversing its eternally-appointed path (law : *logos*) within the former, works round the knot-like spatial quanta (seeds : souls : *logoi*) situated in the law, and, *by* working round them, incarnates them, *i.e.* fructifies them into bodily (as distinct from substantial but supra-material) being. Thus, the first element ( ' love ' : Space) is the element which stands ; the second element ( ' strife ' : motion : Time) is the eternal passer-by, passing, file-like, eternally along its restricted path which is the eternal law or *logos*, while both elements alike are eternal, *i.e.* indestructible and increate. Hence Empedocles' assertion that ' nature ' and ' death ' *are not*. What he means is that, in respect of the radicals of the universe (and this is what all things are ' in-themselves ' ), death (*i.e.* dissolution : disengagement of constituent factors

<sup>1</sup>*Ibid.* p. 351.

from one another) and birth (*i.e.* composition) are alike alien. That is, the world-radicals (the elements) can neither be given birth to nor yet can ever die. They exist superior alike to birth and decay. But, inasmuch as these radicals are dual, and inasmuch as these dual forces are (in response to the leading of motion by its *law*) sometimes linked together with one another and sometimes separated from one another, it follows that the diverse characteristics of these two substances itself is responsible for the introduction of composition and dissolution into the universe. That is, substances which, in themselves, can know neither birth nor death, impose these features on the scheme of things, making them the differentiating features, indeed, of all those 'units of nature' which are linked together by the causal nexus, which latter forms a characteristic feature of the third entity of the universe, *i.e.* the compounded cosmos or world of nature which lies couched in Space the matrix element.

This brings us to our definition of creation (causation) on the cosmogmic scale. First a word of caution however:—The only meaning which, in the ultimate sense, one can rightfully read into the terms 'creation' and 'causation' is that of a *linking-together* of the supra-material but substantial factors constitutive of the elements. To this extent (but to this extent only) we allow that it is incorrect to describe *any* created form as the generator of any other. Or, as we might put it, we allow the force of the scriptural command: "Call no man your father upon the earth. For one is your father which is in Heaven," a command with which ought, in right, to be associated another: "Call no woman your mother upon the earth. For one is your mother, even Heaven." For just as, in a piece of (say) embroidery, no one would be so perverse as to call one stitch the begetter or constituent of the stitch situated next to it, but, rather, would accept the canvas with its pattern and the embroidery-thread with its delineating lengths as being the constituents (causes: parents: factors) of every stitch alike, so, from the all-comprehensive point of view of cosmogony (science of the first principles), mere propinquity or contiguity of forms (even that intimate contiguity represented in the relation of parents to offspring) does not constitute ultimate motherhood

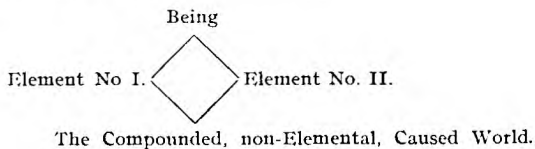
or fatherhood, but is just a matter incidental to the 'making-way' of the one comprehensive element (world-parent) through the substance of the other. In this (the absolute) sense then (but in this only), there is error in attributing causation to the immediate begetters of things. Hence, we define causation (which we do in terms of *the cause* of the causal nexus) as a phenomenon begotten of the fact that, of the two elements out of which caused units in their entirety are formed, the one (the truly three-dimensional element: Space) *stands*, whereas the other (the linear, mobile element: the Time-stream) *passes eternally through* the standing one, and, passing, fructifies into compounded incarnated being the spatial quanta ('indivisibles') which, in its passage, it becomes temporarily yoked up with. The entire phenomenon of creation (causation) thus has its origin in the fact that the mobile one of the two elements is mobile (and also linear), in contrast to its complementary element, the spatial matrix, which is characteristically three-dimensional and static. For the former moves its substance through Space along certain restricted channels (those of the law of motion: the 'inner seat of gravitation'), and, at each place at which it arrives, begets, in that place, a compounded form. This latter is therefore made up, as to one part, of the stream's own substance; as to the other part, of the spatial substance proper to the particular place in which it is generated. The mobile principle (Time) is thus like one of the partners in a dance. In any given place, it engages its partner (a 'seed' of Space), swings it through the figure proper to the place, disengages itself, and *passes on*. Hence that train of changing conditions, *i.e. birth, life and death*, to which all created forms are subject: the train, that is, essentially under consideration when one speaks of the causal nexus.

Needless almost to say (this being our view), our philosophy recognises a necessitarian ground for the emergence of effects out of their causes, which latter consist, in the last resort, in the characters of the two elements. Hence, for our philosophy, fortuitousness of consequences is a quite inadmissible doctrine; which is the same as saying that, in our opinion, Humianism (the modern theory of causation) is a false doctrine. For the

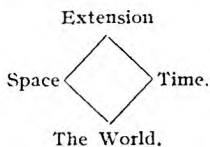
Humian or modern doctrine of causality denies the necessitarian character of the specific consequences of specific causes, and does so precisely because it fails to apprehend—specifically denies indeed—the existence of entities which, underlying the causal nexus and entailing it, are the entities which determine what kind of effect shall emerge out of certain causes. Hence, inasmuch as adhesion to Hume's theory of causality is now so widespread as to determine the atmosphere which invests all modern thinking, and yet represents an error of such proportions as to threaten the very sanity of thought (standing as it does for the persuasion that the world of creation has no substantial bases), we have (and in order not to hold up the statement of our argument) put forward a brief examination of the Humian *doctrine of causality* in the form of an appendix to this present treatise.

## II

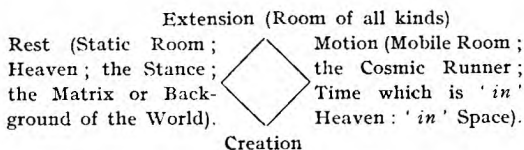
We enter upon the second part of this chapter by gathering together into diagrammatic form the terms we have defined in the three foregoing chapters. The scheme of the universe we have been indicating analyses out as follows:—



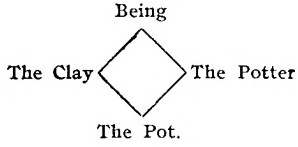
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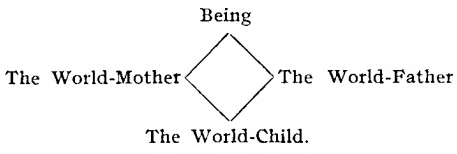
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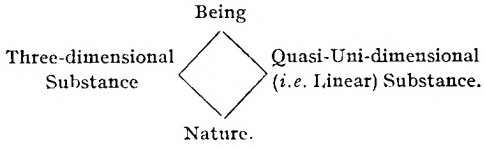
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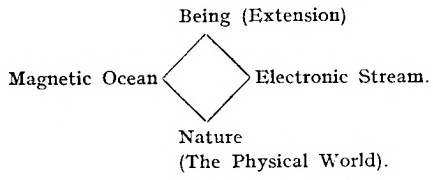
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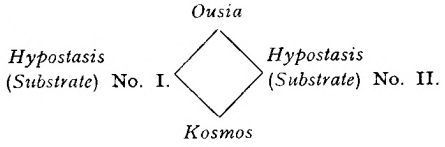
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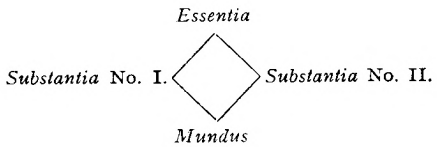
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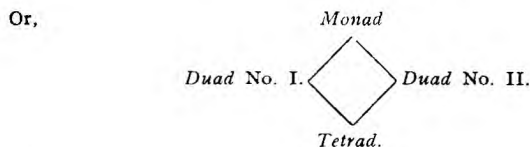
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It will be observed that, as presented above, the scheme of things exhibits *four* terms. That is, it is represented by a *tetrarchic scheme*. Accordingly, the question may be asked, why, if we hold the universal scheme to be a trinity (as we do) we thus present it as a tetrarchy. To this question our answer is the following:—In our opinion, the knottiest knot in all philosophy has arisen out of the fact that philosophic science, as soon as it emerged out of its primitive mythological stage, tended to confound the notion of the One (the group subtended by the universal *summum genus*) with some one or other member of the cosmogonic trinity of which the One itself is *not* a member. The tendency was thus begotten to identify the parts (any one of the three differentiable parts) of the universe with the whole universe. Hence the consequence that the philosopher has been hampered in respect of both the two quite differentiable forms of activity proper to him—the one, that of informing the classifier of things, the ontologist proper, what is the goal of his activities *i.e.* the formulation of the notion of the One, the *monad*, the universal *summum genus*; the other, that of informing the ultimate physicist, *i.e.* the cosmogonist, the searcher *par excellence* after the causes of things, what is the goal of his activities *i.e.* the identification of those two, uncaused entities (the elements or eternally-existing ‘raw materials’) of the universe in which the causal nexus finds, at once, its limits, its causes and its meaning. An element of irrationality and mystery has thus come to invest this important notion of the One, with the consequence that it has become sacrosanct and the philosophers have not been able to handle it with the requisite measure of firmness. They have even lost sight of the ontological motive which led them on to the framing of it: that of bringing the whole scheme of existence under one notion so that they might, without leaving

any loose notions over, present the universe as a unit in which all contraries are over-ridden, but in which certain ingrained, inherent lines of cleavage exist which account for the diversity of the forms exhibited by the One. Indeed, certain philosophers have strayed so far from the true notion of the One as the *summum genus* or first term of a universal scheme of classification, that they have made their first speculative move consist in an affirmation of the essential indivisibility of the One: a move which, obviously, involves a negating of the entire philosophic function so far as this is bound up either with ontology or cosmogony. This being so, it is not strange that (inasmuch as these philosophers still attempt to philosophise, unaware that their prime ontological affirmation meant the divesting of them of their function) they should have found the notion of the One playing the rôle of the Old Man of the Sea with them, perching itself sinisterly upon the shoulders of philosophers all down the ages as the very emblem of the supra-intelligible: as the very token whereby the human mind might know the hopelessness of its ambition to excogitate the scheme of the universe and, so, establish a rational first philosophy, a rational ontology, a rational cosmogony, a rational theology, a rational physics.

This being our view, our reasons for presenting the scheme of things as an ontologico-cosmogonical 'tetrarchy' instead of a bare cosmogonical trinity are obvious. Since it is confusions relative to the notion of the One which constitute the seat of so much of the mischief in philosophy, it is surely a counsel of plain common sense that this notion shall be so catered for in one's classificatory dispositions that it can never be lost sight of, but must, at all times, keep us informed concerning the rôle it is filling in the play of our reasoning. We, at least, have thought so, and so have not considered it sufficient merely to give the triune scheme into which the One divides, but have thought it necessary to bring into association with these inherent divisions of the universe that entity which yields such divisions: the supreme *summum genus* comprehensive of the universe-in-its-entirety. In order, for instance, that we shall never be tempted to confound the One with the tetrad (*i.e.* with the

mere world of creation : the third member of the cosmogonical trinity), or with either of the two members of the duad (the first and second members of the cosmogonic trinity), we have made our initial diagrammatic scheme render visualisable the relationships in which all these three stand to the One. Hence, we repeat, a tetrarchy in place of a bare trinity.

And now let us state, formally, what, in our opinion, is the truth concerning the age-old wrangle about the 'one and the many' : the wrangle, that is, as to whether the universe ('the One') is one *or* many. We do so as follows :—Comprehensively, the universe is a unity of being, its essence or 'beingness' being extension. Within such unity, there are, however, two strongly differentiated types of being : of extension. There is that eternal and immutable species of extension, *Space*, which is essentially static ; and there is that other eternal and immutable species of extension, *Time*, which is essentially mobile. Thus we define Space as characteristically static room, and Time as characteristically mobile room, though (we must not neglect to add) Space will, in defence of its continuity, *move* ; while Time (the cosmic stream of motion) will often find parts of its substance (mobility-in-itself) *equilibrated*. And these Two combine together to form a different type of extension altogether : the compounded type. Accordingly, ontologically, the scheme of things is a unity. Cosmogonically, such scheme is a duality. But, in virtue of the fact that a *genetic potency* inheres in these dual cosmogonic radicals, it comes about that, theologically, the scheme of things is a trinity. Finally, physically, the scheme of things is an (almost) unlimited plurality, in that the third member of the trinity (creation) is made up of a vast conglomeration of (causally-connected) units. Hence, in virtue of our knowledge of the constitution of the universe (the scheme of things) in its large lines, we analyse the position as follows :—

1. The One, the All, Being *quà* Being is ONE viewed from the point of view of being : of extension : of essence.
2. The One, the All, Being *quà* Being is TWO viewed from the point of view of its Elements : of what it is radically : of what it is 'in itself.'

3. The One, the All, Being *quà* Being, is THREE, viewed from the point of view of its cosmogonic 'persons' World - Mother, World-Father : World-Child.
4. The One, the All, Being *quà* Being, is MULTIPLE almost indefinitely, viewed from the point of view of the multiple entities which constitute the content of the world of creation.

Thus, varying with the point of view from which we choose to regard it, the universe can be said, with approximate accuracy, to be One, Two, Three, or Many. Nevertheless, no one of these statements is unqualifiedly accurate ; for each requires, in order to be so, the citing of the point of view from which it is said to be one, two, three, or unlimitedly multiple as the case is. Thus :

The One is One (as being : as extension) ;

The One is Two (as elements) ;

The One is Three (as cosmogonic persons) ;

The One is almost Unlimitedly Multiple (' Many ' ) (as including the constitutive items of the world of creation).

And now let us note a certain very curious matter relative to this notion of the One according to which it is the ' three-in-one ' and ' one-in-three ' :—The primitive culture which elaborated this entire trinitarian philosophy conceived all the four items indicated in the tetrarchy as *living* entities. That is, it conceived (and requires us to conceive if we would understand its system) the cosmos (*mundus* : creation) as a person (as an organism : the *world-embryo*). It conceived also each of the two duads or elements as persons ; AND THE ONE ITSELF ALSO it conceived as a ' person.' That is to say, the primitive view of the scheme of the universe was, root and branch, of the organic cast, not only the cosmos being regarded as the world-child, the three-dimensional element as the world-mother, and the linear and mobile element as the world-father, but, and at the same time, the One itself was regarded as a living entity in respect of whom the world-mother was one vital organ and the world-father another. Thus, at times, these two elements seem

to have been regarded as world-lung and world-breath respectively ; at others, as world-womb and fertilising agent respectively, all this being involved in and covered by the notion of the ' three-in-one and the one-in-three.' The trinitarian view of the universe thus did not assume that the Absolute (the One) was just an ingeniously made-up parcel of entities. It involved the supposition that ' the whole ' was an organism which was, at the same time, a community, and a community offering a place of residence to all other organisms, chief among whom were the two primary cosmogonic Persons. That is, the notion of the One, from the trinitarian point of view, was *not* just the culminating term of a classification-tree *and no more*. It was the mysterious Absolute, the ' One Being ' whose body (Space) carried the entire remaining contents of the universe. Hence the explanation of that notion which crops up so often in primitive thought : that of a world-grandmother [*i.e.* the mother of the gods as well as of men : the mother of the *motherless* (and *fatherless*) by definition, that is to say]. " I am all that was, and is, and is to be . . . . The fruit I bear is Helios [*i.e.* 'Time']," are the words put into the mouth of the goddess Neith identified with the ' Only One ' in her temple at Sais. " Glory to thee ! Thou art mightier than the Gods. The forms of the living souls which are in their places give glory to the terrors of thee, their Mother. Thou art their origin ! " So it is written in the 165th chapter of the Egyptian *Book of the Dead*. Obviously, the notion we are here confronted with is the notion of life piled on life ; or, rather, of life *bedded within* life almost to infinity. Accordingly, when we say that the primitive image of the universe was a trinitarian image, we must not omit to say that it was also, pronouncedly, an *organic* image, the ' Three ' and the ' One ' alike being conceived as alive. The consequence was that the latter was conceived, at one and the same time, both distributively and collectively. Hence, the organic view of the universe which ultra-modern thought is being cautiously familiarised with in such works, for instance, as those of Alexander and Whitehead, was the primitive view *par excellence* ; but where these modern thinkers take hold of the notion inquiringly and tentatively, the primitive races of the

world laid hold of it without any question whatever, and with all their youthful might. Indeed (as we shall later have to show in detail), when we have fully grasped the view that theology makes one with the science of cosmogony (the science of the first principles conceived from the trinitarian standpoint), and have, also, grasped the truth that the 'tetrarchy' must be interpreted organically, we shall find ourselves very near to the realisation that Christian theology (which, we hold, is the *débris* of primordial theology) has not one single dogma which is not crystal-clear, and (granted the organic viewpoint), intellectually inevitable. We are, however, here anticipating too far our later findings.

Now let us, in conclusion, take note of one further fact, the one to the effect that, when the master-ontological term (being *quà* being) has been defined, the classification-process in its main lines *has worked itself to its climax*. Hence the consequence that all further development of ratiocinative propositions has become an impossibility. For all the ordinary ratiocinative assertions which men are accustomed to make when they set themselves to reason, are steps on the way upwards *towards* the One. Hence, this conception having been truly and soundly arrived at, they are at Journey's End, and all their ontological progress is over. Nevertheless, blocked in the one direction, they have the compensating advantage of journeying with unprecedented confidence in the inverse direction; the advantage of speaking, that is, under a type of assertion which, in contrast to the ratiocinative, is of the dogmatic, definitive, analytic, gnostic type: an alteration in predicative activity which can be likened to that which obtains with (say) a man who, having spent the greater part of his life in amassing a fortune, begins to make it his business to assess, to count and to state it. On this account it can be claimed that, in the realisation of the meaning of the cosmogonic trinity (the three-in-one and the one-in-three) we have the 'beginning of wisdom'; for, herein, for the first time, there is a clear realisation of what the entire scheme of things is *radically*. But (it is to be noted), to have run up the classification-structure to its pinnacle in the One does not mean a termination of men's

progress *in knowledge* ; rather, it implies the beginning of knowledge as accompanied by an hitherto unprecedented sense of security and sureness. Thus, while the loftiest peaks of the range of knowledge still remain to be conquered, our certain knowledge as to the meaning of the One will be found to have imported something wholly new into the quality of our knowledge, which same something is necessary : indispensable : in the type of knowledge needed to serve as a base for man's attempts to conquer knowledge's still unconquered heights. This, however, relates to much deeper matters than can be touched on in this immediate connection.

## CHAPTER VI

### REALITY

The foregoing has made evident the fact that we identify the raw materials of the universe with Space and Time. Accordingly, in this present chapter, we have to take note of (and, if possible, suitably meet) a very curious matter, *i.e.* that it is precisely these two entities with which we have identified the two indestructible and ungenerable elements: the two permanent substances of the universe: which, the most persistently, have had their reality called in question by philosophers and scientists. Indeed, with the passing of time, the tendency to do this has crystallised to such an extent that the calling in question of the reality of Space and Time may be said to constitute one of the most distinctive characteristics of the thought of the modern period.<sup>1</sup> Now, if this characteristically modern opinion were well founded, our philosophy would be in the grotesque position of identifying the basic elements of the universe (its *basic* realities) with entities destitute of reality entirely. What, therefore, we propose in this present chapter is to examine the opinion according to which Space and Time are destitute of reality and to ascertain its value by raising the whole question of the meaning of reality. First, however, and in order to give some idea of the extent to which this opinion concerning the non-reality of Space and Time prevails at the present time, we submit an excerpt taken from a study treating conjointly of the subjects of Space and Time in a great modern dictionary<sup>2</sup>:—

“ The metaphysical problems connected with Space and Time are so similar and have been so closely conjoined in the history of thought that they may well be treated together . . . . The business of the metaphysician is to determine what reality outside our minds corresponds to our temporal and spatial conceptions. The first tendency of thought is to treat Space and Time as having objective existence in the same way as the ordinary things which compose our world, and this we may call

<sup>1</sup>It is one of the merits of certain thinkers of the modern 'Space-Time' school of philosophy (*e.g.* Prof. Alexander) to have brought this opinion into question. On the other hand, and curiously enough (considering the school's basic postulates), such reality is as often denied by its members as it is recognised.

<sup>2</sup>*Encyclopaedia Britannica* · 11th Edition. Article: *Space and Time*.



the objective method. Simple as it appears to be, it discloses formidable difficulties which may be illustrated by a consideration of Newton's famous account of 'absolute, true and mathematical time' as something which 'in itself and from its own nature flows equally' and with no liability to change. Now, if mathematical time as thus described is merely an abstraction used to facilitate mathematical calculations, no objection can be taken to it. But if Newton meant to assert that Time is a flowing stream no less actual than the Thames, his assertion is open to fatal objections. All admittedly real streams such as the Thames, have a definite beginning and ending. But where is the source of Time, and where is its outlet? Every real stream has boundaries at its side. What are the boundaries of Time? Every real stream has certain definite qualities: water is rather heavy and translucent and produces certain effects upon bodies plunged into it. What are the specific qualities of Time? How are things in Time affected by their immersion in Time so as to be different from things not in Time? And if it be asserted that Time has such specific qualities, by what senses do we perceive them? We may fairly assume that none of these questions can be answered intelligibly by one who holds the Newtonian position. And thus we are justified in the conclusion that Time is not a real stream at all, but something which is said to behave like a stream only in some metaphorical sense.

Similar difficulties arise if we try to attribute a like objective reality to Space. We can imagine no boundaries to Space. It seems to have no active, specific, qualities, and we have no sense-organ for perceiving it. The thinkers of antiquity saw these difficulties without solving them. Their whole treatment of philosophic problems was objective; and, so long as Space and Time are treated objectively, not much can be done with them. Plato has great difficulty in explaining the relation between Space and his Ideas. Aristotle contents himself with defining Space as 'the first unmoved limit of the containing body,' a definition which helps us very little; nor do we get more light from later Greek philosophy. As to Time, there was always a tendency in Greek thought to treat it as, in some sense, unreal. Time was seen to be intimately connected with change and it was just their liability to change that made ordinary mundane things unreal as contrasted with the unchanging steadfastness of the Platonic Ideas. And the pantheistic One-and-all of Plotinus is plainly incompatible with the reality of Time. In all pantheistic systems, Time belongs to mundane existence and Eternity to the transcendent reality.

Modern philosophy is distinguished from ancient mainly by its greater subjectivity; and thus it was not long after the rise of modern philosophy that thinkers began to turn to the subjective method of explaining Space and Time; that is, to regard them as real only to our minds. Its use begins effectively with Berkeley, though prepared for to some extent by earlier writers such as Hobbes . . . Berkeley's treatment is most definitely clear in the case of Space, for his attack upon

materialism made it necessary for him to affirm the ideality of Space as well as that of Matter. But he takes a similar line of argument with Time, declaring it to be nothing but the succession of ideas . . . . A distinct epoch in the history of the subject was made by the work of Kant whose solution of the problems may be classed as transcendental. He argued that Space and Time are not given by experience, but are, rather, conditions of all our experience, being, in his terminology, *a priori*; that is, supplied by the mind from its own inward resources. They do not belong to things-in-themselves but to things as we know them, or phenomena. Their validity consists in the fact that all men have them and that they are absolutely necessary conditions of human intelligence. As he expresses it from his peculiar point of view, Space is the form of outer sense, Time of inner sense . . . . Space as we know it [the author of the article goes on to say] is altogether relative to our tactual, muscular and visual powers of perception . . . . The fact that our spatial perceptions and conceptions enable us to deal successfully with objects requires us to believe that the objective world has an arrangement of its own corresponding in some way to spatial arrangement, though we are unable to imagine what it can be. Space cannot be objectively real because of the difficulties disclosed above in the criticism of the 'objective' method, and we are unable to put anything in its place."

Let us, then, put the question: what characteristic has an experience to possess in order to be characterisable by the attribute *real*? In reply we offer, provisionally, an answer so obvious that it may seem we are trifling with a profound question. We say that any experience, in order to be characterised as real, must be non-imaginary. Now, all will agree with so obvious an affirmation. The only doubt will be as to its helpfulness. This feeling however we do not share. For (as we contend) the affirmation, obvious as it is, serves the useful purpose of presenting the problem of the real as the problem of *the imaginary*, and, so, of switching the whole discussion on to the lines where it truly belongs, *i.e.* epistemological lines which are not so menacingly profound as cosmogonical questions are regarded as being. Moreover, it serves also to restrict the problem at issue: a procedure which, so very often, we have found of the highest value in unravelling knotty questions, and one which (as we believe) will prove particularly serviceable in this present connection. The real, then, is the non-imaginary. But what is the imaginary? Let us consider a stock instance, for example, *a centaur*. What do we mean when we say that a

centaur is 'imaginary'? The following contains, as we consider, the gist of any valid philosophy of the real<sup>1</sup>:—When we say that a thing is imaginary we imply that, either in some specific set of circumstances or in the universe at large, the thing in question (*e.g.* a centaur) is one which is not apprehensible by the (healthy) submental senses. The non-real (the imaginary) is thus the non-sensorily-apprehensible. It is a type of existence exclusively mental in form, an idea in its own right, so to say, without any sensory correlative. Now, this description of the imaginary raises the question (this question also, we may observe, belongs to epistemology) of what *an idea* is, and to this we reply (without going into the matter in any detail) as, for ages, Aristotle's followers in substance replied, that an idea is, basically, a mental copy of a thing originally experienced *viâ* the lower, involuntarily-acting, submental senses. But here is a difficulty. For, if this definition of ideas be sound, if, that is, the principle taken over from Aristotle by the schoolmen: *Nihil est in intellectu quod non fuerit prius in sensu* be sound, it ought to follow that we can have no ideas save of things which we experience through one or other of the lower senses (senses lower than the mind-sense, that is to say). Yet we have a perfectly clear idea of a centaur in the absence of any sub-mental sense-experience whatever. Is there a discrepancy? Only a surface one, the situation readily admitting of explanation as follows:—Although the mind can cull its ideas (*i.e.* its mental copies of sense-born data) only of such things as have already been given to experience *viâ* the activity of the lower sense-organs, it is empowered to arrange the ideas thus culled (the mental copies) in any order it pleases. That is, the mind-sense possesses the power to build up a composite mental image (a sort of mosaic of primary ideas), each component factor of which is, itself, a copy reproduced by the mind of some sense-given thing. In a mental composition of this character, the ideal bits of sense-given data are put together in an order of arrange-

<sup>1</sup>The majority of modern philosophers tend, more and more, to make of the question of 'the real' a much more complex matter than it is actually, and their motive in doing so is quite comprehensible. Thus the obvious definition of 'the real' (it is the one which we ourselves are about to give) is that it is the sensorily-apprehensible. This definition, however, is supposed *not* to cover the *noumena*. With the demonstration, however, that the sensorily-apprehensible does cover the *noumena* this tendency will become as pointless in aim as it has already shewn itself barren in achievement.

ment which need not be one given in any sensorily-enacted experience. Hence, the possession of this human power freely to construct with the prime ideal factors (the 'bricks,' so to say, of the imaginative process) causes the emergence, with man, of a quite unique kingdom of creative activity, *to wit*, the kingdom of imaginary creations ('fictions'); for instance, imaginary forms like winged lions and human-headed horses which are destitute of any sensorily-apprehensible counterpart whatsoever. Hence the significance attaching to the word *real*. For, in view of this power possessed by the mind to play constructionally with the arrangement of its mental replicas of sense-given things, it becomes a matter of importance for us to know whether, when a complex idea (one consisting of multiple parts) is suggested to us, it is, as regards the arrangement of its several parts, a faithful or a doctored copy (freely-mosaicised copy) of its sense-derived factors. Hence the coining of the two antithetical terms of the 'imaginary' and the 'real'; for any complex idea which is faithful to its sense-given original *as regards the arrangement* of its various ideal parts, is the idea of a real thing, whereas doctored copies are ideas of the imaginary order. Thus, all imagining, all lying, intentional or inadvertent, reduce to a matter of the alteration of the order of co-existence or of succession, as sensorily-given, of the individual, sense-based, ideal elements of which a complex idea is made up.

Accordingly (and this is the point of importance for us here), the calling in question of the reality of any *quite simple* idea of anything is an absurdity. For there can be no doctoring of any absolutely simple and single idea, all doctoring implying a re-arrangement of the order of co-existence or of succession (or both) of the diverse mental replicas of things of which a complex idea is built up. Hence the grounds of that ancient dictum that 'nothing [at least, nothing single and simple] can exist in the mind which has not had a prior existence in the sub-mental senses': an observation which goes to the roots of the question of reality. It is, however, one the significance and implications of which have been strangely overlooked. If, for instance, heed had been paid to this simple rule, it would have been seen that ideas of such things as points, lines and surfaces

must necessarily (as being homogeneous and simple), be ideas of real things. They could not possibly be ideas of things which are imaginary, for the very sufficing reason that, being simple notions, they do not furnish the means by the manipulation of which imaginary entities are created. And this is the situation which obtains in respect of the two ideas we are here concerned with: those of Space and Time; for our ideas of these must perforce be ideas of things which are real in that such ideas are quite simple (*i.e.* homogeneous and non-compounded). Hence our *a priori* means (as such means are called) of proving the reality of Space and Time, these means being grounded in the possibility of our knowing, in advance of any definitely-recognised and immediately-citable sense-experience, that real existences will correspond to our simple homogeneous notions.

Now, in view of the very long-drawn-out controversy which has been sustained on the subject of the nature of the real, it is permissible for use to put the foregoing conclusions in simplified form as follows:—

- (1) Those forms of experience are termed real which admit of being experienced by any of the (healthy) sub-mental sense-organs. The real is thus either the sensorily-apprehended or the sensorily-apprehensible as the case may be. This definition of the real it is which furnishes the *a posteriori* test of reality;
- (2) An idea belongs, necessarily, to the class of ideas which are possessed of real counterparts when it is a simple and homogeneous idea, and it is our knowledge of this fact which furnishes us with the *a priori* assurance that there are realities corresponding to all such ideas;
- (3) Any idea is the idea of that which is real, when, being an idea possessing multiple parts, the order of arrangement obtaining between these parts is a copy of the arrangement obtaining between them as sensorily-apprehended;
- (4) An idea belongs to the class of ideas termed imaginary when, being then *necessarily* an idea possessing multiple parts (*i.e.* diversity of composition), the order of arrangement obtaining between these multiple parts is *not* a copy of the sensorily-apprehended or sensorily-apprehensible arrangement;

- (5) *Basic* reality appertains to those particular sensorily-apprehended entities which all compounded forms derive from. That is, the basic realities are the sensorily-apprehended elemental entities, and, as such, are the indestructible and ungenerable components of the cosmos. They are the universe's eternal parts. They are its *noumena*; its things-in-themselves; its first principles; its first causes;
- (6) *Secondary* realities are those sensorily-apprehensible entities (inclusive of course, of the latter's features) which are compounded, being thus non-basic, and (hence), ephemeral, transient. They are the sensorily-apprehended entities which are subject to generation and death. They are phenomena. They are the constituent items of the (transient) world of creation. Because of their transiency (*not* because of their non-reality, for they are real, what though only in the second degree), they are very commonly regarded as a species of 'seeming.'

## II

The *a priori* means, then, of ascertaining whether an ideal form has a corresponding real form, assures us that our ideas of Space and Time necessarily bespeak correspondent entities in the category of real things. But, if Space and Time be real entities, they ought, in virtue of the *a posteriori* test of what constitutes a real thing, to be apprehensible by some one or other of our 'lower' senses. Have we, then, senses of Space and Time? If so, they have been very persistently disregarded. As we have just read, the accepted opinion is that we have *no* sense-organ by means of which these entities can be sensorily apprehended. And, certainly, neither Space nor Time is anything which we can hear, see, taste or smell. Hence the emergence of the important question: which of our senses is it whereby we apprehend these two realities? Now, in our opinion, our senses of Space and Time, all screened as they are, are to be found lurking very close to a sense more basic than any of the above-named senses. That is, they are to be found lurking very near to the sense of *touch*. For, as we are going

to claim, bound up with the primary sense of touch, *there are other senses*, and among these are to be found those of Space and Time. That is, we consider that, in holding the basic vital sense to be that of touch alone, men have failed to make their inventory of the lower senses adequate, and, when such inventory *is* made adequate, the two senses of Space and Time will be discovered to exist in integrally-close alliance with that of touch. The basic organic sense, then, commonly regarded as single-fold, requires to be regarded as nothing less than *fourfold*. The result of a closer scrutiny of the number of the senses conducts us, that is to say, into the belief that, in naming the 'first' of the 'five' involuntarily-acting (sub-mental) senses the sense of touch, men have failed to do justice to the wealth of revealing potency inherent in that primary quantum of sense-potency with which all living forms whatsoever are invested. Hence, the basic sense of living matter is (we say) very inadequately named the 'sense of touch,' and, if selection had to be made among the four senses which go to constitute it, it would have been juster to the actual circumstances to have fixed upon the kinaesthetic: the sense of motion: the sense which the percipient has, primarily, of the motion of its own body, inasmuch as it is this sense which expresses the sensitive subject's basic irritability or 'life.' Yet, even were the basic sense styled the kinaesthetic, the nomenclature would, in our opinion, still be inadequate, and, indeed, misleading. For (as we claim) inseparably bound up with this said sense (the kinaesthetic) there are these three other senses: (1) the sense of Space; (2) the sense of touch, of matter, of resistance, generally; (3) the sense of the manner (the sense of relationship<sup>1</sup>) in which the data yielded by the three preceding senses co-exist in respect of one another. The fundamental sense is thus the fourfold sense of (1) the percipient's own motion; qualified by (2) the sense of an environmental Yea; or (3) a Nay, as to such motion's power of continuance; and (4) the sense of the interrelations obtaining between the products of the three foregoing types of sense-finding. For these products present themselves in the

<sup>1</sup>We might here note that, among the many relationships which our primary sense of relations takes note of, that of causal connections is a very important one. We hold, that is (as against Hume and many others), that we have *a sense* of the causal relationship.

percipient's consciousness 'all together' as a complex whole, and, therefore, with their inter-relationships sensorily marked out upon them. Thus, the living (*i.e.* sentient) body, even of the lowliest order, puts forth effort ; spends some of its native force ; it moves ; it alters its place in the universe, and (as the phenomenon of fatigue goes to prove) it senses its own effort. And it senses also the fact that the medium through which its movement takes place passes a comment upon its movement, saying either Yea or Nay to it. When the comment of the medium upon the movement is sensed as being positive (when, that is, the medium is apprehended as virtually saying Yea to it) the sentient subject registers the existence of a ' somewhat ' upon which we, on the human level, have set the title of Space. Space, then, is the term applied primarily to that specifically-characterised condition of the medium of motion which is such that the pioneering motion of the percipient substance feels itself freely-permitted, *i.e.* (relatively) non-resisted. Contrariwise, the terms matter, body, resistance, the tangible-in-general, are the terms which are applied (primarily) to those reports of our senses which tell us that the condition of the medium in which our motor-effort exercises itself is one which does not freely permit such effort, but, on the contrary, resists it. And thus, out of these varying comments as to the condition of the environment in which we exercise movement : comments which are reported by our senses upon the fortunes of our adventuring motions : we (like every other sensitive organism from the lowliest to the loftiest), construct our world-picture : our primary vision of what constitutes the universe.

This, then, is our conclusion : a highly important one, as we think. It is that the fundamental sense, the so-called sense of touch possessed by all living bodies, high or lowly, is a fourfold sense yielding fourfold data, and that, of such data, tangible data (construed exclusively as forms of resistance) form only one part, the three other parts being, respectively, the kinaesthetic, the spatial and the relational. Hence (as it appears) the verdict of the *a posteriori* test of the reality of Space and motion is as satisfactory as that



of the *a priori* test. By both, the reality of Space and motion are confirmed. But what of Time? The entities which we declared to be the elements or first principles were Space and Time. Well, the answer is that this philosophy identifies Time with motion, and Part I of our succeeding volume (*The Mystery of Time*) is taken up with the proof of this claim. This proof is, however, lengthy, and the development of our present argument would be unduly strained by the immediate presentation of it. Accordingly, directing attention to this proof in the place indicated, we allow ourselves to consider this position established, *i.e.* that Time is motion, and that, therefore, the above argument that the primary senses are fourfold and include a kinaesthetic sense, is an argument to the effect that there exists, in all living bodies, a sense of Time.

Now, with the settling (and the settling in the affirmative) of this question of the 'objective reality' of the universe's first principles: its basic realities or elements: there disappears from the list of living issues an exceedingly hoary problem. For, from the time of Parmenides to that of Kant and onwards, intellectual war has been raging as to whether there are not parts of our experience which do *not* derive from our sub-mental sensations; and there have always been very powerful thinkers prepared to maintain and insist not only that there are such, but that the parts in question are precisely those parts which constitute the fundamental realities: the *noumena*: of the universe. Parmenides himself thought so; so, too, his rival Heraclitus; and so also Plato. Aristotle on the contrary manfully tried (none too successfully) to establish the case for sensationalism, and, thanks to his influence, sensationalism was, in a general way, maintained right down to modern times, when, once again, the sensationalist issue was taken up and formally defended by Locke, Hume and the rest of the English psychologists. Thus, the Aristotelian and scholastic contention: 'nothing in the mind which was not previously in the senses': was precisely what Locke taught and sought to establish. But, no more than Aristotle, was Locke successful. For Locke came to grief (and brought the sensationalists' cause to grief), by his own mistaken concession that we have no sense wherewith

to sense 'substances' in the strict etymological meaning of this term, *i.e.* that of substrates: things-in-themselves: *noumena*: elements; and Locke strove in vain to escape the horns of the dilemma upon which Stillingfleet, Bishop of Worcester, sought to impale him in accusing him of "almost discarding substances out of the reasonable part of the world." For Locke ought either (1) to have discovered the senses wherewith we sense substances (substrates: the ultimate elements); or, as a sensationist, he ought (2) to have acknowledged frankly that men can have *no* knowledge of substances; or, again, (3) to have abandoned his sensationist dogma. But Locke would do none of these things, as Stillingfleet (who was seeking to cause him to abandon his sensationism) very plainly showed him. And thus was born modern agnosticism of the epistemological order, for thinkers later than Locke did not shrink from drawing (justifiably, in view of the inadequate inventory of the senses they were all making use of) the inference which Locke rather shied at, *i.e.* that men can have *no* knowledge of the substances, substrates, *noumena*, things-in-themselves, the ultimate elements and basic realities of existence. Indeed, short of allowing his opponent the satisfaction of seeing him formally state that we can have no knowledge of substances, Locke himself drew this agnostic inference. His own simile, unforgettable in its simplicity, of the Indian and the elephant, as descriptive of the inadequacy of men's knowledge of 'substances,' is replete with agnosticism. Thus, said Locke, those thinkers who built so contentedly upon the notion of substances reminded him of the Indian's account of what held the world up. For, said the Indian, the world rests on the back of an elephant; the elephant on that of a tortoise; but what the tortoise rested on was something-he-knew-not-what. But whether or not this be a true description (as Locke held) of those who build 'contentedly' on an affirmation of the existence of substances, it certainly is a true one of those who say (as Locke himself said) that men cannot identify substances (substrates), and that we have no senses wherewith to apprehend them, and are, therefore, unable to establish (by any *a posteriori* proof) the fact of their reality by a citing of those (sub-mental) senses wherewith we do sense

them. (Of course, Locke did not identify 'substances' with Space and Time, a failure particularly to be regretted in that Locke, unlike the later idealists and mentalists, declared that we *do* sense Space and Time.) Moreover, and very curiously, not only did Locke needlessly fail to defend the sensationalist position as regards the substrates (*noumena*: elements) from the *a posteriori* point of view; he failed also (and equally needlessly) to defend it from the *a priori* point of view. For Locke was perfectly well aware of the mind's power to argue *a priori* the reality of things from their ideal existence when such ideal existence is of the non-complex, integrally-simple order, and he gave to the world, very clearly and succinctly, the beginnings of the philosophy of this. Nevertheless, in this his crowning need, the idea simply did not occur to him to make use of his knowledge. And Locke's failure to win the battle of wits on the subject of substances (substrates) was all the more ironical in that Locke held (as we have just said) by the doctrine of the real existence of Space and Time<sup>1</sup>, *to wit*, of substances proper, being, perhaps, too nearly connected with that group of Cambridge Platonists (the group which included Cudworth, with whose daughter Locke at one time made his home, and Henry More, the unrelenting opponent of Descartes on the subject of Space, and a thinker with whose philosophy that of Newton—whose friend Locke was—had so much in common) readily to maintain the contrary. In this regard, Locke was in a very different position from Berkeley, Leibnitz, Hume and Kant who, one and all, denied the objective reality of Space and Time; that is, of substances proper. But, inasmuch as he failed to identify Space and Time *with* the ultimate elements, Locke found himself, so far as the agnostic

<sup>1</sup>Concerning the sensory basis of our knowledge of Space, Locke is very definite: "Of pure space, then . . . there are several (amongst which I confess myself one) who persuade themselves they have clear and distinct ideas; and that they can think of space, without anything in it that resists or is protruded by body. This is the idea of pure space, which they think they have as clear an idea of as any they can have of the extension of body: the idea of the distance between the opposite parts of a concave superficies being equally as clear without as with the idea of any solid parts between" (*Essay*, II, iv, 4). Again: "To conclude: whatever men shall think concerning the existence of a vacuum, this is plain to me—that we have as clear an idea of space distinct from solidity, as we have of solidity distinct from motion, or motion from space. We have not any two more distinct ideas; and we can as easily conceive space without solidity as we can conceive body or space without motion, though it be never so certain that neither body nor motion can exist without space." (*Essay*, II, iv, 27). On the subject of our sense-derived knowledge of Time see *Essay*, II, xiv, 3 ff.

predicament was concerned, no better situated than Hume or Kant. Nor did Berkeley fare better, verbally saving himself though he did, from the position of religious agnosticism later taken up by Hume and Kant ; for he did this at the very time that he denied the reality of Space and Time, and at the time that he scoffed at 'substances' as 'things-in-themselves' (cp. the *Notebook* where Berkeley declares he "knows not what men speak of when they talk of things-in-themselves"). The situation wherein modern philosophy was born was thus one calling loudly for an application of Occam's Razor, to the end that all these many synonyms for the same notion (*i.e.* first principles, first causes, elements, basic realities, 'substances,' substrates, things-in-themselves, Space and Motion, Space and Time), should have their identity with one another recognised and insisted on. Indeed, if such identity could have been declared, and, with it, the truth that the world's first principles are sensed by our sub-mental sense-organs (and by the very earliest-emerging of these), and, accordingly, are *realities*, our modern culture would have been spared that scourge of agnosticism, religious, scientific and philosophical, from which it has suffered so painfully. Contrariwise, in the facts that no such recognition of identity was made, and no such affirmation of the sensory origin of our knowledge of *noumena*, we have the cause of the re-emergence, in modern times, of that epistemological scepticism which, ages ago, was taught and defended by Protagoras and Gorgias, and which the (later) Platonic academy made appear, not only intellectually fashionable, but respectable. For this is the explanation of, for instance, a Huxley who, about the time he was coining the agnostic label, expressly says :

"I have champed up all that chaff about . . . noumena and phenomena and all the rest of it, too often not to know that, in attempting even to think of these questions, the human intellect flounders at once out of its depth!"

Now, what, in our following chapters, we are going to claim (this, in terms of the equivalence: *noumena* = *numina*) is that the epistemological scepticism which is to be found behind the agnostic affirmations of a Hume, a Kant, a Spencer, and a Huxley

<sup>1</sup>T. H. Huxley, *Letter to Charles Kingsley*, Sept. 23, 1860.

is equally behind that of a Hamilton, a Mansel, an Otto and a Barth. Epistemological agnosticism and religious agnosticism are (we shall contend) not to be regarded as two things but as *one and the same thing*. Hence, when we say that *noumena* are sensorily-apprehensible we say also that the *numina* (the members of the Godhead) are so also. But this brings us to the point where we open out our definition of the Godhead.

## SECTION II

### CHAPTER VII

The Definition of the GODHEAD as the two *Supernatures*

#### I

#### CERTAIN CONSIDERATIONS PRELIMINARY THERETO

Before attempting to give our answer to the question : what is God ? we will glance at the questions of *the value* of a re-definition of the term Godhead, and *the criterion* which will enable us to judge of its correctness. In our opinion, the value of a re-definition of the term Godhead has to be assessed in the light of the fact that the meaning which men set upon this long-established term determines for them the scheme of values which, consciously or unconsciously, shapes their behaviour ; so that a man rightly apprehending ' what God is ' carries on his life equipped with human life's proper governing conception ; and *vice versa*. Hence, to our thinking, it is the sure instinct of the seer which speaks in the story told of Tennyson who, in reply to one who remarked to him :

" My chief desire is to leave the world a little better than I found it " ; answered :

" *My chief desire is to have a new vision of God.*"<sup>1</sup>

If, then, men's idea of God be, as we believe, the governing factor of their lives, a right idea of God must perforce be human life's basic good, and it is as such that the ' deepest want of our age ' has been sensed as being a new definition of the Godhead. The difficulty is not, of course, that there is any paucity of definitions. It is, rather, that their amazing multiplicity makes it seem impossible to discover a criterion which will enable men to choose among these all-too-many definitions, and, in terms of the definition chosen, effect a synthesis of all those which are in harmony with the religious consciousness in general, and consign to oblivion those which have missed the term's meaning entirely.

<sup>1</sup>This story is quoted by Lewis Campbell in the opening paragraph of his *Religion in Greek Literature*, where it is followed up by the suggestion that there can be no permanently binding conception of the Godhead.

As to the diversity obtaining among existing definitions, something of what this is may be gathered from the following specimens:—

*The deathless and ageless : the eternal* (the early Greeks) ;

*The vault of heaven* (Xenophanes) ; *Water* (Thales) ; *The unlimited* (Anaximander) ;

*Air* (Anaximenes, Diogenes, Metrodorus, certain Greek poets, e.g. Philemon, Aeschylus, Euripides) ;

*Fire*, as identified with *motion* (Heracleitus) ;

*The ultimate good* (Plato) ;

*Love, Aphrodite, Heaven—yoked up with Strife* (Empedocles, the author of the Johannine epistles and many orthodox Christians) ;

*The unmoving generator of movement identified with the region beyond the outermost sphere of the finite heaven* (Aristotle, and, following Aristotle, Philo of Alexandria, many neo-Platonists, the pseudo-Dionysius the Areopagite, John Scotus Erigena, St. Thomas Aquinas, and the Aristotelian scholastics generally) ;

*Inventions of crafty politicians designed to function as an internal policeman so that the mass of mankind may be scared from wrong-doing in secret* (Critias ; Aristotle also as regards the demi-gods ; many Peripatetics, e.g. Strabo) ;

*The ' One and All ' ; the Universe* (the Stoics ; all pantheists everywhere) ;

*Everything serviceable to man apotheosised, e.g. corn and bread as Demeter, wine as Dionysus, fire as Hephaestus* (Euhemerus ; Prodicus of Ceos) ;

*Illustrious men apotheosised after death* (Euhemerus) ;

*The being " than whom no greater can be conceived "* (Anselm of Canterbury) ;

*The most perfect being imaginable* (Descartes) ;

*A " being absolutely infinite, i.e. a substance consisting of infinite attributes "* (Spinoza) ;

*The eternal world-mind* (Berkeley) ;

*The first cause(s) ; the necessary as opposed to the contingent* (Maimonides, Locke, Clarke) ;

*The universe as the transcendent unity* (Schleiermacher) ;

*The supreme being* (Lotze) ;

*The principle of the three orders of the beautiful, i.e. physical, intellectual, and moral* (Cousin) ;

*Corporate humanity* (Comte) ;

*The social institutions fashioned by human culture mentally projected outside human consciousness and apotheosised* (Emile Durkheim ; Jane Harrison ; F. M. Cornford) ;

*Dead ancestors* (Grant Allen) ;

*The absolute, as identified with pure thought* (Hegel) ;

*The absolute or 'one being' identified with the first cause(s)* (Lord Gifford as per the terms of bequest of the Gifford Lectures' foundation) ;

*The spatial infinite* (Max Müller) ;

*The guiding principle of evolution* (Whitehead) ;

*The "next higher empirical quality to the highest we know"* (Alexander) ;

*The unknowable ; the regulative concept of the moral reason* (Kant) ;

*The unknowable ; the ineffable* (Chrysostom ; Maximus of Tyre, Theophilus, Athenagoras, Clement of Alexandria, Cyprian, Origen, Athanasius, Hilary of Poitiers, Cyril of Jerusalem, Gregory Naziansen, Gregory Nyssen, Basil, Augustine, Cyril of Alexandria, Arnobius, Damascenus, John Scotus Erigena, Alexander of Hales, Aquinas, Durandus, Heylin, Leighton, Bramhall, Hooker, Cardinal Nicholas of Cusa, Sanderson, Usher, Pearson, Barrow, Boyle, Newton, Beveridge, South, Stillingfleet, Wollaston, Burnet, Butler, Copleston, the theology of the Catholic church generally down to the seventeenth century, Sir William Hamilton, Dean Mansel, Spencer, Huxley, Tyndall, Dr. Otto, Professor Karl Barth).

It is therefore, nowadays, accepted as a matter wholly open to question whether the term God admits of any definition which could automatically displace those which do not comport with it. Why, for instance (it is implicitly asked), if a body of men wish to attach to this term a certain significance and to restrict it to that, should there be any objection to their doing so? Why should not the procedure here be what it is, for instance, in mathematics, where one can affix quite arbitrary values to the symbols  $x$  and  $y$ ? Of course, to this latter question, the answer obviously is that, in respect of ordinary verbal symbols as contrasted with mathematical, the old associations which have grown up about the former exert such a binding force that they nullify in practice any theoretical admission that a free choice in meanings is permissible. That is, the meanings attached to long-established words are the products of a long period of growth during which powerful associations have had full opportunity to establish themselves, and failure almost invariably dogs the attempt to fasten arbitrary meanings upon common words, and not only the community in general but even those who seek to effect the innovation will, more often than not, be found reading into the words the ordinary familiar meanings and shewing but a spasmodic regard for their own intention artificially to restrict them. However, to this it would be possible to object that, in respect of this special term God, so far is any set meaning from being operative, that a multitude



of meanings obtains, most of them quite incompatible with one another. On what principle, then, can there be separation of sheep from goats among the various historic definitions? Is there a criterion? In our opinion, there is, and it consists in this, *i.e.* the distance to which any given definition will carry its author in explaining the entire phenomenon of man's religious life, psychological, ritualistic and ethical; how far, that is, it will carry him towards a complete philosophy of the religious-in-general: the holy-in-general. For, although at the present time it would be possible to fill many pages with definitions of the Godhead, all differing from one another and all commanding adherents, we hold that this has not always been so. On the contrary, in the primitive ages of the human race when theology was (according to our philosophy<sup>1</sup>) in its heyday, there was *one* pair of entities and *one only* to which the term applied, and it was during the period when this single conception was reigning that all those universally-distributed religious dogmas and rituals were elaborated which constitute mankind's theological 'wisdom.' Hence (so we have concluded) that primitive conception of the Godhead which formerly reigned alone and which has formed the base of all our highly elaborated religious beliefs and practices *is the true one*, a conclusion we find ourselves all the more strengthened in, in that this conception of the deity was the one we had arrived at quite in independence of the consideration that this was the earliest conception, and of how far our own view would square with established ritualistic practice and theological dogma.

The criterion, then, we would judge definitions of divinity by is that such definition shall square with the beliefs and ritualistic customs associated through long ages with the religious: beliefs and customs which, for convenience, we can take to be covered by the term *the holy*. Hence the reason we see propriety in yoking our primary definition of the Godhead with a definition of it as *the holy*. For, by so doing, automatically, we can shew to what extent the definition tendered as primary covers (and illuminates) those objectives of the religious consciousness, which, generally, are styled 'the holy.'

<sup>1</sup>This is not a bare unthought-out assertion, but, on the contrary, one with an entire *Theory of Knowledge* to support it.

We thus submit *two* definitions of the Godhead with the suggestion that the second shall function as a test, more or less, of the correctness of the first. Then, if our primary definition emerge from such test handsomely; and if, incidentally, it shows itself able to pick up and explain<sup>1</sup> all the doubts and antipathies which have been generated in respect of the religious outlook through long stretches of religiously non-comprehending ages, then (we urge) we are justified in saying *this* is the master-definition, the exclusive definition, 'the' definition, being so for the reason that it is good enough, *i.e.* that it serves. But how alight on such a definition? Well (we suggest) conditions obtain here very like those which rule in the choice of partners in marriage, where choice is determined partly by the tastes, habits, and characters of the choosing parties and partly by 'accidental' happenings thrown out by a complex of circumstances over which one has little or no control; partly, that is to say, by what is called 'luck,' so that, for a correct choice here, it becomes one to kneel down and thank the Goddess Fortuna for the great boon of it. For she has thereby entrusted us with the key to the entire system of the universe.

One further preliminary we would attend to before putting the question: what is God? This has to do with what this question *is not*. Thus, it is not (primarily) a question of whether the Godhead is a reality or not. Nor yet is it a question of the existence of God. Rather, the question to which a re-definition of the Godhead must address itself is that particular question which has assumed relevance in consequence of the fact that, for one reason and another, confusion has come to invest this ancient term, making the only fit and proper course that of rediscovering the term's lost meaning, a course which takes precedence over (for instance) that of determining whether a reality is indicated by such term. For what is the use of debating the question of the reality of a 'something-we-know-not-what'? But once let us be convinced what the Godhead actually is, and we shall find ourselves in a position to grapple with the question whether this 'something' be real or not, and, indeed,

<sup>1</sup>To prove that our definition does this is the purpose of the historical survey of philosophic and theological conceptions which constitutes Part II of this present volume.

with any other question which may arise concerning it. We would, accordingly, point out that the following questions require careful discrimination from one another before the question is put: what is God? These are:—

The question of the Godhead's *existence*

“ “ “ “ “ *whatness* or *quiddity*. (This is what is given in the definition).

“ “ “ “ “ *identity*

“ “ “ “ “ *reality*

“ “ “ “ “ *character*

In this present chapter, an answer will be given to all the above questions save the last, the answer to which will appear in a later chapter of this present volume<sup>1</sup>.

Concerning the first question (that of the existence or being of God) we would make the following preliminary observations:—*Everything is. Everything* has being in one category of being or another (*e.g.* in the real category, in the imaginary, and the like). Even ‘non-being’ has being, not indeed as a meaning-fraught verbal symbol, but yet as a scrawl, or as a noise, or as an instance of mental confusion, or as a piece of symbolic self-contradiction. So, too, errors have being; absurdities have being; in short, the answer to every question beginning with ‘Is there a—?’ is always and perforce in the affirmative. *Ergo*: God (whatever ‘God’ may prove to be) *is*. The question concerning God's existence is thus one about which we have to say that its proof derives, not from a consideration of the term ‘God,’ but from that of the wider term ‘being’ in the comprehension of which the entity we call God—like every other entity—is included. But, it may be asked, if this be so, if, that is to say, the fact of the existence of God is a matter which, philosophically, goes without saying, why has there been, for so many ages, and among not the least able of human kind, such agitated debate concerning it? The answer to this question is made up of several pieces and cannot therefore be embodied in a single assertion. We mean, several causes have combined to produce a confused state of thinking which, itself, has served

<sup>1</sup>Chapter xxi.

to destroy what ought to have been the normal, unquestioning acceptance of the fact of the existence of this entity, the Godhead. We indicate the most outstanding:— In the first place, there has been that state of almost incredible confusion relative to the meaning and breadth of import (the denotation) of the term being *quà* being which the troubles we shall later have to shew as clustering round the bogus term *non-being* are some indication of. The philosophers have not been able to deal satisfactorily with the master-idea of ontology: have not been successful in their handling of the uppermost reach of the process of classification, and, so, have not been able clearly to recognise the supreme *summum genus* which is identical with the term *being*. And this has left philosophy at a loss also in respect of the penultimate stage of the classification-process, *i.e.* the stage immediately adjacent to the highest which enframes the notion of the Godhead. Hence, unable to clarify their minds about being-in-general, scarcely less at a loss have men been in respect of the prime sub-division of being which contains the two divine types. Now, we will call this confusion (*i.e.* that concerning the meaning and breadth of import of the term 'being') cause number one of men's doubts as to the existence of God, while cause two we find in the allied fact that, being unable satisfactorily to define being, and (consequently) unable satisfactorily to define God, men have found themselves very powerfully drawn to say that Being itself was God; to say, that is, that the concepts of *Being* and of *God* constitute one and the same concept. Cause number three consists in the fact that (as is so often the case) men are to be found nominally asking one question when, in their own minds, they are asking another. Thus, when, for instance, men ask: does God exist? what, very often, they are inquiring about is not the fact of God's existence (that, as we have seen, in one form of existence or another goes without saying) but the fact of God's reality. They are inquiring, that is, about the Godhead's *real* existence as opposed (for instance) to a merely imaginary (ideal) divine existence: a very different matter. These facts, then, *i.e.*

- (1) that men have not succeeded on defining either (a) Being, or (b) God;

- (2) that they have tended to identify Being *with* God ;  
 (3) that they have confused the question of (a) the *existence*  
 of with that of (b) the *reality* of God ;

are the principal reasons why, in the general confusion resulting, men have not held it to be a matter amiss seriously to pose the question : does God exist ? and to struggle to discover not only answers to it, but to tender more or less elaborate proofs<sup>1</sup> in support of their answers, be the latter in the negative or in the affirmative.

Yet another preliminary : the one which will lead us directly into our definition of the deity. This has to do with a matter arising out of the fact tabulated number two in the list just given (*i.e.* that men have exhibited so strong a tendency to confound the deity with the One : the One Being : the Absolute). For, in view of the confusion which this particular tendency has imported into philosophy, it is very pertinent to inquire *how we know* that the Godhead is a specific type of being, and not the ' One Being ' itself. *How* (let us ask) do we know that the Godhead is not the One ? Our answer is that the Godhead cannot be identical with being-in-general in that the term God possesses a contrary. We know, that is to say, that *pantheism is an error* on the strength of our knowledge that there exist in the universe things which are ' not-Gods.' Thus, inasmuch as we (in company with almost all mankind when they speak unsophistically), know that such things as pens, chairs, animals, men, are ' not-Gods,' we know also that the term God cannot be a synonym of the term being *quà* being, which, being the universal *summum genus*, is (as we saw in chapter ii) unique in that it cannot carry a contrary. To be incapable of carrying a contrary is (we saw) the distinguishing mark of the *summum genus*. Hence, once allow the claim that anything whatsoever exists which does not come under the category of what men mean when they speak of Gods (admit, that is to say, that ' not-Gods ' exist) and immediately we move to the enabling, empowering position that the term God (be the term's

<sup>1</sup>So far as certain such ' proofs ' in the affirmative are concerned, we shall need (inasmuch as these have played important rôles historically) to take note of certain of them in some detail. Thus the ' proofs ' of Aristotle, of Anselm, of Descartes, together with the criticisms of Kant thereon, we shall look into later on in this present inquiry.

connotation what it may) is not a synonym of the term being *quâ* being. Now the value to us of this position at the present juncture (we will style it the anti-pantheistic position) is that the method by which we propose to ascertain the true meaning of the term *God* is that which we employed when we sought to learn the meaning of the term *real*, *i.e.* the method which seizes upon the contrary of the term we are seeking to define, eliciting the exact meaning of this contrary, and then, in the light of this meaning, returning upon the debated term in order to fix its meaning. Thus (as we shall see more clearly when we come to consider the nature of contraries and the significance of their symbol: *not* or *non*) the essence of contrariety resides in the oppositeness of two forms of being in respect of some one particular feature. It does not reside in the negating of the being of either of the pair: a truth which is adequately illustrated by the fact that the symbol of contrariety may, indifferently, be applied either to the one or the other of the pair, once the character of the opposition which divides them has been clearly recognised. For instance, we may speak either of the 'false and the non-false' or the 'true and the non-true' and still express one and the same meaning by these different-sounding phrases. And similarly with the real and the not-real, and the imaginary and the not-imaginary. It is, however, to be noted that our power thus to transpose the symbol of contrariety (*not* or *non*) resides, in any given case, in our power so to sense the exact meaning of the opposition involved in that particular case of contrariety, that we can summon this knowledge to our assistance. Thus, our power to handle the question of the meaning of reality resided in our knowledge of the meaning of the opposite of the real (*i.e.* the imaginary), a term the meaning of which had not become so befogged with confusions as had that of the real. And similarly here, where what is in question is the meaning of the Godhead, the measure of our power to indicate this will be found to make one with our power to explain exactly what notion we have in our minds when we say that certain things are not-Gods (what our notion is, when, for instance, in response to one who asks us whether a pen, a stone, or a crime is God, we reply *No*). Now, it may be that it will be objected

that the difficulty of saying what a not-God is, is equal to that of saying what God is. But this objection is not sound, for the reason that the shifting of the question at issue from the standpoint of ' what God is ' to that of ' what not-God is ' carries with it the tremendous advantage of changing the problem from one in which we have to indicate the properties of an entity whose very existence some men hold in doubt, to one in which we are required merely to state what is meant by a certain property (*i.e.* not-Godness : non-divinity) which appertains to all the mundane things about us—things which almost all of us agree are not the things we have in mind when we speak of God. The aspect of the situation is thus changed from one of nebulosity to one of the plain definition of a certain quite specific attribute appertaining to concrete things. But this matter definitely launches us upon our major task : that of defining the Godhead.

## II

Insight as to the meaning to be attributed to ' not-Gods ' came to us by way of a pair of terms in which the transposition of the symbol of contrariety had already been effected. Our attention found itself focussed upon a pair of contraries which seemed to us to be the true substitutes of the pair ' Gods and not-Gods.' This was the pair *the supernatural and the natural*. Accordingly, we found ourselves saying that *naturalness* was the essential *differentium* of ' not-Gods ' ; was, that is, the express quality in virtue of which Gods and not-Gods become opposed types of being. Holding, then, the Gods to be the non-natural (*i.e.* the supernatural) we were led to ask : what, exactly is the meaning of the natural ? Now (we may here confess) we were led to the adoption of our meaning for the ' natural ' by the etymology of the term *nature* which was such (we found) as fitted in very aptly with our own particular reading of the meaning of creation (causality). For (as we were accustomed to say), everything which exists in nature is caused, and anything which is caused is born. (It will be remembered that, in our theory of causality, the caused is the born.) But (so it occurred to us in the light of its derivation), the term *nature* itself has to do with the born, the term deriving from the Latin *natura*

which itself is connected with the verb *nasci* meaning to be born; to be created; to grow. Accordingly, so far as the immediate Latin equivalents of the word 'nature' could inform us, the natural world would be the born world: the created world. Further, the Greek equivalent of *natura* is *physis*<sup>1</sup>, a term which connects with the verb *phyesthai* meaning to be born; to be created; to grow. Thus, here again, the inference we felt we could draw was that the physical world is the *born* world: the *created* part of the total universe: the natural world. Hence, to the extent to which we allowed etymology to guide us, we were led to say that all the forms which go to constitute the content of the natural world are all such entities as have had a birth: as have had causes: whereby they have been ushered into the universe of being. They are all such entities as, in the course of the ages, have made their advent into the universe (*i.e.* into the One, the All, the Monad) wherein, prior to such advent, they had not held precisely that place. That is, the constitutive entities of the natural or physical world are entities none of which have persisted for as long a term as the universe as a whole. Hence, they are not elements, not first principles, not *noumena*. They are not the universe's uncreated, indestructible substances: its eternal substrates or 'raw materials.' On the contrary, they are those entities of the universe which are brought into fleeting being as a result of the periodic inter-twinnings of the two elemental substances, which same *are* the universe's permanencies. Hence our definition of the natural parts of the universe as its born parts: its compounded parts: since the *effecting of a composition* is what *to be born* means.

But, if this were so, we had now arrived at a definition of that term which, for so many centuries, has proved itself the supreme problem of the speculative reason. We had arrived, that is, at a re-definition of the non-natural, the supernatural, the divine parts of the universe: the Godhead. In terms of the simple antithesis between this pair of contraries, the natural and the supernatural, we had learnt that the Deity is identical with those entities of the universe which are uncompounded,

<sup>1</sup>This term bears also a quite different meaning in the Greek, being the title given to a cosmic entity which is indicated much more commonly in Greek thought as a *Goddess*. We deal with this conception of *physis* at length in our third volume (*The Immemorial Cross*).



ungenerated, parentless, causeless, eternal, and, as such, are the universe's irreducible first principles: its constitutive 'raw materials' or elements. They are the *Numina*, which same are the *Noumena*: the *Archai*: the *Beginnings*: the *Creators*. They are the substances out of which the entities of the world of nature derive their being and those back into which all these will ultimately be refunded. They are the universe's radicals as contrasted with its compounds, and it is as such that they are as superior to death as they are to birth. For (obviously) birth being what it is (*i.e.* a compounding together of plural entities), it follows that every born thing will have the possibility of death built into its very structure. That is, because birth means the compounding-together of plural entities, so will 'to die' mean the breaking-down of a composition; and anything which is compound in structure must admit of decomposition; admit, that is to say, of *death*, to die meaning to decompose. But, whereas the compounded necessarily carries within itself the possibility of decomposition (death), all those forms which are natural finding themselves, in consequence of their mode of entry into the universe, incurably infected with the possibility of death, the world's *radicals*, for the inverse reason, are imperishable.

Such, then (we hold), is the character of the antithesis between the supernatural and the natural: Gods and not-Gods. We are, indeed, now in a position to present quite a long list of antithetical pairs of terms (contraries) each of which is the equivalent of that contrary pair, 'Gods and not-Gods,' from which we started. Thus we have:

The Godhead	<i>versus</i>	The Not-Gods.
The Supernatures	„	Nature.
The Elements	„	Compounds.
The Non-Born	„	The Born.
The Deathless	„	Mortals.
The Causeless	„	The Caused.
First Causes	„	Secondary Causes.
First Principles	„	Creation: <i>Mundus</i> : <i>Kosmos</i> .
Metaphysical Entities	„	Physical Entities.

Noumena (Things-in-Themselves)	<i>versus</i>	Phenomena (Appearances).
Substances (Substrates)	„	Accidents (not, however, in the most commonly-accepted, <i>i.e.</i> the Aristotelian, of the many senses of this term).
Permanent Beings	„	Transient Beings.
The Fundamentally Real	„	The Secondly Real (together with the non-real).

As to the last-named antithesis, a word ought perhaps to be added in explanation of how it has been arrived at :—We have just now identified the Godhead with the elements or increate and indestructible first principles : the world's raw materials. But, in an earlier chapter<sup>1</sup>, we identified the elements with Space and Time, entities which we adjudged to be real entities, admitting (as we discovered them to do), of being sensed by the sub-mental senses. Hence, the Godhead consists not only in real entities, but, as being those particular real forms out of which all other forms are constituted and back into which they will ultimately be refunded, it consists also in the universe's *basically* real entities. The question, therefore, as to the reality of the Godhead, can very well be passed over as disposed of, and we pause merely to note that the pair of contraries constitutive of the two divinities or elements which mankind has already recognised under the names of :

Space and Time ;

Heaven and Motion ;

Rest and Motion ;

Love and Strife ;

Water and Fire ;

Darkness and Light ;

God the Mother and God the Father ;

Soul of the World (*World-Mind*) and Spirit of the World (*World-Spirit* : *World-Minder*) ;

<sup>1</sup>Chapter vi.

Psyche and Pneuina ;

Body (Immaterial) and Breath (Immaterial) of the One  
Being (the *Summum Genus*)

now require to be recognised (here in this twentieth century) under yet another pair of antithetical names which may cause the question of their reality to appear still more settled *i.e.* that of the *Magnetic Ocean and the Electronic Stream*. As, however, the identification of magnetic substance with the three-dimensional substance Space (which is involved in attributing these names to the Godhead), and, as, again, the recognition of either Space or Magnetism *as* a substance are moves not yet made by modern science, this particular identification itself requires to be argued upon its own merits : a task which we shall attempt later in this present section<sup>1</sup>. Nevertheless, it is not (we think), impermissible for us here, and quite in advance of the arguments by means of which we hope to furnish its justification, to bring forward the identification.

However, if we have to postpone our effort to establish this particular pair of antithetical names for the Godhead, we cannot defer the effort to disestablish one member of another very strongly entrenched pair. Thus the elements, Space and Time, are, by definition, the eternal types of being, being uncreatable and indestructible. Hence, not only is Space eternal, but *Time also is eternal*. Yet, as everyone knows, in default of a definition of the Godhead as the elements, and in default also of an identification of Space and Time with the elements, Space and Time have come to be contrasted against one another, not on the score of their veritable points of contrast (for, being contraries, inevitably they must possess these, *e.g.* they are contrastable as static and mobile, as three-dimensional and linear, and the like), but on the very point of which they may not be contrasted at all, *i.e.* that of their *eternality*. Thus, as we all know, one of our very commonest antitheses is that of Time *versus* Eternity, Time and the non-eternal being accepted as synonyms. Now, the cause of the emergence of this false, this exceedingly false, this quintessentially false antithesis has to be sought in the fact that, whereas Space is eternal as a

<sup>1</sup>Chapter xi.

fixed substance (*i.e.* positionally fixed: 'static room') Time is eternal as a substance which is eternally moving its substance about in Space. That is, Time is 'mobile room,' and, inasmuch as the substance of the Time-stream is eternally moving into, and again, eternally moving out of given points of Space, we, as more or less fixed points of Space with plenty (so to say) of our Mother (Space) in us, superficially get the impression that Time is not eternal, but, on the contrary, the very prototype and model of the transient. Thus is begotten a tendency which makes terms like transiency, fleetingness, impermanence, synonyms of temporality, all of them being indifferently regarded as contraries of the eternal. However, as this matter will be greatly to the fore when we come to deal, in detail, with our 'advanced' theology, with this *caveat* against the use of the antithesis Time *versus* Eternity, we pass to the consideration of one final matter:—

It is fitting in this connection that we should take note of a remarkably contradictory piece of nomenclature which has been successful in establishing itself as a title for a certain type of theology, *to wit*, *natural theology*. Curiously enough, the theological type upon which this title has been bestowed, is that very type which seeks to identify the Gods with the elements. There is, therefore, double need we should take note of it: in the first place, because it constitutes an error; in the second, because, as we ourselves identify the Godhead with the elements, the notion might, in the minds of careless readers, arise that we, too, espouse this strange thing, *natural theology*. But, if our definition of the Godhead be accepted, then the Gods (*theoi*) are, by definition, the supernatural. Hence, inevitably, all theology (all science of the Godhead) must perforce be supernatural theology. Or, rather, all theology must, perforce, be the science of the supernatural: the science of the deathless and increate. With nature (that is, with the effects of the unions of the two members of the Godhead: with the effects of the juxtapositions in respect of one another of portions of the two substances which compose the Godhead), theology has to do only indirectly, its business being essentially with the first principles themselves, with metaphysics rather than with

physics, with the problems of electro-magnetism adequately conceived, with the problems of ourano-chronometry (Heaven and Time: astronomy) adequately conceived. Hence (we repeat) there is and can be, *no* natural theology. One can, however, readily understand how this misnomer, 'natural theology,' could come into currency; for, while the 'natural theologians' certainly tended to identify the Godhead with the elements, few if any took the precaution carefully to define, and, thereafter, to identify the elements; with the consequence that the 'elements' of the 'natural theologians,' in place of being the true scientific elements (the universe's uncompounded and, therefore, indestructible radicals), were the 'elements' as conceived under the purely popular acceptance of the term. That is, they were 'weather-elements,' 'forces of nature,' loosely identified with the 'weather-gods' so-called, *e.g.* rain, cloud, wind, thunder, lightning, and the like, with the heavenly bodies—sun, moon, and stars—thrown in. Hence the strong affinity which has always existed between 'natural theology' and polytheism. For the almost unlimited plurality of the weather-elements argues a like plurality of the Gods who are identified with them. Hence the connection: naturalism: pluralism: polytheism. Not, of course, the strictly limited pluralism of the true dual elements, but the chaotic, unlimited pluralism of 'weather-entities' loosely called 'elements.' On the other hand, while the (nominally correct) definition of the Gods as the elements, has, when the latter are wrongly interpreted as 'weather-elements,' contributed its share towards involving the theologians in the confusion of polytheism, this same 'natural theology' has, when the term element has been construed in the monistic sense in which (for instance) Aristotle taught the world that the Ionian philosophers construed it, brought about that error which is the antithesis of polytheism, *i.e.* *monotheism*: *pantheism*. Hence, it is no unnatural result that the 'natural theologians' should, on the one hand, be found (as they are) ranked among the pantheists (*i.e.* the monotheists) and, on the other hand, among the polytheists and the atheists, the two positions not being very materially different from one another. For, to declare that *everything* is God, is,

basically, the same as saying there is no God in any meaningful sense. Thus, in default of a correct definition of the term element, 'natural theology' has been found appealing recklessly now to polytheism, now to pantheism, and now to atheism. And naturally ; for (as we have said) all these types of theology so called are of one and the same type. Intellectually regarded, there is little to choose between them. Where theology is concerned, it is (intellectually speaking) the trinity or nothing (*i.e.* a ditheism which is trinity-begetting, or nothing). With monotheism, with pantheism, with (unrestricted) polytheism, a genuine theology can have as little to do as it can with atheism frankly so called.

## CHAPTER VIII

A second definition of the GODHEAD *i.e.* as *the Holy*

In order to make clear the connection which obtains between the definition of the Godhead we are about to give and that given in our preceding chapter, we will here offer our definition of the *religious sense*. For, when we have defined the Godhead as the elements and the elements as Space and Time, and have proved the reality of the latter by indicating the sub-mental senses wherewith we sense them, it follows that mankind must be possessed of such a sense. What, then, *is* the religious sense? In the first place, let us say that this sense cannot be merely the sense of the elements (Space and Time); for, as we saw earlier, the senses apprehensive of the existence of the elements are possessed by all forms of living matter whatsoever; for instance, even by those undifferentiated units of protoplasmic material which, as uni-cellular organisms, constitute the lowliest of known organisms. But not all organic forms possess the religious sense, but man alone. What then is this sense? Our answer is that it is the sublimation or full-flowering of that fourfold basic sense which (we claim) ought to be recognised as filling the place at present supposedly filled by the sense of touch. Especially, it is the full-flowering of the sense of the relationship in which two of the three primary objects of sense (the two elements) stand to the remaining primary object *i.e.* matter; and it is as such that it is possessed by man alone. For only on the human level does the sense of relationship (and the sense of causal relationship<sup>1</sup> in particular) mount to its climax in the sense of the fact that Space and Time are causally responsible for the existence of the entire created world, while it is this particular sense which constitutes the religious. Hence the reason that the latter can be defined as the sense of the existence of the cosmogonic trinity. Or, inasmuch as the recognition of the cosmogonic trinity constitutes the most distinctive characteristic of (primordial) Christianity, the religious sense

<sup>1</sup>The sense of causal relationship is, we hold, a possession of the entire organic kingdom.

can be defined as the sense of the fundamental truth of Christianity, the findings of religion in their entirety representing a body of beliefs which are so many elaborations of this basic religious finding.

Now, when we are granted the position that there exists a religious sense, we are, at once, empowered to give a supplementary definition of the Godhead as the objects of worship. This however raises the question: what *is* worship? Now, in answer, we are going to say that worship is a term which stands for the reactions men make in face of the findings of their religious sense; or, in face of the findings of the sense of the relationship in which Space and Time stand to the cosmos. Thus, just as, for instance, acting responsively to the findings of the sense of sight, a pedestrian will move aside at sight of an oncoming vehicle; or, in response to the findings of the sense of touch, will seek shelter from the stings of a pelting hail, so (we hold) all mankind acts responsively to the findings of this exclusively human sense *i.e.* the religious; and it is as so doing that men make certain characteristic responses which we can call, broadly, their religious exercises or their acts of worship. And (we may add) these same responses analyse out mainly as efforts to express these findings by a re-acting of their import symbolically. That is, men's acts of worship consist, pre-eminently, in a body of human actions which have, one and all (deed as well as word), to be interpreted as saying: 'Yea, thus it is. It is so. How? So, and so, and so.' As to what it is which is thus and so, it is (we repeat) the manner of the relationship obtaining between the world and the two Supernatures. It is the manner of the relationship obtaining between the three entities of the cosmogonic trinity. Men's acts of worship are thus the expression of a valuation which mankind as a whole has set upon the three members of the cosmogonic trinity, two of these being held to be more valuable than the other. Acts of worship thus consist in a body of human actions designed to say that the two entities of the cosmogonic trinity (towards whom these actions are directed) are possessed of ultimate value, whereas the third entity possesses secondary value only. As to what constitutes ultimate value, this equates



with the feature of *eternal persistence*. Unbroken sequence of existence is that to which the mind of man, consciously or unconsciously, attributes ultimate value and deems as meriting the ascription of *worth-ship* in the absolute sense, while all the principal forms of worship (universally distributed as these are), express men's endeavours to utter forth the truth that entities possessed of this feature exist in the universe, and that they are addressing them. They are endeavours, that is, to express the worshipper's recognition (conscious or unconscious, articulate or inarticulate) that the objects towards which worshipful actions are directed possess absolute worth-ship in that they are characterised by these features of ungenerability and indestructibility which men set superlatively high worth on. Hence the explanation of the intimate connection which exists between worship and all those ways of living dictated by a recognition of the fact that the universe can be viewed pronouncedly *sub specie aeternitatis*: in the light of the eternal: the worshipful attitude of mind being essentially the attitude which tends to construe all existence from the point of view of the relation in which secondary and impermanent existences stand to the primary and permanent existences (*i.e.* to the elements, the Godhead, Space and Time, which *ipso facto*, are the objects of worship).

And now, with these consideration in our mind, let us turn our attention to the meaning of the term *holy*: a term so bound up with the findings of the religious sense that only a reluctance to define a little-understood term in terms of one even less so prevents us from defining this sense as 'the sense of the holy' in the first instance. Indeed, when we have made clear just what the holy consists in, we *shall* so define it, inasmuch as (as history goes to show) no other word has proved quite so competent as this of 'holy' to cover all the aspects and objectives of the religious, many languages (for instance, the Latin and Greek) having no other term save this to cover the religious signification in its entirety. Let us, then, inquire into the meaning of the word 'holy' which, in Greek, is *hagios* and *hieros*; in Latin, *sacer*; in Hebrew, *kodaush*; in Egyptian, *nutra*; in Sanskrit, *ishiras* and in Polynesian, *taboo*. Now, our philosophy

holds that that is holy which has to do, quite specifically, with the universal whole. That is, our philosophy holds that the veritable meaning of the *holy* is the *wholly*, the terms holy and wholly having, in this connection, the same connotative identity which they have etymologically. For instance, the meaning of the Anglo-Saxon word *hal* is that of whole, and that of *halig* the wholly (*i.e.* the holy); while what the holy has to do with the whole will become clear from the following:—The religious consciousness exists to declare not only the fact of the existence of the elements and that of the kinship which obtains between the divine (the eternal elements) and the non-divine (the transient cosmos), but to proclaim the manner in which, in virtue of the characters that are imputed to the two divine beings constitutive of creation's opposites by mankind's early theologians, creation's characteristic feature of transiency is overwritten by a qualified form of the characteristic feature of its divine opposites. For the bare trinitarian findings of the religious sense were early elaborated by mankind's religious thinkers into such an account of the scheme of things as tells men how the two Supernatures are basically the all of things: the whole: the holy: and how, accordingly, *their* characteristics it necessarily is which impose overriding characteristics upon the entire scheme; hence, how nature (the cosmos: *mundus*) is relieved of the apparently vitiating feature of PERISHABILITY characteristic of all its members, in virtue of the opposite feature characteristic of the two eternal beings who are the wholly (the holy), in that they are all that the universe is *at bottom*. Primordial theology thus turned religion's *main* burden (*i.e.* the sense of the *cosmogonic trinity*) into a story of a cosmic *plan of salvation*: a story which told men about the mode and fashion according to which the universe in its entirety was enabled (thanks to *the characters* of the dual members of our Godhead) to keep itself a whole in the sense of being able to prevent anything within it from being laid permanently under the spell of mortality, or (even) from being disqualified to function eternally as an efficient part of the universe's working mechanism. It turned it, that is, into a story telling men in what sense and after what fashion the death which attacks

all the entities of nature (*mundus*: creation) is an illusion. For although, undoubtedly, death exists in nature, religion, as that which concerns itself with the holy (the Holy Ones: the indestructible Holy Pair who form the ultimate whole), exists to say that death cannot have the significance which, superficially, it appears to men to have *i.e.* that of destruction, annihilation. Mankind's highly elaborated early religion, as telling forth the truth that the two Supernatures are the ultimate whole, thus existed pre-eminently to tell a world woefully harassed with disease and death about the universe's scheme for universal health and INDEFEASIBLE LIFE. For (as we ought not to omit to point out), this word 'holy' belongs not only to the group of words which signify wholeness, but to the group from which we derive the terms 'heal' and 'health,' these latter being, as a matter of fact, cognate with the term wholeness itself. Thus, 'to be in health' means, radically, to be whole; to be wholly; to be holy. Here, however, we have to recognise a distinction. For, whereas the terms wholly, healing, health and the like, have lent themselves readily for use in connection with subsidiary 'wholes,' the term holy (together with its equivalents in other languages) has, very happily, kept itself for use exclusively in connection with the one universal whole. Hence the consequence that holiness can be regarded as having to do exclusively with the fact of the health (wholeness) of the universe as a whole<sup>1</sup> and with the cosmic scheme for keeping it so.

The holy, then, has to have its meaning sought in exceedingly ancient views about *the manner of* the relationship of the Godhead to creation: the relationship which, based as it is upon *the characters* imputed to the twofold members of the Godhead, was held to result in the Plan of Salvation (the plan of universal health, the term salvation itself deriving from the Latin *salveo* :

<sup>1</sup>It might be objected that this definition of the term holy is too closely and exclusively linked up with one specific linguistic form of the term to be entirely satisfying, and that, possibly, the argument would not hold in respect of forms equivalent in meaning but different etymologically. To this objection we would reply that it would be quite easy to put up an analogous argument which uses a quite different form of this term (for instance, our own English variant and equivalent of the term holy *i.e.* the term *sacred*). However, to do this with the effectiveness the situation admits of would require that we should treat of the important and universally distributed phonetic complex 'K It,' and as this treatment is reserved for our third volume, we reluctantly pass over the argument from the term 'sacred' at this juncture, where (as we have already said) we are offering preliminary considerations exclusively.

I am in health). However, before entering deeper into the details of this primordial theological notion, we ought to strengthen our grasp upon the primary meaning of this staple of the religious consciousness everywhere *i.e.* the 'institution of salvation.' Especially ought we to get our minds clear in respect of two points of special difficulty having to do with (1) what, in the scheme of salvation, that is which is saved ; (2) what the danger is which 'that which is saved' is saved from. Now, as to the first point, the difficulty here consists in the fact that the meaning of 'salvation' cannot (in the ordinary way) be what is usually asserted *i.e.* the saving alive of our immortal souls ; for a little thought will reveal the objection that soul-substance (being a fragment of Space) is the deathless and indestructible by very definition. That is to say, inasmuch as the soul is a fragment of the spatial Deity<sup>1</sup> : a seed of the 'heart' of Heaven the mother-god : the fact of the eternality of the substance of all souls is bound up with, and guaranteed by, the bare conception and meaning of the Godhead. For death is merely a process of dissociation of the intertwined portions of the deathless, and, while it can reduce compounded (*i.e.* natural) forms to their two elemental, supernatural components, it is powerless and meaningless as regards elemental substances, which for ever have been and for ever must be. This truth, then, we cannot go back on, constituting, as it does, the very minimum of religious truth. Hence the reason that all primitive thought is so indelibly marked with it, marked, that is, with the marks of the belief in the immortality of the soul. For instance, in the primitive epoch of human thought, the truth was unquestioningly assumed that, in the ordinary way, death could mean no more than the disengagement of the individual soul (the primitive 'double') from the condition responsible for its embodied form, and it is precisely this strong primitive belief in the death-surviving soul (to which every

<sup>1</sup>This entire argument concerning the holy involves so many of those deeper findings of primordial theology which we have called its 'second vintage' that it can only be adequately treated in volumes expressly devoted to the deeper theology. We venture the statement however that this doctrine of the 'Heart of Heaven' (it is that of the 'inner seat of gravitation') as a select region of Heaven which serves as the 'refuge of souls' (mercy-seat) is the staple of the religious consciousness everywhere, being nothing other than that protean doctrine of the *Logos Spermaticos* or seminal law of motion which we have already spoken of so often.

incarnated individual reverts at death) which accounts for that flourishing *cult of ancestors* which is absolutely common to all primitive races, a cult which (as we hold) makes one with that *cult of souls* which, thus primitively begun, persisted into all those advanced cultures which form the immediate (so to say) foundations of our own e.g. the Egyptian, the Chinese, the Hindoo, the Babylonian, the Greek and the Roman. In fact, no period of human culture—save indeed our own—appears to have neglected the cult of (disembodied) souls: the souls of dead 'ancestors' broadly speaking: considering the observance of this a normal part of the ordinary duties of the living. The belief in the continued persistence-in-being of the disembodied soul (of which belief, the cult of souls—or cult of ancestors in the largest sense—is the natural corollary and consequence) was thus instinctive with the human race, standing, in this regard, exactly on a level with men's instinctive belief in a Godhead, and being entirely of one piece with it. Nevertheless, we ought not here to neglect to note a certain stern streak which existed in primitive theology which told of a second death which overtakes certain souls i.e. those souls which, persistently giving way to what we may call 'lapses of integrity,' allow these lapses to undermine that *tension of being* in virtue of which certain portions of soul-substance-in-general (i.e. spatial substance in general) become individualised 'seeds' having a rank in the seminal order which is the *logos spermatikos* or germinal law of motion, and, so, become distinguishable from merely non-differentiated Space, finally breaking it down; breaking down, that is, the *individuality* which appertains to specific 'seeds' as distinct from non-seminal soul-substance. To this extent, therefore, a soul was held capable of suffering annihilation; not, indeed, of its substance but yet of its personality, and, so, of being overtaken by that fate which the scriptures refer to as *the blotting-out of a name* from the Book of Life i.e. from the Logos. This, however, was not considered the normal lot of souls but a very abnormal lot, quite different from that which the 'plan of salvation' was conceived to deal with. Thus, the 'plan' takes the facts of the immortality of the soul and the immortality of

the spirit as matters of course, both these 'prime constituents' or 'implicated raw materials' of created forms having their immortality guaranteed in consequence of the eternally-persisting existence of the substances they are the fragments of. What then had the plan of salvation to do with? It had (we say) to do with the qualified immortality of the *body*: of the *flesh*. Hence, on this account, it has to do with a teaching concerning that cosmic institution ('inner seat of gravitation'), whose function it is to carry the substance of the Time-stream (which alone can transmute the immanifest, supernatural souls into material bodies) into the vicinity (the place) of souls. The burden of the dogma of the 'plan of salvation' was thus a teaching to the effect that each spatial nodule (severally the seeds or souls of things) must maintain *its right place* in the vast expanse of Heaven (this, on the human level, in response to the promptings of the moral sense or conscience). That is, this ancient dogma existed to warn men against the danger of transgressing the bounds of the world-palladion or inner seat of gravitation which is the Logos or cosmic law of motion, and, so, becoming a 'lost' soul. For (according to the dogma), only by maintaining their right places in the law of motion could the cosmic seeds (the cosmic individuals, the veritable, supra-material atoms or individuals as against the false, 'Democritean,' material atoms so-called) which have their native home therein stand in the way of the *resurrection of the flesh*: in the way where they can 'put on' Christ; or (to put the matter more generally), stand in the way of the renewal of embodied, compounded, created, natural existence in its entirety. Indeed (as the ancients contended) not only do individuals have their place in the cosmic law, but they have this apportioned to them in virtue of a number (an ordinal number constitutive of their cosmic name) which fixes for them their specific place in the Logos or Time-bed ('Book of Life'), the mainline of which (for reasons to be given elsewhere) forms a Cross, the stream of Time itself being God the Father: the World-Christ. Thus (said primordial Christianity) the soul which would participate in the incarnation, or resurrection of the body (which latter is effected by the 'putting on' of the

Christ-substance), must cling to the Cross : to the Way of the Christ : to the Law : to the Logos : to the Rock of Ages : the erosion-defying, eternal rock or path along which flows the stream of Time.

But, let us ask, if all 'individuals' have their due and proper place in the law or cosmic seedbed, how could they be conceived as capable of running counter to this cosmic law which is (presumably) the most powerful engine in the universe), and, so, lose their place. Now, while we allow ourselves to put this question, we here offer only so much of the primitive answer to it as will serve to show how the plan of salvation bore upon the cosmic basis of morality :—In the Logos or cosmic law, we are confronted with a 'way' of activity which, while constituting the right way, has nevertheless to co-exist alongside that institution of the 'freedom of the human will' which the cosmic design itself makes obligatory *with man*. For, although we have hitherto called *all* the world-seeds (which include the nuclei or cores of inert atoms as well as of biotic atoms) *individuals*, actually only seeds of human rank were considered individuals in the normal sense which requires that a veritable individual shall have the power of exhibiting individuality by way of an exercise of freedom of choice as to course of conduct : an exercise which can thus express what his individual desires and tastes are. That is, only human souls were conceived to have the power *not* to follow the 'way' of the Cross if their desires and tastes tended away from this way, a strict determinism ruling throughout the evolution of the cosmos (the evolution which involves the transmuting of the supernatural world-model into a materialised, naturalised replica) up to the critical point where man emerges. Hence the meaning of 'sin' as associated with the life of man : a phenomenon which consists in a straying of human souls (in gratification of their wrong tastes) out of the region of the Law designed to safeguard their eternal destinies. Hence, the meaning of repentance, which is a re-setting : a sloping back : of the strayed soul in the direction which will reconduct it to its cosmic place in the divine seminal order which is the Logos. For, unless the erring soul returns to its *right* place, it would be (said ancient theology) out of the

track of the resurrection in the new world which is to be when the Time-stream shall have completely overrun its present course round the cyclic Way of the Cross and has embarked on that succeeding course which ushers in the 'world to come.' Hence that primitive cult of souls: the cult which, basically, consists in *prayers for the dead* which man, with his ever-expanding heart, has been led to link up with prayers for himself. And what, indeed, more reasonable than the observance of such cult? And what more 'unloving' (as Aristotle put it) than the neglect of it? For there can be no great difficulty in conceiving how 'the prayers of (an even partially) righteous man' may prove availing where a strayed soul is concerned, soul-substance being what it is *i.e.* Space, love, 'magnetism,' desire, an energy, a drawing and a pulling. For it is wholly conceivable that a soul (whose constitution is of this substance) which finds itself fixed firmly in the Law, and which sets its desire upon the return of another soul wandering in the uncharted ('extra-legal') void, should have the power to incline that lost one in the direction of its right place in the scheme of things; and this the more in that (as is usually the case) the soul of the praying one and that of the prayed-for one are closely linked numbers in the numerical world-order. This, however, is no place to pursue these ancient theological details.

Up to this point, we have concerned ourselves with 'the holy' only in the sense according to which holiness inheres in the external universe, the elements or Holy Ones being so characterised that (within limits) they entail the wholeness (holiness) of even the third member of the universal scheme; that is, they entail it so far as their efforts are not frustrated by that power of choice which, necessarily, has to be conferred upon all the culminating constituent items of the cosmos, *i.e.* upon all mankind<sup>1</sup>. There is, however, a type of holiness describable as *secondary holiness*, and to this type we now attend:—We define the secondary form of 'the holy' as all those forms of worship: all those forms and acts (inclusive of words): which have as their purpose the keeping of the human mind *in mind* of the fact

<sup>1</sup>All this is so bound up with those profounder doctrines of Christian theology which we have called its second vintage that the account here must necessarily be very summary.



of the universe's primary holiness ; in mind of the fact, that is, that the universe itself is wholly (holy), containing as it does, within itself, in the shape of the two world-saviours or ' holy ones,' a mechanism primed for keeping it an ever-living and healthy organic whole. Secondary holiness thus consists in a holiness with which certain forms and acts have become invested in order to make them serve as reminders of the universe's primary holiness ; and, more especially, of the specific manner in which this primary holiness effects the conquest of death. It thus consists chiefly in things (and events) which have become established in the ritual of divine worship as forms of mimicry of the saving working-mechanism of the universe : as forms which cause us to see Space, Time and nature (all fragmentary as these ordinarily appear to us) *sub specie aeternitatis* ; which is to say, as *permanencies*. Ritual in its entirety (covering as this does the whole field of the secondarily holy) has thus to be regarded as a dramatising, in one form or another, of the parts played in the scheme of the universe by the elementary cosmogonic entities ; but, above all, by those select portions of the two elements which primitive theology discriminated as the world-healers : the world-soters : the ' saving-pair ' (the Christ and the Cross) whom primitive art shows as the ' heavenly twins ' : a boy and a girl perched on the shoulders of the Mighty Mother. We may, accordingly, allow ourselves to say that the aim of all ritual is to mimic the plan of salvation, seeking as it does to portray some feature of the world-mechanism credited with keeping the universal whole a healthy whole, free from dislocated parts (' lost souls '). As to form, it consists, most commonly, in the use of forms apprehensible by the senses of sight, sound, scent and taste which have been commandeered by the religious instinct as means of emphasising the less concrete-seeming findings of the more basic senses of Space, Motion (Time) and relationship, these latter findings seeming to ask for such assistance. For, while, no doubt, the deeply religious temperament, working wholly by itself upon the truly religious objectives, is able to ' see ' and ' carry ' in the mind the entire world-scheme in its basically scientific aspect (*i.e. religiously*) ; and while such a specially gifted person will perform

his every action with this vision in his mind's eye and so live constantly in the spirit of holiness (in the 'light of eternity'), the vast majority of us tend, ordinarily, to become so immersed in the fragmentary details of the world-scheme and to be so blinded by these, that the instinctive wisdom of mankind concluded that ordinary men's religious vision must be aided by the cruder and more strongly-appealing findings of the other senses if it were not to lose itself entirely among the fragmentary things and events of the immediate present. Accordingly, organised religion has brought into play, in its ceremonies and forms of ritual, the findings of the senses of sight, sound, scent and even taste (*e.g.* in the eucharistic sacrament and in eaten sacrifices generally). Thus, all those auxiliaries of worship which constitute the secondarily holy, auxiliaries inclusive of cry, chant, hymn, prayer, sacrament, gesture, dance, drama, and all the prime incidents of the holiday-festival, had as their aim the recalling to the understanding that fact which the engrossing detail of daily life tends to overshadow, *i.e.* that the character of the universe is, in itself, inherently a whole, and not in the least fragmentary. Hence the truly tremendous rôle which the 'symbolism which is ritual' has to play in the carrying-on of the organised religious life. On the other hand, there is an essential *secondariness* in all ritual, its whole function being expressible in the words: 'Let us remember: let us think on'—those basic, primary and healing entities of the universe which are the primary entities for religion. But now let us give our attention to one particular ritualistic form which was the outstanding form for the primitive human races.

## CHAPTER IX

### THE GODHEAD AS THE HOLY (Continued)

#### THE COSMIC SACRIFICES

The most impressive piece of ritual in the religious life of primitive man was that of the *sacrifice*, and no account of the phenomenon of worship could be satisfying which failed to give the reason for this. Accordingly, while we defer our detailed account of this matter (together with all the details of our philosophy of the *sacraments*) to a later volume, we give here, in bare outline, the meaning which our philosophy reads into ritualistic sacrifices:—The sacrifice is, we hold, a mimicry (a dramatisation) of that piece of the mechanism of the universe which was conceived to be the most directly involved in the 'plan of salvation' as actually at work. For (as we have now specifically to point out) the early theologians conceived that the universe itself had a sacrificial character, constituting in itself both sacrificer and sacrifice (slayer and victim), and exemplifying precisely those qualities of self-effacement and self-abnegation, even to the point of (apparent) death, which are so persistently mimicked in the human ritual of sacrifice. Accordingly, the meaning of ritual sacrifice has to be sought in the primitive postulate that there exist *cosmic* sacrifices; while men's ritual sacrifices are a mimicry of these to the end of keeping men in mind of the cosmic sacrificial prototypes. As to these latter, they are the two world-healers, the Logos and the Christ, who were primitively conceived, by their voluntary self-effacement, as saving the universe from what might quite well befall its constituent substances if the two cosmic entities failed, voluntarily, to submit to the self-effacement demanded of them<sup>1</sup> according to the 'plan of salvation.' Hence the strict applicability of the term 'sacrifice' to the two world-soters, the term sacrifice deriving from the Latin *sacer* (holy) and *facere* (to make). For the primary sacrifice consti-

<sup>1</sup>This matter also belongs to theology's 'second vintage' and we do not enter into a discussion of its details in this volume. On the subject of the *Logos* however, see below, chapter xxi.

tuted by the two Saviour-Gods (the Christ and the Cross : Motion and its Law : the gravitating-stream and the inner seat of gravitation) have, at one period of their career, to undergo (said ancient theology) a self-effacement and (seeming) death in order to keep the universal scheme a living whole, and any earthly form of the sacrifice (*i.e.* any ritual or secondary form of the sacrifice) which failed to put men in mind of this was a form of religious exercise which had proved abortive. Behind the ritual of sacrifice, therefore, as behind almost every other form of religious ritual, was the primitive solution of the *problem of gravitation* as embodied in the doctrine of the Logos or Cross, which same doctrine necessarily involved a *Philosophy of Time* in terms of the Christ-spirit.

However, to pass from this subject of the primary (*i.e.* cosmic) sacrifices (necessarily treated cursorily here) to that of the secondary or ritualistic sacrifices, we begin by taking note of the great danger attendant upon all ritual, but, in a special measure, upon the sacrificial ritual. This consists in the losing sight of *the aim and end of ritual* in the show and excitement of the means. For the one aim and end of ritual is, as we have urged, to put men in mind of the fact and manner of achieving (according, that is, to the primordial view of this profound matter) of the cosmic sacrifice or universal *rendering-whole*. Hence the emergence of that important question (a question which, indeed, comes to the fore in the history of all dramatic representation) how far 'realism' is to be allowed to go. For, if a strict realism were to be the ritualistic rule, it would follow that that unfortunate actor who was allowed to play, ritualistically, the rôle of (for instance) the male world-soter, would, for the transient honour of a passing hour, have to pay with his very life ; and this notwithstanding the fact that, in so doing, he would be actually falsifying the account of his cosmic prototype, and, thereby, defeating realism. For, as the primitive ages fully well knew, the truth which the ancient sacrificial ritual was designed to teach and figure forth, was not only the death(s) of the divine principle(s), but (and essentially) death of that sort which is followed by *a rising from the dead*. Hence the realists' difficulty. For, granted

that they were prepared (and in later ages they certainly were prepared: only too much so) to put the ritualistic sacrificial victim to death, realism demanded that this victim *should be brought to life again*, and endless were the ruses by means of which ritualistic realism endeavoured to get round this difficulty, one of them (presumably) being the construction of a tomb with *double doors*, by the one of which the body of the victim entered dying or in death, and from the other of which he (or someone else) re-emerged alive and in blooming health; at times, it would seem, as a new-born babe. But, whether the death of the victim were shammed or real, these contrivances were patent attempts to meet the recognised need of portraying the death of the sacrificial victim as followed forthwith by a resurrection *from* the dead. Hence that title of Dionysus, the typical Greek male soter, '*He of the twofold door*,' our own reading of the meaning of this title being that Dionysus was the Time-God, AIO (Aion, Ion), his 'death' taking place when all-Time was ingathered into a certain point along the Time-route (along the Logos, that is to say) which went by the name of Alpha and Omega, such 'death' representing the end of the old world and the beginning of the new all in one, the *iota* which separates *omega* from *alpha* in the title Aio representing crudely the fact which the partition between the ritualistic 'double-doors' represented equally crudely: the fact, that is to say, that the world-death which submerged Time and Time's Law equally, was, at the same instant, the portal of a world-life renewed.

Now, as regards ritualistic realism, it would appear that this strengthened in proportion as the knowledge weakened as to what the meaning and purpose of ritualism was, *i.e.* a putting men in mind of, by means of a dramatisation of, a something outside itself altogether: something basically independent of it, and in every way transcending it. It waxed, that is, as the knowledge waned of the distinction which exists between primary sacrifice(s) and secondary sacrifice(s). For, as all the evidence which is available goes to suggest, in those earliest times when religious feeling and religious knowledge were in their fullest vigour, ritualistic realism was not in vogue, and the

praises are many of the purer ritualistic practice which prevailed in the earlier times before altars had been made 'wet with the blood of bulls,' and, indeed, with the blood of a higher victim than the taurine: man himself. That is, as time went on, and as the knowledge grew dim that ritual sacrifice is merely a means to the end of keeping men awake to the great fact of the essentially sacrificial character of the universe, these 'means' tended to become more and more a raree-show, and to be erected into ends in themselves. As it came to be forgotten that ritual is just a piece of (more or less) dramatic mimicry of the saving and sacrificial mechanism of the universe, such ritual tended to develop 'realistically' along the lines of an entertainment, its: "Let us remember the things of God" degenerating into: "Let us divert and amuse ourselves in the completest measure possible." Hence, in place of the 'milk and honey' sacrifices of 'the good old times,' and the seemly sacrifice of the fruits of the earth, there grew up the 'bleeding sacrifices' which involved those ritualistic murders of man and beast which human history provides only too many unmistakable indications of: murders which, with their allied practices, roused the wrath and contempt of the Greek philosophers of the temper of Heracleitus and Empedocles, and, even more, of the priests and prophets of Israel:

"Gather<sup>1</sup> my saints together unto me: those that have made a covenant with me by sacrifice.

And the heavens shall declare his righteousness: for God is judge himself.

Hear, O my people, and I will speak. O Israel, I will testify against thee: I am God, even thy God . . . .

I will take no bullock out of thy house, nor he-goats out of thy folds. For every beast of the forest is mine, and the cattle upon a thousand hills. I know all the fowls of the mountains: and the wild beasts of the fields are mine.

If I were hungry, I would not tell thee; for the world is mine, and the fulness thereof.

Will I eat the flesh of bulls, or drink the blood of goats?

Offer unto God thanksgiving, and pay thy vows into the most High."

"Deliver<sup>2</sup> me from bloodguiltiness, O God . . . . and my tongue shall sing aloud of thy righteousness.

<sup>1</sup>Psalm 50.

<sup>2</sup>Psalm 51.

O Lord, open thou my lips ; and my mouth shall shew forth thy praise. For thou desirest not sacrifice ; else would I give it : thou delightest not in burnt offerings.

The sacrifices of God are a broken spirit : a broken and a contrite heart, O God, thou wilt not despise."

" I<sup>1</sup> desired mercy, and not sacrifice ; and the knowledge of God more than burnt offerings."

A word of a general order can here be added concerning the sacraments and their relation to the sacrifice. Thus, fundamentally, the two words relate to one and the same fact, *i.e.* the essentially sacrificial character of the universe and the latter's mode of giving expression to this, *i.e.* the ' plan of salvation.' However, a certain notion which, in the ritualistic sacrifice, is merely implicit, in the sacraments becomes explicit : the notion that, what the world-soters are *in great*, men should (so far as they can) be *in little*, and the observation of the sacraments implies that the individual participant therein is vowing himself, or renewing past vows, that he will henceforth become an imitator of the world-soters so far as he possesses power to. Hence the connection of the term 'sacrament' as used ecclesiastically with the Latin term *sacramentum* from which it derives, a term which stood, originally, for a military oath of fidelity. Hence, too, the explanation of the heightened measure of awe and sanctity with which the observances of sacraments are invested, *i.e.* that in them the participants are severally pledging themselves to an imitation of the spirit of the careers of the world-saviours. Now, in the course of the male world-soter's long pilgrimage round his Law : his Cross : the latter imposes on him many incidents of high cosmic importance, but it is especially the incidents which occur in the later stages of any single world-career of the Christ which the sacramental rituals of organised religion are designed to put us in mind of. That is, it is particularly these ' latter-day ' (cosmically speaking) incidents which the initiate in (say) the Christian sacraments is taking a vow to model his life on. However, in the absence of the tale of these incidents, it is obviously futile to attempt to explain the inner meaning of the sacraments modelled on them, and we have no

<sup>1</sup>Hosea 6.6.

choice but to postpone the fuller consideration of sacrifice and sacrament alike until this tale has been recounted<sup>1</sup>.

Accordingly, we now restrict attention to that more mundane subject which is the correlative of and contrary of the holy, *i.e. the profane*:—This we enter upon by pointing out that, in the profane as in the holy (and in the sacrifice), we can distinguish two distinct forms, a primary and a secondary. The two forms of the profane do not, however, follow the same lines as the two great corresponding categories of the holy. That is, the profane cannot be viewed as presenting a primary form representing some feature inherent in the scheme of the universe, and a secondary form consisting in some kind of humanised mimicry of this, designed to keep men in mind of it. For, in the plan of the universe itself, there is *no* profanity. The scheme of the universe is, essentially and unwaveringly, *holy* in the sense indicated. Never, in its *plan*, was it supposed to depart from its integrity and become fragmentary: which is to say, *profane*. For this is the term under which we propose to define the profane. Thus, in conformity with our definition of the holy as the wholly (the integral), we define its contrary, the profane, as *the fragmentary*. Or, rather, to make our terms more precise, we say that, by the profane, we imply all those things and acts which, either in themselves or in virtue of their associations, encourage us to regard the universe under a superficial, unscientific, fragmentary aspect: to regard it, that is, precisely as we are, all of us, all too prone to regard it. Accordingly, as between the holy and the profane, there exists this basic difference, that, whereas the holy is something which exists for our apprehension in the universe at large, profanity is something which is fashioned by ourselves, consisting as it does, primarily, in a mistaken way of regarding the universe, *i.e.* as fragmentary instead of as an organic whole. The profane view of the universe thus consists in our investing with an absolute importance (in the setting of ultimate value or worth-ship on, and, so, *worshipping*) things the very transiency of existence of which should, by right (*i.e.* in virtue of what constitutes ultimate value or worth-ship, *to wit*, permanency) warn

<sup>1</sup>This is the subject of our succeeding volumes: *The Mystery of Time and The Immemorial Cross*.



us that we are making a gross mistake in doing so. Now it is the profanity involved in acting thus (*i.e.* investing transient things with highest worth) which we call *primary* profanity, and it is, obviously, a form of the profane which invades many spheres. For instance, in high philosophy, it is profanity to regard Space as a nonent and motion as relative. Descending a rung in the hierarchy of things, to regard material atoms as the elements is profanity. Similarly, to regard motion as an appanage and attribute of matter is profanity. In the sphere of organised religion, again, the over-emphasising of ritual and the regarding of it as an end in itself is profanity. Equally so is the over-emphasising of the importance of organisation, of structures, of properties and of privileges. In literature and art, in the drama, for instance, the presenting of the affairs of human life out of relation to divinity is gross profanity and a deep degradation of the original ideals and achievements of drama. In social life, the immense importance attached to wealth and place is profanity. There is, however, a second and less general sense of the term 'profane' (*secondary* profanity) which we ought not to neglect looking into, *i.e.* the profanity which assumes the form of *speech*. Let us explain:—One of the two absolutely indispensable entities involved in the plan of salvation is that cosmic 'person' who personifies the cosmic Law or Logos. Now, as this entity constitutes the barricade or fence (the world-palladion) which saves the world-courser (Time) from the dissipation of his energies in the uncharted ('extra-legal') wastes of Space, and leads him in that way (the 'Way of the Cross') which guarantees the world's resurrection (in that, safely garnered in it, 'all souls' are—or should be), it is also God's 'promise.' That is, it is God's covenant; God's vow; God's oath; God's *curse* or course (*i.e.* the 'Time-course'), that mortal forms shall not (or need not) die utterly to the world of 'the flesh.' The covenant of God thus equates with (is 'embodied' in) Time's fixed courses, his fixed curses (cursings). For, fundamentally, the two words, cursings and coursings, are one and the same word, and both equally connected with the ritualistic ceremonies by way of which organised religion sought to keep men in mind of the cosmic institution of

the Logos, the law of motion, the cyclic course<sup>1</sup>, curse or fenced-in way of Time which constitutes the inner seat of gravitation. Hence, because used in religious ceremonies so essentially associated with the law of motion (cosmic course, curse, cross or seminal logos), certain words have, by association, become holy words, words of power, strong words, and, essentially, *temple* words. That is to say, as being words belonging to the story of the divine cursings or coursings (the divine oath or 'way' which is God's covenant and promise of salvation), certain words have taken on the characters of the (secondarily) holy, and it is this fact which accounts, for instance, for that ritualistic survival, *i.e.* the commination service of our modern English church. When, however, these words thus made 'holy' (secondarily holy) by association with the ritualistic commemorations of the promise and covenant of God; when, that is, words made holy by their associations with the altar and the temple and its purpose and services are made use of in trivial circumstances destitute of all religious bearing, such use is rightly regarded as sacriligious and styled profanity (*pro*, for, in front of; *fanum*, a temple), and this no matter whether such use is the outcome of that deficiency of inhibitory power which leads certain men and women to use violent language in the mildest and most ordinary circumstances, or is the outcome of a blasphemous spirit pure and simple which finds pleasure in the mere and sheer degrading of the holy. In either case, the use has never failed to elicit the condemnation of the competent.

In taking leave, for the present, of this subject we would make certain observations bearing upon the question of the quality of the *intelligence* of the primitive races of man who (as we contend) elaborated the idea of the Godhead into 'Christian' theology on the lines indicated. For we suggest that much valuable effort is now being wasted in pursuance of theories of religion which do not, and cannot, answer to that factor in the life of man which constitutes his religious interest. We mean, there is a tendency in modern anthropology which seems almost overwhelming, to approach the question of the

<sup>1</sup>Cp. the Greek *herkos*, a fence, and *horkos*, a curse. The world-palladion or *Logos* (the law of motion) is Time's 'fenced-in' course, curse, cross.

meaning of religion (which, as the science of the holy : the Holy Ones : is the science of the first principles, or science of the whole universe, viewed under its *big lines*) with conceptions characterised by a truly preposterous triviality. As an instance of what we mean we here give a collection of definitions now current as to the meaning of this very institution of sacrifice with which we have been dealing, culled from the eleventh edition of the *Encyclopaedia Britannica* :—

Sacrifice is the ritual slaughter of an object.

Sacrifice is the slaughter of a victim by effusion of blood, suffocation, fire, or other means. (These two are the definitions put forward by the writer of the article himself)<sup>1</sup>.

Sacrifice is a religious act which, by the consecration of a victim, modifies the moral state of the sacrificer, or of certain material objects he has in view. (Definition of MM. Hubert and Mauss.)

Sacrifice is a procedure whereby communication is established between the sacred and profane spheres by a victim ; that is, by an object destroyed in the course of the ceremony. (Same authors.)

Sacrifice is originally a gift, offered to supernatural beings by man, for the purpose of securing their favour or minimizing their hostility. By a natural series of transitions, the ' gift ' notion became transformed, in the minds of the sacrificers, into the homage theory, which again passed, by an easy transition, into the renunciation theory. (Dr. Tyler.)

Sacrifice is a means of uniting men and their god in a common bond by eating together a *common meal*, i.e. the animal destroyed and eaten. According to this theory, the sacrificial victim is, in certain forms of sacrifice, itself regarded as the God which, accordingly, establishes the common kinship of the sacrificers and their sacrifice (the eaten God) by the fact that they have incorporated the latter within themselves as divine food. (Dr. W. Robertson Smith.)

Sacrifice is a sacrifice of the God himself in order to save his worshippers from the evils which beset peoples who have a senile, impotent God. Hence the ritualistic putting to death of the Man-King-God, and the annual sacrifice of the Spirit of Vegetation (Corn-Spirit). (Sir J. G. Frazer.)

Sacrifice is, originally, a magical rite consisting in the effusion of the victim's blood, which same serves to liberate a power

<sup>1</sup>N. M. Thomas.

which bends the will of the Gods to the fulfilling of the sacrificer's desire. (L. Marillier.)

**Sacrifice** is a mode of establishing kinship between the sacrificers and their God by means of sacrificing the latter conceived as embodied in the sacrificial victim. Contact is established by means of the saving blood smeared on the altar. (Same author.)

**Sacrifice** is an act of substitution according to which the sacrificial victims pay a penalty which is, actually, due from the sacrificers themselves. The sacrifice in certain cases serves to remove a traditional curse which weighs upon the sacrificers. (Dr. Westermarck.)

Now, as we hold, not only are these definitions vitiated by the characteristically modern assumption that primitive man was an unenlightened ignoramus whose ignorance was multiplied by the boundlessness of his superstitious fears, but also by a total absence of that breadth of outlook which alone is appropriate where what is in question is a fundamental concern of human culture. There is, indeed, a genuine kinship between the two attitudes. Now, as against this assumption that primitive man, playing about with his almost imbecile notions<sup>1</sup>, contrived to put together a philosophy of (for instance) sacrifice which, though almost indistinguishable from a nightmare, was yet accredited by him and put to the most serious uses, we hold the view that, at or somewhere near the beginning of the history of the human race, man was divinely (*i.e.* instinctively, automatically) put in possession of a knowledge of *the characters* of the elements of the scheme of things in their big lines, and that this same revelation amounted to *philosophic* knowledge which served primitive man in the capacity of a divine overture to the great symphony of human knowledge later to be arrived at by the exercise of men's own conscious and deliberate searchings after knowledge. That is to say, the difference between our view and the foregoing as to what was operative behind primitive religious practice amounts to this, that, whereas the current view considers such ideas to be the embodiment of all that is foolish and ignorant, we see in (what is left of) them the fragmentary remains : the decaying remnants : of what, originally, was man's *perfect* (because automatically bestowed)

<sup>1</sup>That great authority, Frazer, has recently entered a protest against the view which associates imbecility, almost, with the 'savage mind.'

*wisdom* concerning the scheme of things in their *big lines*: a wisdom which formed primitive man's divinely-bestowed birth-right, and which, lingering on in the explicit forms of (1) the revelatory institution of the divine scriptures; (2) the human institution of the moral consciousness, lingered on also, implicitly, in the forms of certain organised social institutions by the aid of which man, through vast ages of human development, has had to steer his moral course along that cosmic way constitutive of the law of motion which has been made dangerous for him by his unique endowment of freedom (choice of action: 'freewill'). Our view is thus one which enables us to see reason in the entire fabric of primitive religious practice, all broken down and degenerated in form as much of it has become and imperfect as our records of it themselves so often are.

Now, it fortunately happens that a finely-preserved ancient record exists on this very subject of the sacrifice which, if it does not go back to the truly primitive ages of man, at all events goes back as far as the oldest literary monuments of the Aryan peoples, *i.e.* to the Vedic hymns. Thus, in the Vedas, *sacrifice* is invested (to the great bewilderment of modern commentators) with a patently cosmogonic significance. To such an extent indeed does the Vedic glorification of the sacrifices and the sacrificial agents go, that the commentators, failing to understand the imagery, have brought against the authors of the Vedas the charge of being guilty of an especially aggravated type of sacerdotalism. That is to say, identifying the sacrifice celebrated (and so conspicuously exalted) in these hymns with the secondary (ritualistic) type of sacrifice merely, and the World-Priest celebrated with officiating creature-priests, the critics have felt that no verdict was possible other than that the priestly authors of the hymns in question were most unwarrantedly, indeed impiously, magnifying their office. But, when we remind ourselves that that which is at question in the institution of sacrifice is the character of the scheme of the universe in its entirety, which same was considered to be such that *one* of the two primary sacrifices (one of the two sublime cosmogonic entities which constitute the world-soters) is cosmically called upon to fill a rôle which religious ritual

mimicks in the character of priest (*hierophant* : revealer of the world-mystery), while the other sublime entity finds portrayal as the *altar* which itself *is* the world-mystery *i.e.* the Logos, these hymns present themselves not as pieces of sacerdotal effrontery but as possessed of a quite awe-inspiring measure of philosophic (*i.e.* scientific) insight. Thus, the prototypal sacrifices (a submerged world-altar and an immolated world-priest) are entirely of the cosmogonic order, consisting as they do in that divine pair (the 'heavenly twins') whom an earlier world-age had learnt to know by the names (among many others) of:-

Kore and Kouros (Kyrios ; Triptolemos ; Dionysus ; Osiris) ;  
 Charis and Christos ;  
 Aisa ('Jesu') and Iason ;  
 Iona and Ion ;  
 Pallas Athene and Erechthonios ;  
 [Aesclepia] and Aesclepius ;  
 Helen Soteira and Paris Alexandros ('helper of men') ;  
 Libera and Liber ;  
 Eurydice (Dike) and Orpheus.

The mundane priestly officiants at the ritualistic altar were thus merely seeking to mimic in the usual (and quite correct) spirit of human ritual generally, the relationship which exists between these two primary sacrifices and the created world whose destinies eternally they save. For the two world-healers, the Cross and her Christ, by submitting to their own effacement and ultimate 'death,' maintain the universe in health, rendering the decay and death infecting the third party to the cosmogonic trinity a matter of seeming merely.

Now, in connection with this illustration afforded by the Vedic hymns belauding sacrifice and sacrificers, we would make the following observation relative to the efforts of our scholars to solve the outstanding problems of scholarship, *i.e.* that the pre-condition of any successful attack upon the problems which confront scholars probing into the ancient world-literatures is a firm grasp upon the following<sup>1</sup>:-

- (1) Religion (theology) is the science of the first principles,  
 Heaven and Time ;

<sup>1</sup>This position is gone into in detail in a later volume.

- (2) This science has been in the possession of the human race from a time now so remote that we cannot date it by any of the ordinary historic witnesses ;
- (3) A knowledge (more or less intimate) of this science is to be inferred as existing in the minds of the authors of all the most ancient of existing religious documents.

Our diagnosis of the situation thus finds the main trouble of scholarship to reside, not in the texts, but in the fact that the translators are destitute of the key to the cycle of ideas which formed the underlying assumptions of the by-gone authors whose works they are searching into. Furnished with the key, the work of interpretation and translation would (we contend) prove comparatively easy. For, whereas, without the key, any one of a score (so to say) of versions would seem to fit equally well as the rendering of a given difficult passage, with the key, one meaning solely shows itself the correct one. Let us give instances:—Professor Burnet, in his valuable *Early Greek Philosophy*, brings into question that generally accepted claim that Heraclitus was a teacher of the indispensable religious doctrine of the *magnus annus*, and decides, judging from the texts, against the traditional supposition. But (as we contend) had the writer probed deeper into the meaning of ancient symbolism, he would have understood, quite independently of his minute scrutiny of the texts, that Heraclitus *must* have been a teacher of this doctrine. For one of the most outstanding of the Heraclitan texts is that which asserts that it is the *thunderbolt* which 'steers' the course of events, while the burden of another such text is that it is the *Logos* which fills this cosmic rôle. But, as we know, the 'thunderbolt' was one of the (many) symbols of that cyclic Law whose cyclicity [built on the thunderbolt (*i.e.* cruciform) pattern] itself *entails* the Great Year. Hence, as we argue, deny that Heraclitus taught the dogma of the Great Year, and you reject all the most significant part of Heraclitus's teaching as embodied in the most unquestioned of his texts. A second illustration can be found in that controversy about the origin of the Greek (or any other national) drama, in which, let us say, Mr. Pickard-Cambridge opposes Miss Harrison, Professor Gilbert Murray and Mr. F. M. Cornford. Now,

although most of the textual evidence (construed without the key) seems to support Mr. Pickard-Cambridge, we are convinced that the truth will be found to lie very much more *in the direction of* his opponent's view than in that of his own. Or, again, we might mention that still unexplained matter which has been made world-famous by Sir J. G. Frazer's fascinating *Golden Bough*: the meaning of the ritual connected with the Priest of Nemi. Unaided by the necessary clue, Frazer, after thirty years of labour (and immensely fruitful labour), closes his book with his riddle unsolved. The 'key,' on the contrary, explains this particular piece of ritual down to its minutest detail<sup>1</sup>. This, however, is too important a matter to break ground on in this cursory manner and we pass over it. And, indeed, the list could be indefinitely extended by instances illustrating that what, above all things, modern scholarship is in need of is, not more scholarship (high good, as, of course, this is in itself), but a deeper understanding of what constitutes the fundamentals of the religious consciousness. That is, what is required is a re-definition of the term Godhead which will make clear what the animating principle is behind all religious belief and ritual; hence, what is the animating principle behind all early human culture, early culture being so pre-eminently religious. This is the key which (we say) will open a thousand stubborn locks.

<sup>1</sup>We hope to show this in vol. iii. (*The Immemorial Cross*).



## CHAPTER X

### " SPACE-TIME "

We precluded our definition of the Godhead with a study designed to prove the reality of Space and Time, and we find it necessary to follow it with an argument to prove *the mutual differentiability* of Space and Time: to prove, that is, that the modern notion of a unitary 'Space-Time' is erroneous, and, indeed, very pronouncedly so. To this end, we again draw attention to the fact that, in defining the members of the Godhead as the *dual* elements, we are reverting to the dualist viewpoint which, obtaining at the very outset of European science, was displaced by a monistic view of the elements. The modern doctrine of 'Space-Time' is thus no new doctrine but (we contend) just a passing rehabilitation of one of mankind's most ancient errors:—It is an important historic fact (but one which, rarely if ever, has its full significance accorded), that the Ionian Greeks among whom historic European speculation opens were in possession of this exceedingly important item of knowledge *i.e. what the Gods are*. And not only so, but the concern with which the Ionians primarily concerned themselves—and it was a concern in which they were generally successful—was that of deciding *who* the Gods were: a still deeper implication of this same matter. Thus, in tune with earlier mythopoeic thought, the Ionian Greeks (and all later Greeks in this particular regard), started from the assumption that certain substances existed 'in the beginning.' Now this latter phrase is one we must pause over. What, let us ask, could those entities be which existed 'in the beginning;' before ever the world of creation was, that is to say? What, indeed, but the very 'beginnings' ('radicals') themselves, the increate, indestructible elements, the *archai, noumena, numina, theoi*, the dual Godhead which our earliest European science recognised them as? Hence (we conclude) the difficulty of cosmogonical science at the stage at which this had arrived in (let us say) the sixth century B.C. did not consist in having to state what existed 'in the beginning' prior to the birth of the world of creation. For this they knew, *i.e.* that it

was the beginnings (the elements or radicals) which existed 'in the beginning.' The essential cosmogonic difficulty rather consisted in stating the scheme of the cosmic 'plan of salvation'; that is, in stating how, granting the existence of the *archai* or *beginnings*; and granting also that creation exists only in virtue of a twining-together of the diverse substances of the *archai*, such world (creation) could possibly *be an absentee*. The central cosmogonic problem thus lay in picturing how the two *archai* could co-exist eternally in one and the same universe and yet *not* be intertwined; how they could co-exist, from time to time, in such a relationship of mutual segregation and isolation (in such a suspension of those intertwinings of their substance which give birth to the items of the world of nature) as would enable to obtain that condition of the universe indicated by the phrase 'in the beginning': the condition in which the world of nature *is absent* from the universe. In other words, it consisted in showing how Space and Time can co-exist as two very markedly differentiated types of being and *not* as a henid, non-differentiable complex such as goes under the modern title of 'Space-Time.'

Now, to explain how this state of segregation from one another of the dual beginnings (*archai*: *noumena*: *numina*: Space and Time) was conceived to obtain by those familiar with primitive theology, we must take note of a certain conception (already touched upon in chapter v) which perpetuated a very primitive piece of religious understanding which appears, for instance, in the more ancient hymns of the *Vedas* and in the Egyptian *Funeral Ritual*. This is the conception of the universe as organic and personal, exhibiting life bedded within life almost to infinity. It is the conception in particular, of the great Absolute (the 'One Being') as personal, the Being who, as the *Book of the Dead* puts it, is 'greater than the Gods' in that she contains within herself Gods and mortals equally, containing the two 'persons' of the dual Godhead as her two vital organs: lung and breath. It is thus the conception of the entire universe as alive in the sense of possessing *a breath* (which same is the principle of motion: God the Father: the world-Christ) whose coursings through the One's immaterial

body (*i.e.* through *Space*, God the Mother, as characterised by her *logos*, motion's law, the Time-bed, the *world-lung* containing the 'seeds' of things) effect the incarnation *i.e.* bring the immanifest spatial 'seeds' (souls) lodged in the world-lung into manifest, natural, compound, materialised being. Thus, according to this conception, it is as true—and as necessary—to say that the universe is alive (in the sense indicated) as to say that it *is*, or that it is *one*, or that it is *great*, or that it has a *body* (*immaterial* body, of course, *i.e.* Space). It is alive essentially, that is, not by accident. Now, the universe's 'life' thus conceived as its basic and inalienable feature is the image according to which a world-old culture explained the riddle of how the world of creation could be said to have had a beginning. To show how this was done, let us exhibit this primitive teaching concerning the 'One who is alive' under the terms in which it persisted into historic times. On this point, we have the testimony of Eusebius, who, discussing the opinions of the Pythagoreans (the latter the theological body which salved for mankind much of the early divine gnosis: primordial Christianity: primitive religious wisdom), says:

[The Pythagoreans say that] "Outside the world, there is a vacuum into and out of which the world breathes<sup>1</sup>."

And Aristotle confirms this:

"The Pythagoreans affirmed the existence of the void, affirming that its infinite breath penetrated the heaven itself. The heaven would breathe the void which delimits natures. The void would separate consecutive things and fix their limits<sup>2</sup>";

a difficult passage which might, perhaps, be interpreted as follows:

"The Pythagoreans affirmed the existence of a vacuum [beyond the firmament], affirming that the infinite breath of the latter penetrated into the heaven [beneath the firmament]. The [highest] heaven would breathe into the Space [beneath the firmament] which latter delimits [delineates] natures [*i.e.* contains the Logos or 'inner seat of gravitation' which itself contains the individual 'natures' or world-seeds]. The void would thus separate consecutive things ['seeds'] and fix their limits."

<sup>1</sup>Eusebius, *Præp. Evang.* IV. xl, citing P's.-Plutarch, *De Plac. Philosophorum*. Gifford's translation).

<sup>2</sup>Aristotle, *Physics* IV. v. i. 213 B. 22.

Of course, this view was not Aristotle's, nor is it ours, in that, like Aristotle, we hold by the dogma that the mobile energy of the universe is confined (and, so, conserved), within the heavenly orb which is bounded by the firmament. That is, we do not conceive the Time-stream as periodically entering the region of hyperouranian Space but, rather, we conceive that, upon the 'inspiration' of each single world-breath, the latter exchanges extensity for intensity after the manner of a periodically re-wound spring. That is (again), when All-Time has been inspired: in-breathed: we conceive it as existing within point-dimensions at the centre of the ouranian Heaven: the point anciently known as Alpha and Omega. We do *not* conceive this stream as having run off elsewhere, but as existing at the point named at its full strength, but this strength totally converted from kinetic into potential energy. This point apart, however, we are concerned here approvingly to note that this primitive view of the universe as 'the everliving one' persisted far on into Greek culture of the historic period, thereby putting the latter in possession of the ancient notion that one completed round of Time the world-breath (one breathing-out *plus* one breathing-in) constituted a single aeon or age of the world. Thus (so ran the imagery), when the great living (breathing) 'one' breathes forth, Time the incarnating, resurrective agent begins to run, and the world of nature begins to be in response to the working of rills of the breath-stream about the seeds (souls) lodged in the Logos or law of motion. When however the One indraws her breath, such world perforce gradually expires. Thus, in and out, the naturalised forms of the created world were conceived as going in response to the rhythmic breathing of the all-living One. Here, then, we have (as we hold) a most valuable concrete image as to what 'in the beginning' meant for early thought. 'In the beginning' was that moment in cosmic history when the world-manifesting breath of the 'One and All' rested in a cosmic sabbath on the mount of God: on Alpha and Omega: on the very summit of inspiration: resting there as the breath of living things does rest because of the rhythmic character of this organic function *i.e.* breathing.

Now, assisted by this concrete image as to *what* the

beginnings (*archai*) are, and as to *when* 'in the beginning' is, we can survey the postulates (more or less unconsciously adopted) of our earliest European scientists with a much more competent understanding. Thus, the early Greeks took the positions for granted (without troubling definitely to advance and defend them) that certain fundamental stuffs in the universe exist eternally (*i.e.* whether the world of nature happens to exist or not), and that, out of these, the world of creation is made. These stuffs are (1) the substantial but immaterial and characteristically static 'matter of things' (*meter* : *mater* : *matter* : *mother* : *world-mother* : *hyle* : *protohyle* : *materia prima* : Heaven : Space) inwrought with her own characteristic immaterial seeds or forms which are lodged in her 'character,' the world-design, the Logos, the law or sluice of motion; and (2) the mobile, fertilising stuff which has as its function the 'making manifest' of the invisible seeds lodged in the 'character' of the world-matter or mother, a function which it effects by embroidering, with its own thread-like substance, the outlines of the seeds, thereby rendering these latter compounded, visible, material. Accordingly, in view of these presuppositions (they are the most widely-accepted presuppositions of Greek thought), we ought not to be surprised to find the Ionian Greeks habitually describing these elements under a definite category: that of *athanatos kai ageros*; the 'deathless and ageless': a stock descriptive phrase which never ceased to provide the Greek scientific thinkers with a term under which they could—and did—indicate divinity. Now (as we hold), this fact that, for the Ionians, the attribute of 'deathless and ageless' indicated the *theoi*: the Gods: is one which no one can ignore who would truly grasp the inner thought of the Ionian 'physicists'; for it establishes for us the important truth that it was not the Ionians who were responsible for that devastating duplication of terms which we meet, for instance, in Aristotle, and according to which one speaks of the *Gods* PLUS the *elements*. Rather, the idea they set out from was that of the *Gods*, NAMELY, the *elements*. It proves to us, that is to say, that when European scientific thought first reveals itself to history, it was already in possession of that superlatively valuable

characteristic of economy which makes the application of Occam's Razor needless: a characteristic which, in Aristotle's philosophy, it has so completely lost. And it proves to us also that the Ionians were not, in the pernicious sense, monotheists: were not, that is, what Aristotle so misleadingly suggests they were<sup>1</sup>: holders by the doctrine of the *one element*. For what the Ionians virtually professed was *not* monotheism (a monism of the elements: the Gods) but monism (a monism of existence: of the universe: of the 'One Being') a very different thing. Thus, Ionian and Italiote thought regarded as 'deathless and ageless' not merely one of the two *theoi* (first principles or 'beginnings'); not merely, that is, the three-dimensional static principle, Heaven, but the second, mobile principle also. As to the first, either under the name of water (the celestial water); or that of the infinite or unlimited (*apeiron*); or that of air, or heaven, or rest, or cloud, or fog, or chaos the yawning gap, or the aether, the early thinkers one and all (save perhaps Heracleitus), left no loophole for doubt that they held Space to be a divinity, the pre-eminently divine entity of the universe, the so-powerfully-divine that it could be regarded as carrying the second divinity (*i.e.* Motion: Time) with it (*i.e.* in it) as its permanent tenant. "Our Father which art in Heaven." As to the eternality attributed to the second of the two first principles (the mobile, linearly-self-disposing principle), on this important point let us quote Professor Burnet:—

"According to Aristotle and his followers, the early [Greek] cosmologists believed also in an 'eternal motion,' but that is probably their own way of putting the thing. It is not at all likely that the Ionians said

<sup>1</sup>The following passage from Aristotle himself already quoted in chapter v gives a very different account of Ionian opinion from that which Aristotle has made us ordinarily associate with these early thinkers: "Without exception all [the ancients] (*i.e.* the Ionian and Italiote thinkers) take contraries for their principles. For instance, those for whom all is one and immobile (for Parmenides himself takes as his principles the hot and the cold which, at times, he styles fire and water) do so; and so do the partisans of the rare and the dense; so does Democritus with his full and the void, the former of which is, in his opinion, being, whereas the latter is non-being . . . . We see then that all the philosophers, each after his own manner, take contraries as their [first] principles. And rightly . . . . To this extent then there is a general agreement: an almost unanimous consent. All take contraries as their elements (as their principles, as they say) though they do so without any reasoned motive . . . . Some take such as are the most readily apprehended by the exercise of the reason; others take such as are the most readily apprehended by the senses: some take the hot and the cold; some love and strife . . . . There is a superficial disagreement but an essential agreement on the main theme [which is] that the principles or elements must be contraries." (*Physics*, 1.7).

anything about the eternity of motion in their writings. In early times, it is not movement but rest that has to be accounted for, and it is unlikely that the origin of motion was discussed till its possibility had been denied. As we shall see, that was done [*i.e.* denied] by Parmenides, and, accordingly, his successors, accepting the fact of motion, were bound to show how it originated. I understand Aristotle's statement, then, as meaning no more than that the early thinkers did not feel the need of assigning an origin for motion. The eternity of motion is an inference which is substantially correct, but is misleading in so far as it suggests deliberate rejection of a doctrine not yet formulated."<sup>1</sup>

But, as we construe the matter, the fact of the eternity of motion (of Time) was one so wholly accepted by the Ionians that they did not even sense the need for making an express affirmation concerning it. That is, the dogma stood, unquestioned, as one of the pre-existing assumptions of their reasoning, and it is the fact *that* it did which determines for us the meaning of their monism, proving to us that, while they were ontological monists, they were cosmogonic dualists; proving, that is, that they were not monotheists but trinitarians. And, moreover, if the early Greek 'physiologers' who used the qualitative type of language did *not* take the trouble to say that motion (Time) was an element and, therefore, a God, their poetical, mythologising contemporaries did take such trouble in that they—for instance, Pherekydes, Pindar, and the Orphics—made the God Chronos basic to their systems. Hence (we hold) both Heaven (Rest, Space) and Motion (Time) are to be considered as having been regarded by the early Greek thinkers as equally 'deathless and ageless,' equally eternal therefore; both of them being, not merely 'at' the world's beginning but the world's 'beginnings' themselves; and no mere extraneous considerations ought to be allowed to distract our attention from the very significant implications of this position. We mean, when the Ionian thinkers plainly assert that what they understand by the term '*theos*' is that kind of substance which is deathless and ageless, we ought to accept their statement as full and frank, believing that these early 'qualitative' philosophers knew definitely what they were talking about, and, likewise, that a 'personalising' (*i.e.* mythologising) philosopher like their contemporary Pherekydes, knew what he was talking about

<sup>1</sup>J. Burnet, *Early Greek Philosophy*. p. 12.

when, for instance, he said that Chronos (Time) was the father of the four created elements (the latter term *element* here being taken as meaning a part of the created cosmos). Thus the sceptical manner in which the historian Zeller, for instance, deals with Pherekydes on this particular head (asserting, as he does, that such an 'abstract' thing as Time could not have been regarded as the generator of the forms of nature), seems to us a rejection of the means which exist of arriving at an understanding of the culture of our predecessors.

Now, let us pose the following important question:—Supposing that the earliest Greek thinkers thus knew what the Gods were, what were the causes which led the Greeks of a later period to believe that this their original and stock definition of the *theoi* was inapplicable to the members of their pantheon? Or, to vary the form of the question:—What were the causes which contrived to transform an initial Greek gnosticism into the familiar Greek agnosticism, which latter, in its turn, served to render all later European culture basically agnostic? Now, while adequately to answer this question would demand a treatise, we here put forward what we regard as the principal cause of this state of affairs, and we do so in terms of an affirmation to arrive at which we entered upon this wide digression into the beginnings of qualitative science in Europe. The occasioning cause of Greek agnosticism was, we hold, the *confusion*, inadvertent or other, into which later Greek philosophers fell in respect of the Gods and that 'One Being, greater than the Gods' who embraces alike both Gods and mortals. It was the confounding of the all-comprehensive entity now with this and now with that of the two elements: the two supernatures. That is, the principal cause of the later philosophic confusion of the Greeks was a confounding of *monism* with *monotheism*: a true thing with a false thing: the exceedingly false thing which brought both the Eleatic and Heracleitean schools of philosophy to a state of impotence, and precipitated, almost at the outset of our European cultural history, the sophist movement and the Greek sceptical movement generally. And it was this same error, which, later, nullified Aristotle's onslaught on Ionian monism (the latter a far less pernicious—because less rigid



—form of monism than the Aristotelian). It was the same error, again, which frustrated the Stoics (after the time of Stoicism's founder, Zeno of Citium: an unrecognisedly great intellect, as we conjecture, and a true cosmogonic dualist) in their efforts to give an intelligible statement to their physical principles; while, later, it baffled completely the Christians in their attempt to give an intelligible meaning to their foundational dogma of the Trinity. And it baffled, too, their neo-Platonist rivals; while, later, it brought the promising culture of Arabia to a close in the formal confession of intellectual impotence of an Al Ghazali. And it bewildered those early scholastic philosophers of whom John Scot (Erigena) was the most eminent; and, because of the difficulties in which it involved the dogma of the Trinity, it led to a ban being put (1272) upon the free play of the human intellect within the mediaeval Christian church to the extent of causing the 'mysteries' of the Christian faith (the quintessence of such faith) to be withdrawn from the list of themes which the scholars and doctors might make the subject of their dialectic exercises. And then, too, it bewildered Descartes, hiding from him (as from Aristotle before him) a knowledge of the master-truth that, in cosmogony, it is not a case of the Godhead *and* the elements, but of the Godhead, *namely*, the elements. And it prevented Newton from formulating correctly his correct (as we hold) views as to the absolute character of Space and Time, while it proved intellectually inhibiting in the critical case of Faraday in those valuable philosophic ruminatings of his upon the wealth of electro-magnetic phenomena which, at the beginning of the second quarter of the last century, he was beginning to make evident to the world of science. And it is also (to bring the argument down to this immediate present) the influence which (as we would respectfully suggest) deprives a present-day philosophy like that of Professor Alexander (a foremost exponent of the twentieth-century version of this error of cosmogonic monism *i.e.* the doctrine of a unitary 'Space-Time') of its means of going powerfully forward: a deprivation which comes out particularly in respect of this modern philosopher's treatment of Time. Thus, says Professor Alexander:

"Time is . . . the abiding principle of impermanence which is the real creator. Or, to descend from such high phrases, it is a kind of cosmic *gendarme* who makes stagnation impossible, and at once creates the movements which constitute things and keeps things in movement; *Circulez, messieurs*. If it be true that Time is the mind of Space, or, rather, if Space . . . has something standing to it in the relation of mind to body, and that something is Time, then, for us as for certain Greek philosophers, soul is the source of movement<sup>1</sup>. . . Time is the soul of its Space, or performs towards it the office of soul to its equivalent body."<sup>2</sup>

But, as we contend, the difficulties which an intensive analysis of Time make evident are such as to forbid acquiescence in any of the following of Professor Alexander's affirmations *i.e.*

- (1) that Time is soul;
- (2) that Time is the cosmic *gendarme*;
- (3) that Space is related to Time as body to soul.

Nor do we feel we can concede the claim that the Greek philosophers who are in question here, implied that *Time* was that 'soul of the world,' which, as they undoubtedly said, generated movement. Rather, how these Greek philosophers should have their doctrine construed is on lines like the following:—*Space* is the 'soul of the world' generally. One certain region however of Space (in shape a cross: the letter chi, *i.e.*  $\chi$ , as Plato says in the *Timaeus*) is the quintessential soul of the world; soul of the world-soul, as we might put it. And this specific region of Space constitutes that inner, movement-governing (Time-governing) soul of the world which, as the world-lung, constitutes the 'inner seat of gravitation,' and, so, directs the movement of Time, the world-breath. Hence, *this* entity it is (a spatial entity, not a temporal, it is to be noted) which is the cosmic *gendarme* with its eternally repeated: *circulez, circulez*; for this entity (obviously, it is the *Logos*) it is which, as the white-gloved regulator of the cosmic traffic, is the embodiment of *the Law*. Hence, while we may see in the Time-stream the 'abiding principle of impermanence,' we do *not* see in it the cosmic *gendarme*: the world-policing *Logos*. Rather, we see in it the personified world-mobile (car and chauffeur in one), who may move only in obedience to the hand-sign which is the

<sup>1</sup>S. Alexander, *Space, Time and Deity*, vol. ii, p. 48.

<sup>2</sup>*Ibid.* vol. ii, p. 345.

Law. As for the world of created things (and events) of which Time is part-creator, bringing such creations at once into being and into subjection to the cosmic law, *this* we may regard as the occupant of the Time-drawn car. To abandon metaphor, however, what we would here say is that this entire philosophy of 'Space-Time' is attempting to make headway under the overwhelming handicap of having to state the situation as regards creation (nature) with one of the two cosmic creators of nature missing: a handicap which inevitably leads to a confounding together of two such pronouncedly antithetical terms as:

- (1) motion and the law of motion ;
- (2) world-breath and world-lung ;
- (3) world-minder and world-mind ;
- (4) world-spirit and world-soul.

For (to fix upon the third antithesis of the four given above), we are required to say that, inasmuch as differentiation should be made between Space in its entirety (that is, between the 'soul of the world' in its entirety) and that inner region or sanctuary (Plato's *chi* or cross) of Space which constitutes the Logos, the cosmic sluice or Time-course, we shall be well advised to give to this cruciform spatial sanctuary the name of the world-mind. Then, to the Time-stream—whose energies that mind is designed to direct and safeguard through the vast expanses of the 'soul of the world' as a whole—we could give the name of the *world-minder*. That is, Time is properly to be regarded as the world-spirit whose pleasure it is 'to mind his step' so as not to trespass beyond the precincts of the world-mind: the cosmic *law*. Indeed, in the fact that this is Time's rôle, we discover what are, in truth, the *cosmic bases of morality*.

## II

Now let us examine in somewhat greater detail one particular rendering of cosmogonic monism: the rendering which we might call twentieth-century or (since it was the mathematician Minkowski who gave it its first great fillip) Minkowskian monism. However, before doing so, let us set out certain views to show

why one ought to feel in better prospects of getting satisfactory results by grounding the science of the first principles on such primitive imagery as that which (as we have shewn) Pythagoras and his school salved from primitive mythology, than by grounding it on the 'Space-Time' notion of this brilliant mathematician, Minkowski, who, passing away in his early prime, had not the full advantage of those precious second thoughts in philosophic speculation the bare thought of the deprivation of which would fill many of us with dismay. What we have here in mind to say is that, in touching upon these entities, the first principles (Space and Time), we are touching upon entities which, sensorily-apprehended though they be, are yet entities so vast in extent that the comprehensive science of them in their big lines (which is what the science of the first principles is) has, perforce, to take on the character of an *interpretive* science. That is, the worker in the science of Space and Time (first principles) has to adopt a method of inquiry identical with that which, for instance, a detective uses when, put into possession of certain ascertained facts as pieces of evidence, he has to build up from these as data an account of things he has never seen and never can see. That is (again), the worker in the science of the first principles, being unable to go to the far ends of Space and Time to pick up, firsthand, the knowledge which the science requires, has to put into play that common sense—which is so very uncommon—which consists in the powerful display of the re-constructive imagination, and ask himself : if these (*i.e.* the two supernatures : Space and Time) be the original factors of the situation, and that (*i.e.* nature) be the product of their interplay, after what manner have we to conceive these creative factors' function and character in order that they shall be seen to have the power to produce it ? He has to employ, that is, that age-old method of scientific inquiry which has been newly named that of 'conceiving a mechanical-model,' a method which is (or was until recently) duly honoured in this country (and elsewhere) on account of its great fertility in scientific results, and its great power to assist scientific discovery generally. Further (so it is necessary to point out), choice does not lie within the competence of the

worker in the science of the first principles to employ such method or not employ it; for it is of the very essence of theories of the rank of first-principle theories that *they shall be interpretive* and not leave us involved in as much doubt and confusion as they found us (or more, even). That is, 'dead end' theories (*i.e.* theories either having their bases in, or finally ending up in, any one of the many brands of intellectual nescience or agnosticism) are to be recognised as *self-contradictory* in the sphere of the science of the first principles; for the reason that, simultaneously, they are embarking upon interpretations of the scheme of things and declaring any interpretation to be an impossibility. Accordingly, where the science of the first principles is concerned, commonsense says that one must either be an interpreter or keep silent, such science being *essentially* interpretive. And not only so; theories of the rank of first principles theories are required to interpret *poetically*. Why is clear:—The science of the first principles (as being the science of the eternal realities) will always contain within itself the stuff of poetry in that all poetry worth the name consists in giving such an account of 'things temporal' as causes these to be seen transfigured in the light of their relation to the eternal. That is, the science of the first principles *necessarily* presents all mundane things in the light of the eternal, while so to present them *is* poetry. Hence the reason that the substance of all the myths is poetry, the great world-myths being pre-eminently the linguistic vehicles in terms of which the primitive divine revelation concerning the structure of the universe in its big lines (primitive science of the first principles) was promulgated. Hence, too, the reason that the early poets (*e.g.* Homer and Hesiod) went by the names, at once, of mythologers, sages, philosophers, teachers, theologians. That is, the poets were originally regarded as essentially *sophoi* and *theologi*. Hence, it is not primarily the fact that the primitive myths are couched in the personalising order of language that makes them poetry. The myths are poetry primarily because of *what they tell*, not because of the form in which they tell it. There are, however, secondary reasons why the findings of the science of the first

principles must necessarily equate with the substance of poetry. For instance, anyone who hopes to succeed with the science of the first principles must be prepared to bring to the inquiry certain specific qualities which, themselves, are the outstanding qualities of all great poetry: the qualities of (1) size; (2) simplicity; (3) clarity; and it is (we might here add) for this reason that the science of the first principles is no sphere for the energies of the half-hearted. Rather it is a science which calls for a mental courage great enough to dare those great mental sweeps through the universe-in-its-entirety which involve such profound intellectual and ethical consequences.

The reason that the image under which the first principles are conceived must have the attribute of superlative size is that the entities here under consideration are, quantitatively as well as qualitatively, superlatively *great* entities, while the aspects of them which the science of the first principles expressly deals with are their most extended aspects: their big outlines: in that it is such outlines which determine how the universal scheme hangs together as a complete working-mechanism. Accordingly, entirely in vain will one attempt to deal with these questions under images which are mundane in character and ordinary in dimensions. To attempt to handle the superlatively great with ideas appropriate only to the ordinarily-limited is obviously to invite failure: a simple assertion, in truth, yet one which, in this particular regard, is but seldom either borne in mind or taken account of in practice. And similarly as to clarity and simplicity. For the attribute complementary to the big outlining of things (and this—we repeat—is what every veritable attempt at a science of the first principles involves) is simplicity, the activity of outlining necessarily involving simplification. But, concerning what is simple, one can obtain notions which are, pre-eminently, clear. Hence, one who would follow this science successfully must be prepared to use ideas which have the great *poetic* qualities of size, clarity and simplicity; and our strong belief is that the failure of the moderns and the success of the primitives in the sphere of high science are effects due, respectively, to the nebulosity of the one and to the clear-cut, simple yet majestic imagery of the other. It forms, indeed, a

very ironical fact that, while the ultra-modern age of philosophy has narrowed itself down so very largely to the study of epistemological problems, our modern thinkers are totally unafraid of the presence of vagueness in their conceptions. One would have imagined that any assiduously-cultivated epistemology, however limited its measure of success, would have been capable of establishing firmly the elementary epistemological truth that that which is to be feared (and, so, shunned) where ideas are concerned, is nebulousness: the inadmissibility of a clear visualisation (the preconditions of that 'I see' or 'I visualise' which common language has made a synonym of 'I understand') of the sense-forms to which our ideas primarily have reference. For it is with *these* qualities (vagueness, nebulousness, non-visualisability), that the unknown and unknowable take up their residence, not with the fundamental realities: not with the *numina*: not with the *noumena*, things-in-themselves. For these latter are wholly definite entities, and, because they are, the mind can, if it will be at the trouble, get a completely satisfying mental grip of them. But our modern thinkers have fallen (very innocently, without any realisation of the mishap which has overtaken them) into the bog of the vague and non-visualisable, and, so, have posed to themselves issues which are false issues: issues which are *no* issues indeed, and so *have* no issue: being self-contradictory propoundings produced by the mind's own cloudy bewilderment. As an instance, we cite that of a fourth dimension<sup>1</sup>: a notion which, to-day, is allowed a quite reputable standing among scientists. Another instance is

<sup>1</sup>One has in mind such a use of this term as is made in the article on *relativity* in the 12th and 13th editions of the *Encyclopaedia Britannica* with its illustration in terms of a pile of glass plates. What the notion of a fourth dimension truly has its origin in can be gathered from the following:—"In geometry of three dimensions, that of space, any point can be reached from a chosen one by three marches, one east or west, one north or south, and one up or down; and we shall see that an algebra of three variables is all that is necessary [for geometrical exploitation]. With three dimensions actual geometry stops, but algebra can supply any number of variables. Four or more variables have been used in ways analogous to those in which one, two and three variables are used for the purposes of one, two and three-dimensional geometry, and the results have been expressed in quasi-geometrical language on the supposition that a higher space can be conceived of though not realised, in which four independent directions exist, such that no succession of marches along three of them can effect the same displacement of a point as a march along the fourth; and similarly for higher numbers than four. Thus analytical, though not actual, geometries exist for four and more dimensions. They are, in fact, algebras furnished with nomenclature of a geometrical cast, suggested by convenient forms of expression which actual geometry has, in return for benefits received, conferred on algebras of one, two and three variables." (*Enc. Brit.* 11th ed. (1910), vol. xi, p. 712: article *Analytical Geometry*. By E. B. Elliot, President of the London Mathematical Society.)

furnished by our modern readiness to recognise antinomies: our readiness to accept, that is, certain problems as insoluble under the impression that the human intellect is characterised by inherent limitations which prohibit it from arriving at the solution of these. But (we would point out) where a Kant will complacently space out his supposed antinomies of (for instance) the necessary and incompatible finiteness and infiniteness of Space (and likewise of Time), and declare these 'contradictions' to be irreducible, the primitive human understanding of the poetic age went simply and efficiently to work and met the difficulties with its sharply-outlined images of the *firmament*; of the *waters above and the waters below* spoken of in Genesis; of the *Logos*; of the *flood*; of the *atonement*; of the *day of judgment*; of the *Messiah*; of *Alpha and Omega*; of a fixed *world-centre* and a finitely-situated *world-wall*, and many more: all of them images witnessing to a very massive power of thinking, as regards the greatest aspects of the universe's greatest entities, in terms of the concrete and visualisable. Whence it is that, if we had to state in as brief a space as possible our view of what constitutes the difference<sup>1</sup> between the successful thought of the mythopoeic age and the unsuccessful thought of the modern so far as this is concerned with the science of the first principles (theology), we should say it had to do with the great size, the concreteness, the definiteness and the sharpness of outline of the conceptions of the earlier age as compared with the smallness, vagueness, nebulosity and henism, of the corresponding conceptions in the later. And if, further, we were asked by what right and title the 'primitives' entered into possession of their intellectually-potent conceptions, we should answer: by the same right and title as that by which the scientists of to-day (and of a brilliant yesterday) entered into possession of theirs: that is, by a wholly legitimate use of the constructive (imaginative or 'detective') reason such as is operative behind the familiar scientific habit of conceiving 'mechanical-models,' the lines on which primitive thought ran being to the effect that, if Space and Time (Urania and Chronos)

<sup>1</sup>With this distinction we should, however, have to associate a second, *i.e.*, that the primitives automatically conceived the universe as an *organic* structure whereas the moderns conceive it as *inorganic*.



be respectively the eternally-existing mother and father of the world, the respective characters of these prime constituents of things will reveal themselves in their offspring (collectively the forms of nature), in a manner analogous to that in which the characteristics of natural parents reveal themselves in their children. That is, concerning 'that which may be known of God,' the primitive reasoning was like that which the apostle Paul had in mind when he argued that :

"The invisible things of Him, from the creation of the world are clearly seen, being understood of the things that are made, even his eternal power and Godhead."

## CHAPTER XI

### TWENTIETH CENTURY MONISM

#### I

The mythopoeic cosmogonies (of which the doctrine of the 'everliving One' salved by the Pythagoreans is a specimen) are, we contend, more to be trusted by the science of the first principles than a modern doctrine like this of 'Space-Time' which is merely a re-statement of the age-long error of cosmogonic monism, construing, as it does, Space and Time as so integrally associated that at no time do they permit to one another an independent existence, and, hence, at no time admit of those unique and indispensable cosmogonic moments in the life of the everliving Absolute which go by the name of 'in the beginning.' Now this particular twentieth century version of ancient cosmogonic monism found its most arresting modern expression about twenty years ago (1908) in a pronouncement of the mathematician Minkowski, this being of such an uncompromising character that it roused excitement in scientists and philosophers equally. What accordingly we propose here is an examination of the logical bases of this Minkowskian pronouncement :-Minkowski asserted that Space and Time must needs form a single, homogeneous, non-differentiable whole, in that *nowhere* does there exist any Space (or any Time) in its own typical purity, its substance segregated to quarters of the universe where it is un-intermixed with the substance of the other. As Minkowski expressed it :

"The objects of our perception invariably include places and times *in combination*. No one has ever noticed a place except at a time, or a time except at a place."

And this view Minkowski threw into the form of the hasty generalisation :

"Henceforth, Space by itself, and Time by itself, are doomed to fade away into mere shadows, and only a kind of union of the two will preserve an independent reality."

Now, remembering at once the devastating consequences which a monism of the elements had in earlier epochs of human

culture, and the very distinguished following which this particular form of it has commanded in our own immediate epoch, one ought to look very carefully into the credentials of Minkowskian monism :—

Minkowski claimed that his conclusion that "Space by itself and Time by itself are doomed to fade away into mere shadows and only a kind of union of the two will preserve an independent reality," was built upon facts which were proved findings of experimental physics.

"Therein lies their strength. They are radical."

Now Minkowski's claim that there is a *posteriori* proof for the above-stated conclusion was most remarkably sweeping, and, in that it was so, the easy manner in which it was allowed to him by contemporary thinkers is strange in the extreme; and, certainly, this present philosophy cannot allow it to him. On the contrary, a set of criticisms, general and specific equally, are here brought against it which should make evident the great philosophic recklessness exhibited in admitting it. For instance, if that very anciently-established manner of speaking of these two radical types of being, Space and Time, is to be relied on (that according to which the former is a 'continuum': an ocean: while the latter is a 'stream') the truth is self-evident that the two cannot be co-extensive with one another; that is, it is self-evident that there *must* be Spaces where there are no Times. Hence, assuming, for the moment, the correctness of this ancient 'stream-and-ocean' image, we urge that it would not be possible for any two parallel threads (so to say) of the Time-substance to make the initial attempt to form a continuum co-extensive with the spatial, for the very good reason that they have not the power to coalesce side by side. For, as it appears, the substance of the continuum proper [the three-dimensional (magnetic) ocean which is Space] makes such a 'to do' (because it is, and essentially, a continuum) over the presence within itself of any one thread of Time—such a coiling about it with lines of magnetic force—that no single Time-thread can ever approach another such thread sufficiently to make a start at building up a continuous block of threads. We mean, static in character though the spatial continuum essentially is, its

substance is such that it reacts by counter-movements to the presence of all mobile quanta which break in upon it, and, thereby, threaten its continuity: threaten its basic aspect, that is to say. The Time-threads (Time-quanta) thus find themselves (to use an image of Clerk-Maxwell's) in the position of the units of a regiment who, while themselves occupying only a very limited area, yet, virtually, occupy a much more extended area *i.e.* that which lies within the range of their gun-fire; for the spatial lines of force which coil about every strip (quantum) of the stream of mobile energy contrive to prevent any two Time-threads coalescing, and, so, contrive to prevent Time making a beginning at being a continuum. Consequently, a mere essay in subtraction will inform us that, rather than the separate existences of Space and Time, it is the Minkowskian slogan which is 'doomed to fade away.'

However, let us now (momentarily) consent to waive the reasoning based upon the 'stream-and-ocean' contrast between Space and Time (a contrast which, as we have said, has earned recognition from countless generations of men), and the argument based upon considerations relative to the action of prohibiting spatial lines of force. Yet, even so, we still have to bring against the claim the objection that it forms a generalisation far too wide for its supports, and, hence, does *not* admit of the *a posteriori* confirmation from matters of sensorily-observed fact which Minkowski claimed for it. Thus, in order for Minkowski's generalisation to the effect that only the one unitary entity 'Space-Time' exists, and that nowhere does Space exist without Time and *vice versa*, to be warranted by *a posteriori* considerations, far more extended observations than any which lie within our present experimental competence would be called for. The Minkowskian generalisation thus suffers from the defect which so commonly attends extensive generalisations based upon *a posteriori* evidence. That is, it far outruns its actual, sense-derived bases. For instance, in order that we should be able to negative, experimentally (as Minkowski's contention requires that we should), the familiar and age-old 'interpretive' notion of a Time-free spatial region (Hyperourania) situated beyond the walls of the world (*extra flammantia moenia mundi*), we

should have to devise experiments of a sort which, certainly, neither Minkowski nor any other scientist has devised. Who, then, can say, out of hand, that this region is *not* what Aristotle and Plato (making use of a very primitive theological gnosis), conceived it as, *i.e.* motion-free, Time-free? And, indeed, *a priori* considerations such as, for instance, that of the non-possibility of conceiving Space as other than infinitely-extending, taken in conjunction with the highly-valued postulate of modern science known as the 'law' of conservation of energy, argue strongly in favour of the truth of this ancient notion of a Time-free Hyperourania. That is, our instinctively-formed idea that Space must be infinite, taken in conjunction with the well-reputed postulate of the law of conservation of energy, compels us to assume just what the ancients did assume *i.e.* a firmament, representing the walls (the 'lines of force' as a modern would say) of the world, which shut up all the world's active energy (*i.e.* all Time) as in a sealed womb (which is Ourania), while a Time-free Space (Hyperourania) extends to infinity beyond. For, did no such institution of a sealed cosmic cavity exist within the confines of infinite Space, there would be a constant wastage of the universe's active energy (*i.e.* of Time-quanta) by dissipation into the infinitely-extending ranges of Space (Hyperourania), a fact which even our modern scientists (*e.g.* Einstein) have had to take some cognisance of. But no such wastage is discernible. Hence, one is invited to say that the conception has very great force that the cosmos (world of nature) is shut up as in a cavity (the cosmic cavity), by the 'walls of the world': the lines of force constitutive of the firmament which—as Aristotle taught—are situate at a finite distance from the centre of this cavity; while, beyond these walls, stretching to infinity, is Time-free Space: Hyperourania: the Aristotelian Godhead<sup>1</sup>: the Unmoved Mover: the *Primum Movens Immobile*.

Accordingly (we say), whereas the *a posteriori* proof which Minkowski claimed for his position is, in actuality, not available, this inferential, interpretive type of argument is available in support of its contrary. Thus (we say), men's idea of Space

<sup>1</sup>It should be noted, however, that Aristotle refused the title of Space to this entity.

(a simple, non-compounded idea) exists, and it is of such a sort that the dissociating from it of the notion that Space extends to infinity is an impossibility with us. This we know for the very good reason that we cannot escape our awareness of it. Hence the derivation of the first Kantian 'antinomy.' For, while our possession of this idea does not force upon us the view urged by thinkers like Gassendi *i.e.* that it is *not possible to conceive* a being travelling so far outwards into Space as to arrive at a spot where he cannot shoot an arrow (or thrust out an arm or a sword) beyond [for (as we conceive) lines of force (such as we must conceive the postulated 'walls of the world' to be) might—and almost of a certainty would, otherwise there would be a wastage of the world's active energy and a breakdown of the 'law' of conservation of energy—stop this supposed being's arrow, or even turn it back upon himself]; while (we repeat), our native idea of Space does not negate for us the conception of 'walls of the world,' it does compel a speculation as to what there is beyond these walls, while the very fact that we use the word 'there' is witness that we are conceiving a Space beyond. Therefore (we may say), our instinctively-formed ideas of Space considered in the light of considerations having to do with the law of conservation of energy, inform us that Space is, at once, infinite and yet bounded—infinite as to one part (the Hyperouranian part), and bounded as to another part (the Ouranian part). But, if this be so, it follows that one particular part of Space (*i.e.* Hyperourania: Aristotle's Unmoved Mover) is *Time-free*. Hence the consequence that, without ever once over-stepping our justly reasoned warrants we are able to say that Minkowski's claim assertive of some supposed utter inseparability of Space and Time from one another can be proved untenable. And hence our arrival at a formula concerning the universe which is the opposite of, for instance, that of Professor Einstein (who, developing the Riemannian position, asserts the universe to be finite but unbounded)<sup>1</sup>:

<sup>1</sup>The 'non-imagistic' manner in which modern thought construes the phrase 'finite yet unbounded' is exemplified in the following well-known passage from the brief but famous essay of the mathematician Riemann (pupil of Gauss) who has so powerfully influenced the later relativist school:—"In the extension of space-construction to the infinitely great, we must distinguish between unboundedness and infinite extent: the former belongs to the extent relations, and the latter to the measure-relations. That space is an unbounded three-fold

our arrival, that is, at the formula that the universe is *infinite yet bounded*, infinite in parts and bounded in parts. It is infinite in its outwardly-stretching, *Time-free* region situated beyond the 'walls' of Heaven: the firmament: but bounded as to the part stretching inwards from these walls towards the universe's core and centre.

So much, then, for the Space-aspect of this notion of an integrally-unitary Space-Time. But, as regards the Time-aspect also, conditions hold which render the Minkowskian assertion more than dubious. For, precisely as, in respect of Space, we found ourselves driven to the postulate of two kinds of Space (1) Time-containing; (2) Time-free; so here, in respect of Time, we find it necessary to postulate two states of Time (1) as flowing forth into and linked up with the substance of (Ouranian) Space; (2) as withdrawn from the Ouranian fields of Space and segregated within its own essential place which is at the very centre of the universe: a twofold state of affairs with regard to Time which forces us to take sides in that great and age-old controversy as to whether the world of creation has had 'a' beginning. And very rightly. For, either we must discover a means of making the dogma of 'a' beginning: 'a' creation: intelligible (and the philosophic world in historic times has never found this task easy) or we must abandon hope of founding an intelligible cosmogony: which is, an intelligible theology or science of the first principles of nature. But, as we saw earlier, mankind's early theological thought imported intelligibility into its science of the first principles in terms of a certain dogma the gist of which lies in the postulate that, once in every great world-cycle, Time (the world's active energy: the breath of the universe) is indrawn in its entirety from the great (but finite) fields of Space, into a single point at the centre of

manifoldness, is an assumption which is developed by every conception of the outer world; according to which every instant the region of real perception is completed and the possible positions of a sought object are constructed, and which by these applications is for ever confirming itself. The unboundedness of space possesses in this way a greater empirical certainty than any external experience. But its infinite extent by no means follows from this: on the other hand, if we assume independence of bodies from position, and therefore ascribe to space constant curvature, it must necessarily be finite, provided this curvature has ever so small a positive value. If we prolong all the geodesics starting in a given surface-element, we should obtain an unbounded surface of constant curvature, *i.e.* a surface which, in a flat manifoldness of three dimensions, would take the form of a sphere, and consequently be finite." (B. Riemann, *On the Hypotheses which lie at the Base of Geometry*, printed in W. K. Clifford's *Mathematical Papers*, p. 56.)

the whole universe, where, on what was called the 'mount of inspiration' or 'mount of God,' it was supposed to abide as pure mobility-in-itself throughout a world-sabbath which was the celestial prototype of all earthly sabbaths. But, as will be seen, this dogma which rendered the early science of the first principles intelligible did so by aid of a dogma grounded on the supposition that, at the very core of the universe, once in every world-age (aeon), conditions obtain in respect of Time which are analogous to those we have just been arguing obtain (in Hyperourania) in respect of Space. For, whereas, as regards Hyperourania, we argued for the existence of a pure, unmixed, Time-free Space existing beyond the finitely-situated walls of the world, here we argue that, at the very centre of the whole universe, and once in every great world-cycle, there exists a coil of pure, unmixed, Space-free Time<sup>1</sup>. However, it is not our intention in this chapter to press these points to any length, our aim in introducing them being merely that of giving some general indication of where our philosophy stands as regards certain issues now under debate in modern science, and of stressing the fact that, in order to get a start with the science of the first principles (theology), men must, *wittingly*, reject all forms of cosmogonic monism, and (hence), all teachings which urge upon them the view that Space and Time constitute a single, homogeneous, non-differentiable entity. For (we repeat), if the subject-matter of theology be not recognised as presenting dual entities, there can be no such science as theology. Hence the necessity for anyone who proposes to expound an intelligible theology (science of the first principles of physics) to make clear, at the very threshold of his inquiry, where he stands in this important matter. And thus it is that we ourselves advance categorically, dogmatically, at the very outset, the claim that *no* science of the first principles can ever be built up (in that no such science can render itself intelligible) which

<sup>1</sup>We here construe Space's essence to consist characteristically in immobility, and Time's essence in mobility, which latter, at this unique moment of a given world-aeon, is of so absolute a quality that (like a sleeping-top) it itself resembles immobility, a condition which is just that in which 'the sun' (a general name for Time: for motion) at the command of Joshua ('inner seat of gravitation') stands still, establishing the cosmic sabbath during which there is, on the one hand, no straying forth of the Time-quanta into Space, and, on the other hand, no modicum of immobile substance in that centre-point of the universe into which, for the moment, all Time has been gathered up.



fails to make a capital point of the fact that Space and Time are differentiable varieties of being; in other words, that Minkowskian monism is an error.

## II

And now let us consider that aspect of this question of cosmogonic monism wherein the issue touches modern physics. For, note:—We define the Godhead as the elements and the elements as Space and Time. But, in doing so, we are speaking the language of philosophy rather than the language of the scientists. For the latter, supposing they felt called upon to define the Godhead as the elements, would automatically go on to say that the Godhead must therefore be identical with the energy (energies, as *we* say) electro-magnetism. Now, the matter we would here draw attention to is that, just what the philosopher calls 'Space-Time' the scientist calls 'electro-magnetism.' But things which are equal to the same thing (here, the elements) are equal to one another. *Ergo*, Space-Time is electro-magnetism, and electro-magnetism is Space-Time, the one and the other being variant names for the element(s). And, significantly enough, the parity of nomenclature between modern science and modern philosophy does not stop here; for, precisely as the twentieth-century philosopher speaks of Space-Time as a single entity, so the twentieth-century scientist speaks of electro-magnetism as a single entity. If, therefore, there be soundness in the claim that a unitary Space-Time is unacceptable, the philosophic conceptions implicit in our current science of electro-magnetism must be equally so. For modern science does not recognise in electro-magnetism two things, but one only, and, in the fact that it does so, we are confronted (so we hold) with the one issue on which modern science has gone wrong. For, as we contend, this view as to the monistic character of electro-magnetism is based not on facts, but on a hasty interpretation set upon facts, a far too hasty interpretation, indeed. Thus (we hold) there is nothing in the facts themselves *to compel* the interpretation that the magnetic phenomena which accompany an electric phenomenon have their source *in* the latter. On the contrary,

all the facts of the situation go to suggest that magnetism itself is a substance and a three-dimensional substance, in contrast to the linear (and jointed) substance which is the electronic stream (Time). They suggest, that is, that magnetism constitutes the substance Space : the Spatial Ocean : a suggestion which, by its bare acknowledgment, at once rids us of the incubus of the notion of an aether 'in' Space, and provides us with that absolutely necessary substantial (but supra-material) medium for which the postulated aether did duty so inadequately. For it was one of the consequences of men's denial of substantiality to Space that a hypothetical 'aether' had to be imported.

Now let us raise what may seem a curious question. This is the question as to the seat of authority as regards this (and kindred) questions ; it is the question, that is, as to who, *primarily*, has a right to be heard here. Now, we urge that the large issues which are here being debated belong, not to the science of physics but to the science of theology, the physicists being found dealing with them only because of the fact that, when physical science is pressed to its fundamentals (when, that is, it is pressed back to the point where phenomena are analysed down to *numina, noumena, archai, theoi*, elements), this science is in actual process of linking up with theology. What we mean is that, when the physicist takes it upon himself to declare the number of the elements, he is, whether he knows it or not, departing out of the sphere of physics and entering that of theology. And the like is the case in respect of all the larger aspects of the sciences of biology, atomology, and optics. Hence (we contend) in the sphere of the science(s) of magnetism and electricity, when it is debated whether these are two things or only one thing, those who debate the question are debating an issue which is not physical but metaphysical *i.e.* theological. Moreover (we would urge), this incursion of the physicist into the sphere of theology, *in the absence of any recognition on his part that he is doing so* has very serious disadvantages, the most serious being that he is led into making deliveries of a character he would hesitate to make did he know fully what he was delivering himself on. For, in the latter case, he would

(one hopes) take the precaution to equip himself with certain indispensable findings deriving from an intellectual sphere quite remote from that of physics as ordinarily understood, findings which are the indispensable pre-requisites of theology in that they bear inescapably upon every dogma of the latter. The findings we have in mind are those deriving from the sphere of ontology: the findings we were so largely concerned with in the first part of this study (Section I: *Prolegomenon to Theology*). But the erstwhile physicist, become theologian unawares, allows himself to plunge precipitately into the problems of theology *ab initio*, totally unassisted by any of those illuminating, guiding ontological findings with which philosophy ought (by right) to have equipped him; for instance, unassisted by that guiding, elementary, ontological principle to the effect that, when one speaks of any *qualified* order of being (as, for instance, of elemental being), one necessarily must be prepared to cite two types thereof; this, in that it is only absolutely unqualified being which can be monistic. But, electricity and magnetism are elemental types of being. Hence (as ontology could assure him *a priori*), if the physicist postulates a monism here, he is logically bound to be in error, a monism of any qualified order of being being an absurdity the advocacy of which is explicable only on the grounds of philosophic ignorance. Hence the existing state of affairs in high science which is such that not one single department of science can boast insight into its problems when these touch the philosophy-line; touch, that is, issues which bear on the science of the first principles or elements. In illustration, let us cite the case of Faraday: perfect physicist and experimentalist if ever there was one, yet no philosopher. Thus, as everyone is aware who has read anything of his day-book of experiments, his correspondence, or his articles in learned journals, Faraday (who had demonstrated that light is an electro-magnetic phenomenon) had brought himself to the point where his heart was very ardently set upon the discovery of an explanation of the problem of gravitation, and, year after year, in search of the solution of this, he brought to bear upon his wealth of electro-magnetic knowledge his powerful scientific imagination. Yet

the result of all this labour was just an incoherence which, when examined, turns out to be this protean error of cosmogonic monism ; which is to say, it is that error into which no man, howsoever gifted, can fall without becoming incoherent, in that he is attempting the logically impossible *i.e.* a monism of a *qualified* order of being. Hence the fate of Faraday, who had the misfortune to fall deeply into this error. This might be illustrated by that classic experiment of Davy (with whom Faraday began his life-work) by way of which schoolboys are initiated into the mysteries of electro-magnetism *i.e.* the sending of an electric current along a wire which has been passed through a cardboard disc on which iron-filings have been sprinkled, filings which, when the current runs along the wire, arrange themselves concentrically about the wire. Now, let us add, this experiment remained throughout his life the basic image under which Faraday conceived what was happening in Space ('aether') whenever electro-magnetic operations were in question. However, instead of interpreting the concentrating movements of Space about the wire which the movements of the iron-filings reveal to us (and which, as we hold, represent Space's counteractions to the ruptures of its continuity made by the invading electric element), Faraday wrote and thought about them in a way which Professor A. J. Fleming sums up as follows :—

" The two-fluid theory may be said to have held the field until the time when Faraday began his researches on electricity. . . . Faraday's notion as to the nature of electrification, about the middle of the 19th century, came to be something as follows : He considered that the so-called charge of electricity on a conductor was, in reality, nothing on the conductor or in the conductor, but consisted in a state of strain . . . in the particles of the dielectric surrounding the conductor, and that it was the physical state in the dielectric which constituted electrification. Since Faraday was well aware that even a good vacuum can act as a dielectric, he recognised that the state which he called dielectric polarisation could not be wholly dependent upon the presence of gravitative matter, but that there must be an electro-magnetic medium of a supra-material nature." Now, let us ask, what justification could Faraday have for holding that the state known as electrification had nothing to do with what was *in* the conductor or *on* the conductor ? None whatever, we say, the view having its origin in an illicit philosophic pre-supposition which does not stand the test of examina-

tion, but which, if harboured, can powerfully influence the play of the physicist's mind over facts. Hence the false—and conspicuously strained—interpretation which Faraday set upon certain experimentally-obtained facts which admitted (far more readily and naturally) of a quite different interpretation. Thus the interpretation which would harmonise naturally with the facts here in question is that, *undoubtedly*, there is something on the conductor<sup>1</sup>, and that it is only, indeed, in response to that something's presence there that the contractile 'lines of force' bearing in towards the conductor are generated in the Space around it, their very *raison d'être* being to enable Space to heal the breach made in her own characteristically-static, magnetic continuum by the invasive something on the conductor, and it is (we hold) only by a full recognition of this (*i.e.* by a full recognition of the fact that the causal factors implicated in these phenomena are dual) that the problems which are held to constitute the two master-problems of physics (actually, they are *theological* problems) admit of solution, (1) the problem why matter has weight; (2) the problem of the nature of light (and other radiational phenomena). Thus, as regards the latter, the existing difficulty can be thrown into the form of the question whether the phenomenon of light is one which best is explained by the *corpuscular theory* or the *undulatory theory*, and the answer which a dualist science of the first principles makes to this question is that a synthesis of both theories is necessary for an explanation, *plus* a fundamental alteration in our conception of an 'undulation' as here applied. Let us be explicit:—The picture under which the phenomenon of light is envisaged according to the existing monistic theory of electro-magnetism can be likened to that in the mind of a person who, noticing the wash of water travelling alongside a swift-passing ship, should imagine, on the one hand, that the moving foam-line was an essential part of (a sort of frilling belonging to) the ship; or, that the ship was a phantom the essential reality in connection with which was the foam-line. Cosmogonic dualism, on the

<sup>1</sup>This statement should be read in the light afforded by an examination of the assumptions which run through the entire history of the *atomic* theory as ranging (at least) from Kanada to Boscovich and our 20th century scientists. We might add that, in the history of philosophic notions, we are confronted with a spectacle of speculative 'continuity' indeed, but one which takes the form of a very uncritical and unimaginative borrowing.

contrary, would say that ship and foam represented two opposed but complementary entities, and that both alike need to be recognised as inalienable features of the one composite phenomenon of a foam-washed ocean-going ship. Thus, one essential part of a ray is, it would say, a corpuscle of mobile energy (the ship), the passage through Space of this giving the straight-line axis of the ray-phenomenon: the factor of the phenomenon which Faraday, for instance, would say was not 'there.' The undulations, on the contrary, are the wash of the disturbed magnetic ocean (Space), which same wash is called into being by the passage through Space of the shaft-like, arrow-like ('corpuscular') ray which travels along the axis of the undulations. They are the contractile lines of force which, as the experiment of the wire-pierced cardboard sprinkled with iron-filings shews, form about electric forces invasive of the spatial continuum, being the latter's measures in defence of its continuity. That is, the picture under which we conceive the undulations of light is precisely that which the iron-filings illustration presents. With this difference, however, that, whereas the latter gives a cross-section of what is happening in the Space about a travelling electron, the undulations of light represent a horizontal section. That is, we envisage the light-wave as the kind of 'wave' one gets when a fine wire is closely wrapped round a rod and then stretched out to its fullest capacity. Thus, such an undulation will be superficially indistinguishable from a simple 'up and down' formation, yet it will be one quite different from this in that it *has a twist* in it. We can state our claim in the form of a few questions. Thus, we would ask whether, when (say) it is said that, in respect of Thomson's discovery (1887) of the acquired inertia of a moving electric charge ("a moving electric charge gathers inertia in virtue of its motion, through the grip which the Faraday lines of force travelling with it have upon the aether"), the situation would not be equally well described (or better) if it were said that the moving electric charge generates inertia in that, by its disturbance of the spatial substance (the latter essentially *a continuum*), it causes the disrupted portions of the continuum to set up lines of strain towards one another which are, at once,

the defensive (and healing) protests of the disrupted medium and the Faraday lines of force, these latter being spatial (magnetic) in character rather than electric, while they seem to travel with the travelling electric charge because, everywhere where the latter travels, it rouses up the Space about it in such a way as to cause it to give birth to these contractile reactions constitutive of 'lines of force.' And are not the vibrations—so-called ('undulations') which are postulated in the accepted theory of light not so much vibrations (*i.e.* simple up-and-down movements), as spirals; that is, vibrations with a *rotary twist* in them which renders them rather formations appearing about the axis of the phenomenon: about the straight-line track, that is, which is followed by the ray-proper: the 'corpuscle' factor in this (compound) phenomenon of light? What we have in mind to say is that that image of the track of a corpuscle of light by means of which schoolboys are given their introduction to the study of it (*i.e.* a simple undulation impressed upon a taut rope which travels along the length of the rope in the form of a simple up-and-down movement) is not a correct image, in that such undulations *have no twist* in them answering to the twist in the spiral (corkscrew) undulations which (we say) obtain in the phenomenon of light and of rays in general. What we are suggesting is that the physicist has mistaken for undulations what are, actually, spiral formations about the straight line formed by the passage of the light-corpuscle. Would not such a view explain, for instance, both the doubling of the wave-line instead of the undoing of it which is found to obtain when a ray of light is turned back upon its path, and those effects which appear to argue that *rotation* has, somehow, a place in the phenomenon of light? In any case, if (as seems inevitable), the *emission theory* of light has to be resurrected, the 'undulations' must perforce cease to be the *essential* constituent of the 'ray,' this latter being identifiable, not with a spatial but with a temporal phenomenon *i.e.* with a supra-material, rectilinearly-travelling corpuscle of electronic energy. And such a dualist view would, moreover, lay finally the question of the 'aether,' the main, if not the only function of which has been, as the late Lord Salisbury said in his presi-

dential address to the British Association in 1894, "to furnish a nominative case to the verb 'to undulate'" ; or, as we should say, the verb 'to twine round.' For that which 'undulates' (so a dualist view of the first principles would assert) is Space itself, not the Space-cleaving, Space-disturbing ray. That is, it is Space (*i.e.* characteristically static room: the magnetic ocean) which suffers displacement by the passage of a ray ('corpuscle') through Space. Hence the relief which dualism would import into speculations concerning the nature of light. For, as Professor Schuster puts it :

"So long as the character of the displacements which constitute the waves remains undefined, we cannot pretend to have established a theory of light."

As to the relief which cosmogonic dualism affords in respect of the outstanding problem of matter *i.e.* the explanation of that *gravitational feature* of matter according to which all matter at once pulls and is pulled, this is achieved by regarding this feature as a special case of what obtains in respect of rays, the outstanding differences obtaining between the two sets of phenomena being explicable as effects of the prime difference that, whereas, in a light ray, the corpuscle which generates the lines of force ('spiral undulations') follows an open track, in the structure of a material particle it follows a closed (cyclic) track which, at its centre, harbours a spatial nodule. However, this matter is one too important to be dealt with merely as an illustration to something else and we therefore postpone our consideration of it. The following comparatively recent pronouncement of Sir J. J. Thomson appeals to us as giving support to the dualist view which (as we contend) sweeps into one common category the problems of *gravitation* and of *rays* equally, and (with a difference) constitutes a return to Newton.

"There<sup>1</sup> was a period lasting for more than a century in which the Newtonian or Corpuscular Theory practically held the field. On the view held by the immediate successors of Newton the energy in the light was carried by small bodies called 'corpuscles' which were shot out by lucent bodies and which travelled through space at the rate of 180,000 miles per second.

It is to be remarked that Newton's successors were much more corpuscular than Newton himself. He thought that the corpuscles were

<sup>1</sup>Sir J. J. Thomson, *The Structure of Light*. Fison Memorial Lecture, 1925.



only a part of light, and held that the ether as well as the corpuscles formed an integral part of it. . . . It would appear that he regarded a corpuscle as surrounded by ether waves excited by its own vibrations, the red corpuscles by long waves, the blue ones by short. Thus light in his view was not entirely corpuscular nor entirely undulatory but an inseparable mixture of both. We shall see that a view having much resemblance to this is suggested by discoveries made during the last twenty-five years on the electrical properties of light.

A point to which I wish especially to direct your attention is that on the corpuscular theory the energy in the light is concentrated in small corpuscles and is not diffused through the whole space through which the light is passing. . . . At the end of the 18th century attacks on the corpuscular theory began which ultimately led to its downfall. The men who led the attack were an Englishman, Thomas Young, and a Frenchman, Fresnel. . . . Young took the view that light consists of waves spreading through the ether. When you observe a system of waves, say those travelling over a pond or the sea, you will see the crests and the troughs of the waves following each other at equal intervals, and a cork on the surface will be pushed up when a crest and pulled down when a trough passes over it. . . .

Though Young originated the fundamental idea of interference, we owe the mathematical development of it to Fresnel; he and other great mathematicians have developed the optical effects which would follow from the undulatory theory in the domains of interference, diffraction, polarisation, and double refraction; these include the most beautiful, important and, I may say, complicated of optical phenomena and the results of their theory, in many cases quite unexpected, have been in complete accordance with the results of the most searching and accurate experiments; no theory has ever survived such searching tests as those to which the undulatory theory had been exposed up to the end of the last century. So much was this the case that before that time everyone was convinced that we had an adequate mathematical theory of light; by this I mean that if we represent the vibrations of light by a mathematical symbol, Fresnel and his followers had supplied us with equations by which we could calculate the value of this symbol in any optical problem. The attention of many physicists was then directed to find what the physical interpretation of this symbol was—to find, to use the Marquis of Salisbury's phrase, the nominative to the verb 'to undulate.'

In all forms of the undulatory theory of light the energy is supposed to be diffused throughout the whole of the space through which the light is passing, and not, as in the Newtonian theory, concentrated in small patches; it is this uniform distribution of energy which has proved the most serious difficulty in the way of the undulatory theory.

These difficulties may be said to have commenced with the discovery, quite at the end of the last century, of the X-rays, which on good grounds are supposed to be a very potent form of light. These rays eject electrons

from bodies on which they fall. Now we have very accurate methods for counting electrons and measuring their velocities. It was found by these methods that when X-rays passed through a gas only an extraordinarily small fraction of the molecules of the gas lost electrons; it takes long exposure to strong rays to get an electron out of one molecule in a million million. If the energy of the rays is spread continuously through the space through which they are travelling no molecule can escape it; every molecule must be exposed to the same influence and yet only one in a million million is affected. This result would seem much more probable if the energy of the light were, as it is supposed to be on the corpuscular theory, concentrated in widely separated centres, forming a kind of net-work with a wide enough mesh to allow most of the molecules to slip through. Very soon after beginning work on X-rays I came to the conclusion that the energy in them and presumably in light is concentrated at centres. I expressed this by saying that the front of a wave of light must resemble bright specks on a dark ground and not a uniform illumination. Further and still more convincing evidence was obtained by measurements of the speed of the electrons ejected from the molecules. If the energy was continuously distributed one would expect this speed to be greater in a strong light than in a faint one, but it is not so . . . . Another line of reasoning leading to similar conclusions is based on quite a different phenomenon. You know that when a body, say a blackened ball, is heated it becomes luminous and as it gets hotter the colour changes from red to yellow and then to white. The late Lord Rayleigh was the first to call attention to the fact that this is not what we should expect on the undulatory theory . . . . This subject was studied very profoundly by Planck who showed that the observed distribution of energy in the spectrum of a hot body would follow if the transference of energy from light to an absorbing substance took place as if the energy were atomic and not continuous . . . . The unit by which the energy of a particular kind of light increases or decreases is called the quantum of that light. Planck postulated that the quantum for light making  $n$  vibrations per second was proportional to  $n$  and equal to  $hn$  where  $h$  is a constant now universally known as Planck's constant, and the relation  $E=hn$  where  $E$  is the energy in the quantum is known as Planck's law. The evidence in favour of this law has continued to accumulate ever since it was enunciated. . . .

You will see however that while it fits in quite naturally with the corpuscular theory of light, if we suppose that the energy possessed by each corpuscle of a particular kind of light is equal to the quantum energy of the light, it is quite foreign to the undulatory theory which postulates a continuous and not an atomic distribution of energy.

The position is thus that all the optical effects point to the undulatory theory, all the electrical ones to something like the corpuscular theory; the contest is something like one between a tiger and a shark; each is supreme in its own element but helpless is that of the other."

BOOK II

HISTORICAL SURVEY

THE  
HISTORY OF THOUGHT  
RE-INTERPRETED

## SECTION III

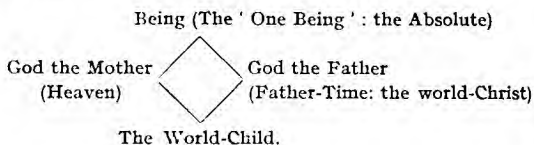
### CHAPTER XII

#### THE NOTION OF NON-BEING IN GENERAL.

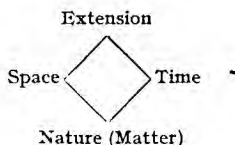
The gist of the thesis set forth in the foregoing book is that the mind of man is capable of reading intelligibility into the universe only in terms of the notion of the trinity. Now, one great negative peculiarity of the philosophic thought of the Christian epoch is that, in spite of the lip-service paid to the notion of the trinity by Christian theology, no place whatever is provided in the latter for a trinitarian philosophy. Nor is there anything surprising in this, considering that Christian thought so early threw in its lot with those monotheistic notions which had rendered null the classic thought against which Christianity was, philosophically regarded, the protest. Accordingly, so has the error of monotheism (cosmogonic monism) worked itself into the bone of modern thought that only by boring into the question from many different angles can one hope to dislodge it. For this reason, from among the multitude of historic speculations open to us to consider in illustration of our thesis, we select for scrutiny the two matters the consideration of which will make the widest sweep through philosophic theory, (1) the philosophic notion of 'non-being' itself; (2) the theological views embedded in the well-known historic arguments in proof of the existence of the Godhead. On this account, our consideration of these matters is to be regarded not merely as an end in itself but as a means of explaining the existent state of modern thought in terms of its faulty antecedents which have been guilty of the error of *shedding a God*, thereby depriving (mentally) the world-scheme of one of its divine parents. With this statement of our inquiry's underlying purpose, we begin our survey of the career of the illicit term non-being:—

The error of cosmogonic monism consists (we have seen), in a confounding of the topmost and single term of the tetrarchy

with one or other of the two terms of the Godhead which the tetrarchy inserts between the topmost and nethermost. Let us recall the terms of the *tetrarchy*:-



Or,



Now, the native intelligibility of the universe (the feature which, as we have urged, is bound up with the recognition of the universe's trinitarian structure as exemplified above by the tetrarchy) can be obscured by any one of three outstanding varieties of cosmogonic monism, and between these possible modes of the monistic error we would discriminate before entering in detail upon our account of the career of ' non-being.' Thus, if it be the fourth term of the tetrarchy (*i.e.* nature) which is mistakenly identified with the topmost (the Absolute), the monistic philosophy guilty of the mal-identification will constitute not so much a monotheism as an atheism, in that it ignores *both* the divine members of the tetrarchy. Hence, while it is undoubtedly a fact that, when the topmost term is mistakenly identified with one or other of the members of the Godhead, the resulting situation is almost indistinguishable from atheism, the difference in the initial intention (so to say) of the mal-identification remains over as a quite different psychological predisposition. Hence the need to take account of monotheism as distinguished from atheism. Accordingly, apart from thus recognising its existence, we propose to neglect entirely, in this place, the study of the atheistical position, concentrating our attention exclusively upon the two well-known varieties of the

monotheistic. The two positions we have in mind emerge as follows:—Inasmuch as the topmost line of the tetrarchy is filled by a unity ('Being') while a duality (the Godhead) occupies the intermediate line, the attempt to identify the unity with the duality may effect itself either by asserting that 'the two are one' or that 'the one is two.' A notable instance of the first procedure is furnished by our modern Space-Time-ists in that, here, the monotheism consists in presenting the two divine entities as one. The second monotheistic procedure (and it is this latter which we shall have principally before us in these chapters on non-being) takes the form of multiplying 'the One' into a duality by associating with it (contrary to all the rules rightly to be associated with the term being *quâ* being) a contrary. That is, the move whereby the occupant of the uppermost line of the tetrarchy is falsely presented as containing two entities in contravening the primary rule relative to the *summum genus*. A seeming parity of terms—so far as numbers are concerned—is thus achieved as between the topmost and the intermediate tetrarchic lines, the being and non-being of the topmost corresponding to the dual elements which occupy the intermediate. Subsequently, however, that one of the two divine entities which has been identified with non-being is construed as a non-being in the sense of the non-existent. Hence the consequence that a single entity only (regarded at once as the Absolute and as the Godhead) is held as existent. Hence the arrival again, by way of this unwarrantable numerical manœuvring with the One and the Two, at monotheism. Obviously, it is a manœuvring whereby (logically) one sheds or slips a God. As to which of the two members of the Godhead is identified with non-being (and, thus, ultimately *shed*), opinions have been at variance through long centuries, such differences providing the main cause of the most noted rivalries which have existed between opposed schools of philosophy. This, for instance, was the meaning of the rivalry between the two famous Greek schools, the Heracleitean and the Parmenidean. On the whole, however, it has been the mother-God (*i.e.* Heaven, Space) who has been identified with non-being, though, in asserting this, one has to

recognise the fact that, so important to the intelligibility of human thought is this entity Heaven the matrix-God, that, while men have chosen to say that it was the mother-element who constituted non-being, they saved this element for their systems as a substance by styling it God the Father. Hence (for instance), our Zeuses and Jupiters *i.e.* the matritial Heaven falsely (not to say ridiculously) styled God the Father. However the form of non-being we propose to attend to first in our survey is Heaven as plainly identified with the world-matrix or all-Mother :-

The first difficulty which the attempt to sketch the origins and career of the term non-being confronts one with is that of deciding where to begin. One might, for instance, begin at the place where accounts of the Greek *nonent* (non-being) usually begin, *i.e.* with its use by Democritus and the Greek atomists. But such a beginning would be entirely arbitrary, for not only are Democritus' own affirmations of a nonent a retort upon the contrary views on the nonent of his predecessors, but an atomistic philosophy appears in Aryan speculation long prior to the Greek, *i.e.* in the Hindu atomism of Kanada in the 12th century B.C. (or even earlier) ; and in this Hindu atomism again we discover a nonent. Not the same nonent, indeed, any more than the Parmenidean nonent was the same as the Democritean. For the Parmenidean nonent was the mobile, temporal principle, whereas the Democritean was the static, spatial principle (the 'void') which Democritus found himself driven to postulate in order to provide his atoms with a medium to move in. The nonent of Kanada was different from either of these, approximating less to these two Greek notions than to that of the 18th century Italian (or Serbian) atomist Boscovich. Thus, Kanada advanced the (wholly true) postulate that the material atoms themselves are compounds ; but, in place of advancing the true account according to which these atoms are compounded effects resulting from the union of fragments of the substance of the two supra-material elements, he regarded them as effects resulting from the union of a 'pair of nonents' ; that is, a pair of non-extended somewhats, three such pairs constituting the material atom proper. According to Kanada, six nothings

made a something, *i.e.* a material particle : a form of reasoning paralleled by the reasonings of our own mathematicians when they let it be assumed that a string of non-extended points make a line, that a set of breadthless lines make a plane, and that a pile of depthless planes make a volume. But, even when we have gone back as far as Kanada and the India of the 12th century B.C., we have not arrived at such sources of the idea of the nonent as will enable us to understand the tremendous hold which this term has taken on the human mind, a hold so great that even the greatest of human intellects have not refused to have commerce with it and to recognise its status. To do this, we have to go to the origins of the symbol of negation itself, which (so it has been considered) are to be found in the name of one of the most anciently recognised of the Gods of Egypt. We are thus conducted to an age long prior to that with which one associates the most ancient scriptures of the Aryan peoples (perhaps 4000 B.C.); to an age, that is, long prior to that held responsible for the most ancient hymns of the Rig-Veda in which (we might add) there exist very highly significant references to the notion of non-being. However, the distance we have to journey will not matter if, when we have traversed it, we feel we have arrived at a point where illumination breaks. And we *do* feel we have thus arrived, when, in the origins of the symbol of negation, we find ourselves presented with a conception of non-being which is not only self-explanatory but which helps us to understand the otherwise inexplicable conceptions of (for instance) the Vedic hymn-writers, the atomist Kanada, and the advocates of the two widely-forking branches into which the main current of Greek and post-Greek thought has bifurcated on the subject of the identity of non-being. Let us, then, inquire into the character and substance of that Egyptian Goddess whose name makes one with the symbol of negation.

The divine being whom Egyptian cosmogony presents as supreme goes by the name of Nun or Nu. In one of the ancient Egyptian papyri it is written that 'in the beginning' existed Nu, a primordial liquid mass, and that this being, in her limitless depths, harboured the germs or seeds of all things.



Now, continues the papyrus, when the sun (or, as we should say, mobile energy, electronic energy, Time the breath of the universe) shone forth, these germs developed into the world, while the primordial water<sup>1</sup> divided into the waters above (Heaven) and the waters below (supposedly, wrongly, the rivers and seas of earth). Now, a little reflection will make clear the fact that this ancient Egyptian cosmogony, in its account of the origins of the created world, was teaching the doctrine of *two* primordial entities, both non-born and eternal, yet differing from one another in that, whereas the massive 'watery' being, Nun, was a static three-dimensional continuum, and, hence, *always there*, the linear 'sun' entity was a mobile being whose substance, now entering into, and now departing out of, some given region of Space, was *not* always there: the substance's periodic cycles only—periods having their beginnings and ends in a given point—being always there *i.e.* always in process of being over-run. The substance of the second primordial entity was thus conceived as essentially non-omnipresent. That is, it was 'there' (so far as some one given locality was concerned) only when the eternal achieving of Time's cyclic courses brought the threads of its being there.<sup>2</sup> The substance of the second primordial entity was thus conceived as very highly selective of the places within Space ('celestial water') it occupied, while, at one particular moment of its career, *i.e.* the periodically-recurring culminating-moment, it was conceived as occupying one single point exclusively. This, then, is the image of 'in the beginning' presented by Egyptian culture; while, we might add, the old cosmogonies of all other nations reveal the presence of a similar world-image. It is the image of Heaven as the permanent world-matrix, the essential continuum, an entity characteristically static, and, as such, eternity proper, but an entity sown with (*i.e.* self-characterised by) her own

<sup>1</sup>It ought to be noted that this conception of Space as 'water' is universal. Space was the *celestial water*. As however this conception is gone into in detail in a succeeding volume we need not enter into details here; nor need we, in this place, attempt to re-interpret the important conceptions of the *Waters Above* and the *Waters Below* as here given. It will suffice to say that what we consider the true interpretation of this dogma constitutes a highly profound philosophic finding; whereas, as here given, it has the appearance of being merely a quaint expression of racial childishness.

<sup>2</sup>This matter is dealt with in our second volume: *The Mystery of Time*.

eternally-existing, supernatural seeds which admit of being fertilised into mundane being only by the flow about them of the eternal threads of Time. Hence, when Time (the breath of the universe) pauses at certain periodically-recurring moments in his eternal career (*i.e.* when Time rests on the 'summit of inspiration' at the end of each rhythmic world-breath), the pause effected marks the beginning and the end, respectively, of two successive lives of the cosmos, all the seeds which give character to the substance of the spatial matrix (Nun) resting, at that moment, in a condition of non-fertilisation. For (as we have said), in order to be made manifest as nature-forms against the fixed, dark, spatial background of the sky, these seeds have to receive in their immediate vicinity the onflow of the mobile principle. Hence, when the latter is sleeping (sleeping as a spinning-top sleeps) on the summit of inspiration, all natural existence is suspended. Hence the emergence of this notion of non-being. For, obviously, the excitement : the interest : of the scheme of the universe would be conceived to lie in the intermittent advents of the Time-threads along the Time-bed, in that it was then that the seeds had their outlines 'picked out' by the Time-threads, and, so, entered into a compounded, incarnated state of being in which their fiery shapes shewed up sharply against the neutral background of the sky. These compounded parts thus standing out, in consequence of their incarnation, against the neutral background afforded by the vault of Heaven, they would tend to be regarded not merely as the interesting parts of the universe, but as the solely *existent* parts. For the term existent<sup>1</sup> (as its form shews) does not stand for all the being that is. Examination of the term's form shews it to be a compound term made up of the two parts *ex* and *istent*, the first part of the term (*ex*) being a prefix meaning *out of*; the second a form derived from the Latin verb *stare*, the meaning of which is to stand. Accordingly, the existent

<sup>1</sup>The meaning which, throughout this chapter, is allowed to the term *existence* as implying something different from *being*, is not one which we shall attempt to maintain in the remaining chapters. For good or ill, the two terms *being* and *existence* have coalesced, and we should be greatly trammelled by the attempt consistently to differentiate between them. The asserting of the distinction between them will, moreover, have served its full purpose when it has served to illustrate how that basic form of being (*i.e.* the three-dimensional continuum : Space) out of which 'existence' sprang, came to be so widely identified with non-being.

(putting the two meanings together) can be expressed either as (1) that part of the universe which stands out (so to say) prominently against the neutral background of the vault of Heaven (Space the neutral stance or rest) ; or, as (2) that which emerges out of the stance or static neutral background which lies behind, above and beneath all 'existence.' In either case, speaking in terms of cosmogony, the 'existent' will be the world of nature (the world of compounded being) as contrasted against the neutral matrix (background) out of whose immaterial body it has issued forth in response to the advent of the Time-stream. But, as we have seen, this neutral matrix is the Dark Cold Water, Heaven, Space by name, Nu, Nana, Nina, Nanaea, Anat, Nun, *NON*<sup>1</sup>, the name which (or allied forms of which) constitutes the symbol of negation in most of the world's languages. Negation's very self, therefore, was equated with Heaven the world-matrix, mother of all the world.

But, obviously, just as the existent was not everything, so the Nun (very name of negation though it came universally to be) was *not nothing*. On the contrary, it was that very important something, the home, matrix and mother-liquor out of whose substance the world of existence was fashioned, and that which, moreover, supplied it with its type-forms. Hence, while the Nun was, undoubtedly, the contrary of the existent in the sense indicated, it was not truly *non-being*: an assertion which will, in itself, serve to introduce us to the philosophy of contraries: a matter which (we consider) reduces to the very small affair of giving a correct synonym for the term *non* or *not*. Thus, the veritable equivalent of *non* or *not* is *anti*, with the consequence that neither of the two entities which make up a pair of contraries can be a non-entity. Rather, they are two entities the one of which possesses some one particular quality (a quality which will needs be, of course, less widely distributed than that of *being*), whereas the other is

<sup>1</sup>It is this same N-N root (it is a root which derives from the sound of *breathing*) which, allied with that other root-name for Mother and Nurse (the M-M sound characteristic of *sucking*), which presents itself as Mana, Mena, Menat, Mene, Menes, Mens, Menos, Mensis, Moon, Minerva, Money, Mona, Manna, Minos, Minataur, Muni, Manu, Manis, Manes, Mann, Mannus, Maneros. Also, with the order of the consonantal elements reversed, as Numa, Nemus, Nemi, Nomos, Numen, Noumenon, Nomen, Nemesis. The nature of the common world-conception which makes a unit of all these terms—and many others of the same family—will be indicated in a later work.

destitute of it. To use an image, we may regard the symbol of negation as a dividing-rod, and a dividing-rod which, in respect of some given feature (which latter constitutes the 'principle of division'), has the power to fall anywhere within the universe of being, and, as it falls, to cleave this universe into two groups of beings according as the members of the two are or are not possessed of the feature constituting the principle of division. Accordingly, wherever and whenever the dividing-rod *non* falls, it must, perforce, yield a couple of groups of *beings*, and to the members of either of this couple the term *non* may, theoretically, be applied. Practically, however, the application of the symbol will be determined by the special circumstance of the lie of our interest at the time the division is made, the symbol being prefixed to that one of the pair in which our interest is (momentarily) smaller; but, as we have said, to whichever one of the two members of a pair of contraries the symbol of contrariness (negation) is attached, its attachment will never imply that the entity to which it is attached is in any way possessed of less of being than the one which is free of it. For, to say of a thing that it is destitute of some particular attribute, and, so, devoid of interest for us, is a very different matter from saying that such thing is devoid of being.

Now, applying this argument concerning the meaning of contrariness to Heaven and the cosmos (world of nature), we are led to say that both equally have being; hence, that they are not and could not be contrasted in respect of the feature of being-in-its-entirety but merely of some particular subsidiary feature of being. For instance, where the one is static being, the other is mobile being; where one is retiring, in the sense of being a background, the other is prominent, standing out; hence (as said) its title of the existent. Indeed, in respect of this particular pair of contraries, the points of contrast run to a large number. Yet, be the terms of the contrast existing between the members of any pair of contraries what they may be: and many or few: each member of the pair will, perforce, be as much a form of being as the other. Hence the seat of our power, in respect of every pair of contraries, to transpose the

symbol of negation from the one to the other. Thus, to pick up the terms of the above-mentioned antithesis (stance *versus* ex-istence), it is as wholly correct to speak of these as the stance *versus* the non-stance as it is to speak of them as the non-existent *versus* the existent; and, were it basic reality of being which determined us in deciding where to place our sign of the negative rather than what it ordinarily is *i.e.* the mere passing lie of our interest, it would be *more* correct thus to speak. For Space, in that it is an element, is a more basically real being than any form of born being, while the spatial content (the existent) is a collective entity made up of born forms exclusively.

Theoretically, then, the 'existent' and 'being' are not to be taken as synonymous terms. For all things have being, but not all things are existent in that not all things stand out against the static spatial background which is Heaven. Accordingly, in the light of this etymologically-correct way of naming spatial being non-existence (or naught), and the created world aught, we become empowered to explain one of the most baffling hymns of the Rig-Veda (X. 129), the well-known creation hymn about what was 'in the beginning,' *i.e.* prior to the creation; prior, that is, to some one periodic making-manifest by the breath of the universe of the immanifest germs of things as the world of nature:

" Then was there neither Aught nor Naught ;

The non-Existent was not, and the Existent was not at that time ;  
there was no air nor sky beyond. . . .

Death was not nor immortality then ; there was no discrimination  
of night and day ; that One Thing [*i.e.* the All] breathed . . .  
of its own self ; apart from it there was nothing else at all  
beyond."

Thus, in this Vedic hymn<sup>1</sup> (which is one of the most ancient philosophic fragments of the Aryan peoples) we obviously have a reference to that great entity who is referred to in the Egyptian monuments and scriptures as ' the being who is greater than the Gods,' the great, living, breathing being who, as the Absolute, is the *summum genus*. And it is a reference to this being at that

<sup>1</sup>Cf., also, hymn x. 72. " Let us now proclaim, with admiration, the births of the Gods, in utterances of praise that a man may hear in a later age . . . . In the first age of the Gods, the existent was born from the non-existent."

particular moment in her eternal existence when she is holding her breath on the summit of inspiration, and, like some Indian Joshua, thereby causing the 'Sun' (Time, the mobile principle) to stand still on the mount of God where the world-judgment is delivered and the world-sermon preached. It is an expression of the same cosmic state of affairs as that which the Egyptian papyrus tells of where it is related how Nun is alone 'in the beginning.' For, at this unique cosmic moment, existence (aught : the created world) is not. Consequently, its contrary as such (non-existence : naught : Space) is not ; is not, that is, as an entity differentiable *from* existence.

When, then, we endeavour to discover the fundamental psychological predispositions determinative of men's proneness to designate the entity Heaven (the Nun) as non-being, we find them in considerations like the foregoing. Indeed, three tendencies can be discriminated in the situation, all of them leading to cosmogonic error and confusion :-

- (1) the tendency to interpret non-existence (the matrix : Heaven the Nun) as non-being ;
- (2) the consequent (atheistic) tendency to identify the existent (the prominent cosmos or world of nature) with the One and All ; and, even,
- (3) the tendency to identify the Nun or heavenly matrix with the All.

However, in the struggle for the mastery which took place between these tendencies, it was the last-named which yielded most ground, the other two combining to make common cause against it and receiving support from man's universal proneness to concentrate his attention exclusively upon those items of his experience which grip his immediate interest, and to regard that which does not interest him at the moment (and, hence, that to which he does not attend) as not being there. Accordingly, the entity Nun (Space the container of the cosmos, the home of creation, that superlatively important something) came, very generally, to be regarded as 'nothing,' her ancient name becoming the type-name for negation all the world over. Hence, too, the psychological predispositions behind the common tendency to regard that member of a pair of contraries to which

the symbol of negation is attached not for what it is, *i.e.* as an oppositely-qualified form of *being*, but as a non-entity : a non-being : a destitution of being. Hence, again, that conception of *the void* of the later atomists ; for the latter regarded the matrix which couched the atoms as a non-entity (*meden ; ouden*) styling the compound forms of being (the materialised atoms), at once, the elements and the all, *i.e.* 'being' in the sense of the Absolute. Hence, too, the explanation of that earlier Hindu atomism according to which Kanada's constitutive elements of the material atom were six nodules of nothing so-called : six portions of non-being : which, taken together, amounted to something *i.e.* a particle of matter. Probably, what was in Kanada's mind was those spatial seeds, those nodules of pure Space, which we are familiar with as *logoi spermatikoi*. Hence, too, the explanation of the Jewish and Christian dogma of the creation of the world out of nothing, *i.e.* out of Space.

However, and naturally enough, men did not find it easy to maintain the position that the matrix, base and container of the world *was not* ; that the very foundation of the world was nothing-at-all. Hence the reason that, in the millennium prior to the Christian era, an exceedingly strong movement is to be found in progress, having for its object the emphasised re-affirmation of the being of 'Heaven the Nun' and the countering of the tendency to translate the fact of the non-existence (in the etymological sense) of Heaven as her non-being. This movement took several forms. In Persia, for instance, Heaven the basic immaterial stuff of the world (its soul or massive energy) was accorded being, but only as the seat and source of evil ! In India, again, as afterwards in Greece and Rome, Heaven was (in response to the prejudices of the then dominant monotheistic masculinism) transnamed from Heaven the matrix and mother of the world to Heaven the father of the world, *e.g.* Varuna and Dyaus, both, originally, feminine names. Hence, Uranus, Zeus and Jupiter, names which are supposed (by many) to derive from Varuna and Dyaus respectively. In this way, Heaven became the familiar monotheistic one God : God the Father. However, in the cultures which were more

strongly influenced by Egyptian and Babylonian thought, the matrix-principle retained her original hold, and as Isis, Ishtar, Aphrodite-Urania, Demeter, Kybele, the Mighty-Mother generally, her status was recognised for what it truly was both as to name and substance. Accordingly, Heaven was 'Heaven the world-mother': the mother-liquor. Taken altogether, however, men found the question of the status and identity of Heaven a stumbling-block and were torn in their allegiance, finding satisfaction neither in calling Heaven (the soul of the world) Satan, the principle of evil; nor in calling Her (the All-Mother) the All-Father; nor in calling Her (who was the source of all) a non-entity: non-being: nothing-at-all; while as for styling Her what She truly was (*i.e.* at once the mother-principle and the governing, form-determining principle, the nurse and home of all remaining things), the emphasised masculinism of the period could not easily brook it. The net result was a veiled yet fiercely real intellectual war.



## CHAPTER XIII

### PRE-PLATONIST VIEWS ON NON-BEING

It was as a conception thus ambiguously construed that the term non-being made its entry into modern culture<sup>1</sup>, and it is for this reason that, to trace the flittings of the title non-being from one cosmogonic entity to another during the Greek period, is, largely, to lay hold of all that is essential in Greek philosophy. Now, in following these flittings, the first thing we note is that *early* Ionian philosophy has little or no use for the term non-being, in that, in that philosophy, we have the most notable instance of that counter-tendency already spoken of which aimed at the re-affirmation of the 'being' of Heaven. The consequence was that the cosmogonic entity with which this bogus term is most characteristically associated, so far from being a nonentity, was, for the Ionians, the 'one being,' and it is in terms of this very excess of acknowledgment of the being of the matrix-God that we have to account for the fact that Ionian monism was a *cosmogonic* monism, and, to that extent, faulty. However, closely affiliated with primitive (mythopoeic) thought as Ionian thought was, Ionian monism, though describing the three-dimensional element as the 'one and all,' conceived the second element as being carried within the One and forming part and parcel with it. It was therefore a much less pernicious variety of cosmogonic monism than that which, holding the mobile and linear principle to be (at once) the one God and the one Being, could conceive a place in the scheme of things for the three-dimensional matrix only as non-being. Nevertheless, in spite of the fact that Ionian cosmogonic monism was of the less pernicious variety, the fact that, in it, Space the Nun was not so much just holding her own as tending more than to do so, led to the pre-Platonic intellectual war concerning non-being, the result of which was (more or less completely), to drive underground the early Greek faith in the supreme divinity of Heaven: a faith which emerged again, aggressively, only in the trinitarianism of historic Christianity. We

<sup>1</sup>We are, in this place, regarding Greek culture as modern.

summarise the theological views of the early Ionians as follows :—

The first three Ionians, Thales, Anaximander and Anaximenes, all alike regarded Heaven the matrix as, at once, the 'one being' and divine. Indeed (and as has amply been recognised) the Thaletian notion is patently that which is indicated in the Egyptian papyrus which tells about Space (Nun: the 'dark cold water') harbouring—in the beginning—the divine seeds or souls of things. It is, also, that indicated in the Babylonian account of the Goddess Tiamat told of by Berosus, priest of Bel. That is, the Thaletian 'water' is the primordial Goddess, Heaven, holding within the confines of her own substance not only her own proper substance (static substance), but the breath of the universe (*i.e.* mobile substance: the second God: Time: God the Father: the World-Incarnator: the world-resurrective Christ). For the Thaletian element 'water' was 'celestial water'; that is, Space: static being: rest: a being filled (partially) with the seeds (souls) of things, and, so, as Thales held, divine. It is however the static deity conceived as having immanent within herself motion, the efficient cause of incarnation; hence, as having potentially within herself the entire universe.

In the system of Anaximander, the 'one being' is the limitless (*apeiron*); it is, that is to say, limitless Space or static being which yet carries within it, eternally, the stream of motion. And the *apeiron* is, for Anaximander as for Thales, divine.

With Anaximenes, the 'one being' is identified with *air*. It is the static element, yet such element quick with mobility. And it is divine. Concerning the views of Anaximenes, Theophrastus (Aristotle's successor) has the following:

"Anaximenes of Miletos, son of Eurystratos, who had been an associate of Anaximander, said, like him, that the underlying substance was one and infinite . . . He said it was air."

So, too, Cicero asserts that Anaximenes regarded air as a God; while a fragment of Diogenes of Apollonia, a follower of Anaximenes, reads:

"My belief is that the thing which has intelligence is what men call air, and that this is what governs all, and has power over all. Just this, I hold, is God; it reaches everywhere, disposes all things; is in every-

thing, and there is nothing that does not partake of it. Nothing, however, partakes of it in the same way as anything else." (fragment 5). "And this thing is an eternal and immortal body, while other things come into being and pass away." (fragment 7).

And that we are not intended to understand by the term 'air' some mere gaseous envelope enshrouding the earth's surface (as we moderns would understand 'air'), but rather a loose equivalent for Space, we learn from Aristotle, who (*De caelo*, B. 13. 284) says that Xenophanes (the philosopher next in order to Anaximenes in the Ionian line, and a thinker whom persecution had driven to Italy) had said that the vast air extends *infinitely upwards*<sup>1</sup>: a most important piece of testimony this, as showing that, with the Ionians, 'air' was conceived as the equivalent of Space and identical with Heaven. Aristotle himself, concerning Xenophanes, says:

"The first of the Eleatic unitarians, contemplating the whole heaven (*ouranos*), declared that this is the One, and is God."

The long period of settlement of Xenophanes in Italy—and the settlement there also of the Pythagoreans—explains the supremacy of the Heaven-cult in Italy. Hence the 'Love' philosophy of Empedocles of which the following is a fragment (941):

"The Cyprian Queen ['Father Zeus'], my children, is not only the Cyprian; there are many other names she bears. She is death; she is imperishable force; she is raving madness; she is untempered longing; she is lamentation. Nothing that works or is quiet, nothing that drives to violence, but as she wills. Her impress [the Logos] sinks into the mould of all things whose life is in their breath. Who must not yield to this Goddess? She enters into every fish that swims; she is in every fourfooted beast upon the land . . . everywhere is the healing of her wing: in beasts, in mortal man, and in the Gods above. No god with whom she wrestles but is thrice overthrown. If it be lawful to say it—and lawful it is to speak the truth—in the breast of Zeus she reigns, a tyrant that needs no armed guard. There is no design of mortal or of God that is not cut short by Love."

We can, accordingly, generalise the situation and say that the truth that Heaven the matrix is a God and the supreme God (hence the seat of the distortion of this truth into the notion of Space as the 'One God') was a piece of the old divine gnosis which, in howsoever distorted a form, contrived to get

<sup>1</sup>Burnet. *Early Greek Philosophy*. p. 125.

past the guard of the mystery-organisations and to become a common property even of the exoteric thought of Greece. (To a less extent, so did the notion that *Time* is a God : Father-Time.) Hence the prevalence of the notion among the poets. Thus, Philemon, in a comedy in which Air, as God, speaks the prologue, makes this deity say :

" I am he whose eye no god or man can escape in anything he does or shall do or ever has done. I am Air, and you may also call me Zeus. Only a God could be, as I am, everywhere—here in Athens, at Patrac, in Sicily, in every city and every house, and in all of you. There is no place where Air is not, and one who is everywhere present must, of course, know everything."

So too, Euripides (fragment 941) :

" Seest thou yonder infinite Air on high, that clasps the earth in its soft embrace ? Hold this for Zeus ; count this to be God."

Also (fragment 911) :

" The Golden wings are upon my shoulders ; on my feet the Siren's winged sandals. I shall go soaring to the firmament of Heaven, to be made one with Zeus."

Again (fragment 877) :

" Oh, young girl, you who have been begotten by the aether to whom men give the name of Zeus."

So too Aeschylus (fragment 70) :

" Zeus is air, Zeus is earth, Zeus is Heaven, Zeus is all things and whatsoever is higher than all things."

Needless to repeat, the term ' air ' in all these passages requires to be taken as a variant for the celestial water, for the infinite, for the aether, for the ' clouds ' (under which latter title—if we may accept Aristophanes' caricature of him in the *Clouds*—Socrates also adhered to the cult of Heaven). It is the equivalent of Space the magnetic Heaven, who, as being magnetic by essence, is Aphrodite the Binder, that God who is ' LOVE ' whom Christian-culture has come to know *viâ* such affirmations as those in the Johannine epistles. Hence the oneness of the foregoing passages with such a passage as the following from Sophocles :

" When ye lay waste the land, bethink you of piety towards Heaven. To Father Zeus, piety is of more account than all things else. . . . Whether they [men] live or die, it cannot perish."

As to the considerations which gradually caused this early type of Greek thought to be displaced by one more faulty, our

opinion is (we cannot here enter into the matter at any length) that these were, on the one hand, the Messianic notion which, in its Greek form, took that of the worship of the God Aio; on the other hand, that 'Persian' dualism which, seeking for some supposed principle of evil, believed it had found this in the Ouranian Heaven which is the 'Space beneath the firmament'; while the 'One God' was identified either with the Space 'beyond the firmament' (*i.e.* Hyperourania: the Aristotelian Unmoved Mover); or with the Messiah (the 'God' Aio); or with Time, the God Chronos, *i.e.* Dionysus: Apollo. In each case alike the leaning towards masculinist monotheism gratified itself by considering all these versions of the 'one God' as a masculine entity, only the 'Space beneath the firmament' being construed as feminine; hence as non-being: as illusion: as the spirit of evil: the devil: hell. Accordingly, when, later (in the *Appendix*) we give specimens of modern thought wherein Space is again identified with non-being, it should be called to mind that this identification has already been made before in European thought and that it was as the (partially successful) attempt to rescue human culture from the calamitous consequences of this identification that trinitarian Christianity took the field. However, these matters require treatment in a study to themselves, and we raise them in passing merely to suggest the nature of the religious implications behind the modern tendency to deny the reality of (and to deny the independent existence of) this divine entity, Space.

Resuming our specific account of the notion non-being in Greek thought, we now have to consider the 'first of the Eleatic unitarians,' Xenophanes: the Ionian who settled in Italy as a fugitive from persecution. Now, in Xenophanes, that Ionian excess of acknowledgment of the being of Space which expressed itself in the failure of the earlier Ionians explicitly to formulate the position that:

(1) there is a 'one being'; but

(2) *in* the 'one being,' there are two elements: two Gods; began definitely to bear its fruit in error. For it is precisely this excess of acknowledgment of the being of Heaven which constitutes Eleaticism: the school of philosophy of which

Xenophanes is regarded as the founder. Thus, Xenophanes, looking up into the vault of Heaven, exclaimed: "The All (*i.e.* Heaven: Space) is One, and the One is God," an assertion which explains why Xenophanes is responsible for the formal declaration of the pre-Platonic philosophic war. For, in terms of this assertion, Eleatic thought (the direct descendant and spiritual heir of Ionianism), became not merely nominally but *essentially* a cosmogonic monism, and it was as such that it was driven to the expedient of seeking a (seeming) loophole from resulting difficulties in a doctrine of non-being. For Xenophanes was followed by Parmenides and Zeno, and, although the former is regarded as teaching the utter illicitness of the term non-being, he is, actually, the opener of the Greek debate as to which elemental entity it is which ought to be styled non-being. Thus, while Parmenides was (more or less) conscious of what was amiss with the Xenophanic ontology, having got a grip upon the fact that being *is* being (*i.e.* being-in-general) and not only divine being (and, hence, upon the truth that the term non-being is illicit), he was quite unable to live up to his initial philosophic insight. Nothing however could be desired more emphatic in respect of the illicitness of non-being than the following:—

"Come, now, I will tell thee—and do thou hearken to my saying and carry it away. Only two ways of search can be thought of. The first, *i.e.* that *it is*, and that it is impossible for it not to be, is the way of belief; for truth is its companion. The other, *i.e.* that *it is not* . . . that, I tell thee, is a path that none can learn of at all. For thou canst not know what is not—that is impossible—nor utter it; for it is the same thing that can be thought and that can be" (fragments 4 and 5). "It needs must be that what can be spoken and thought, *is*; for it is possible for it to be, and it is not possible for what is nothing to be. This is what I bid thee ponder. I hold thee back from this first way of inquiry" (fr. 6). "For this should never be proved, that the things that are not, *are*; and do thou restrain thy thought from this way of inquiry" (fr. 7).

Nevertheless (and as we have said), Parmenides was not a sufficiently able ontologist to support his own important contention, and we find him making affirmations about being quite inconsistent with the character of being as the *summum genus* which his contention recognises. We find him, for instance, making affirmations which seek to limit being to a particular

kind of being, *i.e.* elemental being, and that particular kind of elemental being which Xenophanes (in company with all the earlier Ionians) asserted it to be : Space : Heaven. For instance, he asserts :

" Being is not born ; it cannot die : it is indestructible ; it has no end ; it has not been ; it never will be ; it simply is " (fragments 6 and 8).

But, obviously, while these assertions are true of a certain type of being (*i.e.* of the two divine types), they are not true of all types. As we all know, there exists a third type, *i.e.* the mortal. Parmenides, however, goes on :—

" Being is indivisible ; it is also motionless, being retained in its place of necessity ; it is perfect and complete ; for nothing can be wanting to that which constitutes being-in-itself. Whence it follows that it can undergo no change " (fr. 8). " All the formulas by which men define change as applied to being are absurd " (fr. 8).

Furthermore, Parmenides definitely asserts that being is limited, having the form of a perfect sphere of the same thickness or consistency throughout, no part being either stronger or weaker than another. In fine, Parmenides has fallen back upon the level of Xenophanes in that his being is *not* being as such, but divine being of the kind which is characteristically immobile, *i.e.* Heaven. Ontologically regarded, therefore, only two postulates of value are to be found, residually, in Parmenides' philosophy, and even these require to be eked out with supplementary phrases if one desires completely to justify them. They are :

- (1) The All is One (*i.e.* essentially, *i.e.* extensionally, regarded).
- (2) Non-being is not (a valid term).

And even these, as duly eked out, are adversely balanced by the following :

- (1) Being is determinate (immobile, indestructible, uncreated, indivisible, specific in shape ; it is thought, and the like) ;
- (2) Non-being is the mobile, sensorily-apprehensible world (which Parmenides, like all the Eleatics, identifies with the illusory). Thus, with Parmenides, non-being is given not only an existence but an identity as the (supposedly illusory) mobile principle and the created mobile world. Hence, Parmenides, in spite of himself, presents non-being as very much something.

Now the fact that the original Parmenidean position could be thus whittled down to almost nothing is sufficiently satisfying evidence that Parmenides, when he declared that non-being did not exist, did not do so from the sole motive which has ontological merit, *i.e.* that of emphasising the fact that the 'term' non-being is *no term at all*: a mere noise or scrawl; but, rather (as becomes clear in the arguments of his disciple Zeno) from a desire to prove there is no such type of being as the mobile type. That is, the Eleatic motive in denying being to non-being was propagandist and directed against the prime contention of a rival school (the Heraclitean) who retorted in kind, the two schools (Eleatic and Heraclitean) thus employing the term as one of abuse to belittle that particular one of the *two* elements which their common cosmogonic unitarianism could find no place for. With the Heracliteans, 'the All' was motion. For them, rest (Space) did not exist. It was non-being. Thus, Heraclitus and his disciples (of whom Cratylus—the one-time teacher of Plato—is the best known) did nothing to correct the Eleatic error to which they were opposed, but, swinging to the opposite extreme, opposed one error by a different error. And thus it was that Greek culture hurtled down into scepticism: into sophism. For, short of impugning the authority of the Eleatic and the Heraclitean philosophers equally, the inevitable effect of all this *was* scepticism. Hence, the charge of superficiality so often brought against the Greek sophist and sceptical movement is one which, rightly, should be preferred against the earlier philosophers whose superficial arguments precipitated it. However, we do not desire to concern ourselves here with the sophist thinkers, and we refer to them in passing merely to enable us to illustrate more fully the determining rôle which confusions concerning non-being have played in the begetting of that sceptical tendency which, taking its rise among the Greeks, has wormed its way into European philosophy in its entirety.

Not detaining ourselves, therefore, with the Greek sceptical philosophers, we proceed to notice in connection with the philosophy of non-being, that line of Greek thinkers which we



call the dualist: the exceedingly important line consisting of such philosophers as:-

- (1) Empedocles
- (2) Anaxagoras
- (3) Democritus
- (4) Plato
- (5) Aristotle.

Concerning this line we prelude our observations with an assertion which cannot be made too emphatic, *i.e.* that the sole 'philosophy of being' (ontology) which has merit is one which establishes the truth that non-being is no term at all and has no lawful place in a philosophic vocabulary. This assertion made, we proceed to consider three of these dualist philosophers (whom we have styled dualist, we might add, because they were, one and all, thinkers who held by the double tenets that *rest is* and *motion is*). For, of the five philosophers above indicated, the first two may be passed over in that, important though they are for Greek thought, they do not make much play with this (supposed) antithesis of being and non-being. Accordingly, with the passing observation that Empedocles was truly a dualist [for, of his supposed *four* elements, three (earth, air and water) reduce to the static element Space, this latter being none other than the divine entity which this philosopher called Love (Aphrodite, *Philia*, the *Sphairos*), while the fourth, Fire, is identical with his second element, *i.e.* the mobile element *neikos, eris*, strife, or (as we say) Time], we pass on to consider the three dualist philosophers who made their dualism bear directly upon the quasi-term non-being. These are Democritus, Plato and Aristotle.

Concerning these, the first comment requiring to be made is that, dualists though they were, they were not satisfactory ontologists. They were not, that is, competent thinkers viewed from the point of view of the philosophy of being. As for our warrant for this judgment, it is that no one of them was good enough ontologist to know that he ought to thrust the very name of non-being out of his system; and it is principally through the offices of these thinkers that this devastating term has made the secure settlement it has among the conceptions

of European philosophers. Let us, then, note in detail the attitudes adopted by these three thinkers towards non-being :— Democritus (influenced no doubt by the Heracleitean position) maliciously turned the tables on the Eleatics by styling the element 'rest' non-being, styling it the nonent, the void, the nothing-at-all ; *meden* ; *ouden*. In taking this line, Democritus was, no doubt, following (as we have said) the Heracleiteans, who had countered Parmenides' false position that 'only static being is' with the equally false position that 'only mobile being is.' However, Democritus was not content to be either a Heracleitean or a Parmenidean (an Eleatic). On the contrary, like Plato and Aristotle after him, and like Anaximander, Anaxagoras and Empedocles before him, he rightly decided to retain for his system both these elements. Only, unable to extricate himself from the terminology born of the war between the advocates of the one and the other of the two elements as the sole type of being, he retained this term (of sorts) : non-being : for his system. But the term which, as representing being, he brings into contrast with Heaven as non-being, is by no means the pure mobility of Heracleitus. The Democritean 'being,' that is to say, is neither of the two elemental types of being. It is the physical world, the compounded, derived world of nature made up of material atoms which, conceived as falling eternally in the nonent (in the void), carry motion with them as their inherent attribute<sup>1</sup>. It is the component units of the phenomenal world as impregnated with motion (the latter their mere property and adjunct), and, so, rendered capable of moving through Space, which latter is (as we have said) Democritus's non-being. Thus, while Democritus is to be recognised as making a place in his system for all three persons of the cosmogonic trinity, he is in no way to be regarded as a sound cosmogonist. For, while he omits no one of the three terms of this form of the trinity (the cosmogonic

<sup>1</sup>We ought here to say that this account of the Democritean philosophy is the account of that body of notions which tradition has made go under this name and which has exerted so powerful an influence on European thinking. It is not what we gather from our reading of the Democritean fragments, the result of which has been to give us a quite different conception of the Democritean philosophy.

triangle, so to say), he makes the error—unlimited in its pernicious philosophic consequences—of setting such triangle on its apex instead of its base. That is, he presents a system which turns the world-scheme upside down! For the Democritean philosophy takes the view that the compounded entity (matter : the world of materialised atoms) is the base of everything, whereas motion (Time) is merely an 'accident' of the atoms, while Space (which Democritus postulates in order to give his individually separate, elemental atoms a medium to move in) is just nothing-at-all : the void. The outstanding failings of the Democritean philosophy (as construed by our modern philosophers and so enthusiastically extolled by them) may thus be summarised under the following headings :—

- (1) The 'Democritean' philosophy turns the scheme of things topsy-turvy by inverting the relationship obtaining between the three entities constitutive of the cosmogonic trinity ;
- (2) It recognises the validity of the term non-being and goes so far as to apply it to the primary element and energy of the universe, *i.e.* Space ;
- (3) It takes liberties with one of the Laws of Thought so called, *i.e.* the 'law' of contradiction, according to which a thing cannot both *be* and *not be* at one and the same time. For this is what is involved in his slogan : "The ent (being : the atomic assemblage) is ; but the nonent (Space, the void, non-being) also is." That is to say, the slogan : "That is which is not," which Democritus opposed to Parmenides' (quite sound) war-cry : "Only the ent (being) is ; the nonent is not," requires to be dismissed for this reason if for no other, *i.e.* that it contravenes the 'law of contradiction.'

In fine, not only was the status and prestige allowed to the term non-being by Parmenides (allowed to it, that is, by the Parmenidean identification of it with motion) sanctioned by Democritus. It was heightened by the latter to such an extent that, henceforth, the term—as implying Space : the void—took firm roots in European philosophy. For, after Democritus came Plato, and Plato appears to have been very powerfully

influenced by the atomistic philosophy, with the consequence that, through his instrumentality, this philosophy grafted itself on all later European speculation. However, Plato on the subject of non-being is a matter of such importance as to require a study to itself, and to this we proceed.

## CHAPTER XIV

### PLATO ON NON-BEING

#### I

We have made bold to declare that Greek ontology was a conspicuous failure and that it was so because no Greek thinker emerged who had the power to deal intelligently with that notion which, as the *summum genus* of existence, is the master-notion of ontology, *i.e.* the term *being*. Thus, no Greek thinker arose who was able clearly to articulate the prime ontological truth that the distinguishing mark which renders the *summum genus* unique among terms is that it tolerates no contrary; hence, that there can be no legitimate term non-being. Now, a study of Plato's treatment of the term non-being will (we believe) go far to confirm this opinion about Greek ontological incompetence; for this great thinker, in order to surmount the difficulties born of the retention of the term, made almost every twist and turn conceivable except the right one, and this present study will seek to illustrate this. Our study distinguishes the following Platonic moves relative to the term non-being:—

Plato asserts that the study of non-being is 'a very difficult speculation.'

Plato identifies his notion of non-being with the 'that which is not' of the man-in-the-street, *i.e.* either with (1) the erroneously described; or (2) the non-real.

Plato, dissatisfied, approaches and attacks the notion anew by raising the problem of the 'philosophy of contraries.'

Plato formally affirms the validity of the term non-being, breaking away from the Eleatic position in order to do so.

Plato rejects the entire study of non-being as foolishness, claiming that it is sufficient if one can contrive to distinguish good arguments from bad when one meets them.

Plato identifies non-being with 'the opposite' as identified with that member of any pair of contraries which carries the sign of the negative. This opposite ('non-being') he christens 'the other.'

Plato identifies non-being with 'matter' in the sense of *protokhyle*, the eternal matrix, Ouranian Space, the middle Heaven.

Plato, proceeding after the manner of Democritus, identifies being (*e.g.* in the *Timaeus*) with *generated* being.

Plato postulates five *summa genera*, and leaves ontology in ruins.

Plato picks up what he can out of the wreck he has made of ontology, abandons the latter, and, out of the salvaged ontological material [and by aid of the unwarranted 'Democritean' procedure which restricts the term 'being' to generated being (*heading* 8)] contrives (in the *Timaeus*) to put together his account of the *cosmogonical trinity* by the teaching of which he was to secure the powerful philosophic hold he has had upon all subsequent generations of thinkers.

Now, the state of mind bespoken by the above positions relative to the term non-being is one of very great confusion and it is in the light of this revelation of immense intellectual difficulty that we can understand the passion which is displayed in a well-known passage of the *Phaedrus*. As everyone knows, Plato was most ardently drawn to the study of ontology, this being the intellectual activity which he so constantly praises as dialectic (the activity which our own philosophy identifies with the art of classification), the higher grades of which are required to discover the veritable (*i.e.* native) lines of cleavage inherent in the scheme of the universe. Accordingly, speaking of the labours proper to the dialectician, Plato in the *Phaedrus* asserts that he must be able to take a comprehensive view of the multitude of scattered particulars of experience and bring them under one form or idea, for the purpose of defining the nature of the subject he wishes to consider. He must be able :

"To divide into species, carefully attending to the natural joints by which the parts are severed and connected, not breaking any parts, like a bad carver."

Of these processes he makes Socrates declare :

"I have always been a lover, seeking by their means to make myself able to speak and to think. And, if I can find anyone who is able to see up to the One and down to the Many, I am ready to follow in his footsteps as if he were a God."<sup>1</sup>

<sup>1</sup>Plato, *Phaedrus*, 266 B.

No doubt exists, therefore, about Plato's intense desire to arrive at the correct dispositions in ontology and it was in his efforts to satisfy this desire that he canvassed almost every conceivable ontological opening for a solution of the riddle of non-being. Let us, then, proceed to illustrate something of the workings of Plato's mind about this matter :—

In the *Sophist* (the dialogue in which, principally, Plato discusses the problem of the existence and identity of non-being) Plato makes the Athenian Stranger—who, presumably, expresses Plato's own views—instruct the acquiescent though bewildered Theaetetus in the meanings of the term non-being and the difficulties which cling round it. He begins by suggesting that this meaning is that 'man-in-the-street' notion according to which 'that which is not' is certainly something, but not that which it has (mistakenly) been regarded as being. It is not the thing which one has had in mind. Also, we may add, it is in the course of this particular piece of argumentation that Plato presses his (forceless) argument that, because we can speak of 'things which are not' numerically (which obviously we can with the term non-being construed as above stated), non-being must, perforce, be a valid term, and it is in consequence of this 'discovery' that Plato formally makes his break with the Parmenidean teaching on the subject of non-being. We quote the relevant passage, every word of which is, in our opinion, worth careful weighing in view of the futility of all post-Platonic ontological speculation :—

*Stranger.* These<sup>1</sup>, then, are the two kinds of image-making, the art of making likenesses, and . . . the art of making appearances [*i.e.* things which, as Plato has said earlier, 'only appear like but are not truly alike'] . . . My dear friend, we are engaged in a very difficult speculation—there can be no doubt of that ; for how a thing can appear and seem, and 'not be,' or how a man can say a thing which is not true, has always been and still remains a very perplexing question. Can any one say, or think, that falsehood really exists, and avoid being caught in a contradiction? Indeed, Theaetetus, the task is a difficult one.

*Theaet.* Why?

*Str.* He who says that falsehood exists has the audacity to assert the being of not-being ; for this is implied in the possibility of falsehood. But, my boy, in the days when I was a boy, the great Parmenides pro-

<sup>1</sup>Plato, *Works*, Jowett's translation, vol. x, *The Sophist*, p. 264 ff.

tested against this doctrine, and, to the end of his life, continued to inculcate the same lesson—always repeating both in verse and out of verse :

'Keep your mind from this way of enquiry, for never will you show that not-being is.'

Such is his testimony, which is confirmed by the very expression when sifted a little. Would you object to begin with the consideration of the words themselves ?

*Theæt.* Never mind about me ; I am only desirous that you should carry on with the argument in the best way, and that you should take me with you.

*Str.* Very good ; and now say, do we venture to utter the forbidden word 'not-being' ?

*Theæt.* Certainly we do.

*Str.* Let us be serious then, and consider the question neither in strife nor play : suppose that one of the hearers of Parmenides was asked, 'To what is the term "not-being" to be applied ?'—do you know what sort of object he would single out in reply, and what answer he would make to the enquirer ?

*Theæt.* That is a difficult question, and one not to be answered at all by a person like myself.

*Str.* There is at any rate no difficulty in seeing that the predicate 'not-being' is not applicable to any being.

*Theæt.* None, certainly.

*Str.* And if not to being, then not to something . . . He who says 'not something' must say 'absolutely nothing.'

*Theæt.* Most assuredly.

*Str.* And as we cannot admit that a man speaks and says nothing, he who says 'not-being' does not speak at all.

*Theæt.* The difficulty of the argument can no further go.

*Str.* Not yet, my friend, is the time for such a word ; for there still remains of all perplexities the first and greatest, touching the very foundation of the matter.

*Theæt.* What do you mean ? Do not be afraid to speak.

*Str.* To that which is, may be attributed some other thing which is ?

*Theæt.* Certainly.

*Str.* But can anything which is, be attributed to that which is not ?

*Theæt.* Impossible.

*Str.* And all number is to be reckoned among things which are ?

*Theæt.* Yes, surely number, if anything, has a real existence.

*Str.* Then we must not attempt to attribute to *not-being* number either in the singular or plural ?

*Theæt.* The argument implies that we should be wrong in doing so.

*Str.* But how can a man either express in words or even conceive in thought things which are not, or a thing which is not, without number ?

*Theæt.* How indeed ?



*Str.* When we speak of *things* which are not, are we not attributing plurality to not-being ?

*Theaet.* Certainly.

*Str.* But, on the other hand, when we say ' what is not,' do we not attribute unity ?

*Theaet.* Manifestly.

*Str.* Nevertheless, we maintain that you may not and ought not to attribute being to not-being ?

*Theaet.* Most true.

*Str.* Do you see, then, that not-being in itself can neither be spoken, uttered, or thought, but that it is unthinkable, unutterable, unspeakable, indescribable ?

*Theaet.* Quite true.

*Str.* But, if so, I was wrong in telling you just now that the difficulty which was coming is the greatest of all.

*Theaet.* What ! is there a greater still behind ?

*Str.* Well, I am surprised, after what has been said already, that you do not see the difficulty in which he who would refute the notion of *not-being* is involved. For he is compelled to contradict himself as soon as he makes the attempt.

*Theaet.* What do you mean ? Speak more clearly.

*Str.* Do not expect clearness from me. For I, who maintain that *not-being* has no part either in the one or many, just now spoke and am still speaking of not-being as one ; for I say ' not-being.' Do you understand ?

*Theaet.* Yes.

*Str.* And a little while ago I said that not-being is unutterable, unspeakable, indescribable : do you follow ?

*Theaet.* I do after a fashion.

*Str.* When I introduced the word ' is,' did I not contradict what I said before ?

*Theaet.* Clearly.

*Str.* And in using the singular verb, did I not speak of *not-being* as one ?

*Theaet.* Yes.

*Str.* And when I spoke of *not-being* as indescribable and unspeakable and unutterable, in using each of these words in the singular, did I not refer to not-being as one ?

*Theaet.* Certainly.

*Str.* And yet we say that, strictly speaking, it should not be defined either as one or many, and should not even be called ' it,' for the use of the word ' it ' would imply a form of unity.

*Theaet.* Quite true.

*Str.* How, then, can any one put any faith in me ? For now, as always, I am unequal to the refutation of *not-being*. And therefore, as I

was saying, do not look to me for the right way of speaking about not-being ; but come, let us try the experiment with you.

*Theaet.* What do you mean ?

*Str.* Make a noble effort, as becomes youth, and endeavour with all your might to speak of *not-being* in a right manner, without introducing into it either existence or unity or plurality.

*Theaet.* It would be a strange boldness in me which would attempt the task when I see you thus discomfited.

*Str.* Say no more of ourselves ; but, until we find someone or other who can speak of not-being without number, we must acknowledge that the Sophist is a clever rogue who will not be got out of his hole.

*Theaet.* Most true.

*Str.* And if we say to him that he professes an art of making appearances, he will grapple with us and retort our argument upon ourselves ; and when we call him an image-maker he will say : ' Pray what do you mean at all by an image ? '—And I should like to know, Theaetetus, how we can possibly answer the youngker's question ?

*Theaet.* We shall doubtless tell him of the images which are reflected in water or in mirrors ; also of sculptures, pictures, and other duplicates.

*Str.* I see, Theaetetus, that you have never made the acquaintance of the Sophist.

*Theaet.* Why do you think so ?

*Str.* He will make believe to have his eyes shut, or to have none.

*Theaet.* What do you mean ?

*Str.* When you tell him of something existing in a mirror, or in sculpture and address him as though he had eyes, he will laugh you to scorn, and will pretend that he knows nothing of mirrors and streams, or of sight at all ; he will say that he is asking about an idea.

*Theaet.* What can he mean ?

*Str.* The common notion pervading all these objects which you speak of as many, and yet call by the single name of image, as though it were the unity under which they were all included. How will you maintain your ground against him ?

*Theaet.* How, Stranger, can I describe an image except as something fashioned in the likeness of the true ?

*Str.* And do you mean this something to be some other true thing, or what do you mean ?

*Theaet.* Certainly not another true thing, but only a resemblance

*Str.* And you mean by true that which really is ?

*Theaet.* Yes.

*Str.* And the not-true is that which is the opposite of the true ?

*Theaet.* Exactly.

*Str.* A resemblance, then, is not really real, if, as you say, not true ?

*Theaet.* Nay, but it is in a certain sense.

*Str.* You mean to say, not in a true sense ?

*Theaet.* Yes ; it is in reality only an image.

*Str.* Then what we call an image is, in reality, really unreal.

*Theaet.* In what a strange complication of being and non-being we are involved !

*Str.* Strange !! I should think so ! See how, by his reciprocation of opposites, the many-headed Sophist has compelled us, quite against our will, to admit the existence of not-being [*i.e.* as that misleading likeness to something else which has led us to mistake it for that which it is like to].

Nevertheless, Plato himself appears not to have been altogether satisfied with this and returns to the subject with an altogether new form of argument which has the form of an analysis of the 'symbol of negation' (not or non : *me* and *ou*). Now this analysis constitutes the substance of a philosophy of contraries, and this new Platonic argument accordingly supplies us with very exact information as to the state of Plato's knowledge about contraries and about the significance of the symbol of negation. Thus, in this same dialogue, Plato discusses the meaning of the negative particles *me* and *ou* in such a way as unmistakably to reveal the fact that he is not in possession of their meaning ; for Plato is altogether unwilling to allow that the meaning of the negative particles is that of *anti* (*i.e.* opposition), and that they are prefixed to the name of a form of being solely in virtue of the latter's lack *not* of being, but of some one specific feature of being. That is, Plato does not realise that 'difference' in this connection, means 'opposition' in the sense of lack of possession of some particular feature of being, and nothing other. In the words of the *Eleatic Stranger*, Plato confusedly presents his view as follows :—

"When we speak of non-being, we speak, I suppose, not of something opposed to being, but only different."

He then goes on to make utter confusion of the meaning of the term 'different,' as used in this connection, when he says :

"When we speak of something as *not-great*, does the expression seem to you to imply what is *little* any more than what is 'equal' ?"

And when the accommodating *Theaetetus* has allowed this erroneous view of the *not-great* which the *Stranger* has blandly angled for, the latter goes on :

"The negative particles *ou* and *me* when prefixed to words, do not

imply oppositions, but only differences from the words; or, more correctly, from the things represented by the words which follow them." Which is, of course, a distinction without a difference, for the question of the meaning of 'difference' here is the question of the meaning of *non* or *not*, while this meaning undoubtedly is that of opposition in respect of the quality (feature) indicated by the word to which it is prefixed. For instance, the not-great is the opposite of the great: a fact which our willingness or otherwise to identify this opposite with *the little* does not affect in the slightest. Indeed (we contend), the very first proposition of the philosophy of contraries ought to be 'the different is the opposite' as regards that aspect in respect of which a specific difference obtains, while it is precisely to indicate the existence of this opposition that the negative particles exist. However, not to let the weight of the argument rest solely upon the meaning of a single term, let us give an account of the meaning of *not* or *non* in terms different from this qualitative term of 'opposition.' This we can do in virtue of the fact that we can state Plato's proposition:

"When we speak of [a non-anything-whatsoever], we speak not of something opposed to being but only different,"

in a quantitatively-expressed form according to which the negative term of a pair of contraries expresses itself as a remainder of being, which remainder, *invariably*, represents a positive quantity. Thus, if we call to mind that image previously employed of the negative particle as a dividing-rod, and a rod which, falling anywhere within the universe of being, divides the latter into two groups of beings opposed to one another in respect of the possession of the existential feature which constitutes the 'principle of division,' we can express the situation resulting by saying that the meaning of the negative particle is such that, when placed in front of any term ( $x$ , let us say), the following equations will always be satisfied:  $-(\text{non } x) = (\text{the genus} - x) = (\text{a positive quantity of being}) = (\text{some definite form of being})$ . That is, 'non  $x$ ' must always equate with some part or other of the sum of being. But, in the unique case where  $x = \text{being-in-its-entirety}$  ('the one') its subtraction *from* being-in-its-entirety will exhaust the *summum genus* completely

and there will be *no* positive quantity of being left as remainder : a state of affairs the genuine inference from which is, not that which Plato draws (that non-being is a valid term) but the very inverse of this, *i.e.* that the negative particle may never, validly, be prefixed to the term ' being ' when the latter is used philosophically as the equivalent of the *summum genus*. And, curiously enough, it is precisely this conclusion expressed in the form of the equations :

$$(\text{non } x) = (\text{the genus} - x) = \text{a positive quantity,}$$

which Plato is trying to elicit in his argument in the *Sophist*. Curiously, we say, in that the motive leading him on thus to elicit it was his belief that this conclusion would, when obtained, establish the position that the term non-being is a veritable term (*i.e.* a meaningful term). Hence his otherwise inexplicable move in dismissing as inadmissible the meaning of the negative particle as one implying opposition. In the confusion of his mind, Plato imagined that the two meanings (opposition and remainder) were mutually exclusive, whereas, as a matter of fact, they are merely variant modes of expressing one and the same thing. This being so, it follows that the Eleatic Stranger's subsequent argument is a pure *non sequitur*, its sole semblance to logicality deriving from the peculiar misconstruction which Plato has put upon the meaning of the negative particles. In illustration, let us quote a passage which, from the point of view of the history of the concept of non-being, is of highest significance, forcing as it does upon the mind a very lively realisation of the quality of the antecedents of this long-lived term non-being. Incidentally, it shows us, too, how men of the very greatest intellect can make bad slips, and how necessary it is to be on our guard against granting, even on the invitation of the most impressive authorities, logical positions which make plain commonsense feel restive, as it is made by the theory of the ' identification of contraries ' (which is what the assertion ' non-being is ' amounts to). However, before submitting the passage in question, let us, as a precaution against infection by Plato's sophistries concerning non-being, recall to mind the following important principles :—

- (1) The meaning of the negative particle is *anti* ;

- (2) All terms, save one, may have a contrary ;
- (3) The *summum genus*, as identified with the term being, is the term unique among terms in that it can have no contrary [this, for the very good reason that the term itself bankrupts the whole 'universe of discourse,' and, so, leaves no remainder to which the symbol of opposition (negation) can, conceivably, be applicable].
- (4) What Plato calls 'the other' is simply that member of any pair of contrary forms of being to which the negative particle is prefixed. That is, if the one member of the pair be  $x$ , the Platonic 'other' is 'non  $x$ .' The implication of the Platonic 'other' is, therefore, that of *anti*: the opposite: and is, as we have just said, the equivalent of any term prefixed by the negative particle. Hence, inasmuch as the latter can (logically) be prefixed to all terms save one, it follows that 'otherness' can be asserted of all terms save one. But this excepted one is the very term to which Plato is labouring to persuade himself he has the right to prefix it, *i.e.* being: the *summum genus*.

Now, if we bear these points in mind, we shall not be misled by Plato's argument that, because we can preface certain terms with the negative particle, we can preface *all* terms (inclusive of that which constitutes the *summum genus*) with it; for such an argument is false both as to form and to substance. Let us, however, now submit Plato's argument:—

*Str.* And the non-great may be said to exist, equally with the great?

*Theæt.* Yes.

*Str.* And, in the same way, the just may be placed in the same category, *i.e.* of the existent, with the non-just—the one cannot be said to have any more existence than the other.

*Theæt.* True.

*Str.* The same may be said of other things; seeing that the nature of the *other* has a real existence, the parts of this nature must equally be supposed to exist.

*Theæt.* Of course.

*Str.* Then, as would appear, the opposition of a part of the *other*, and of a part of *being*, to one another, is, if I may venture to say so, as truly *essence* as being itself, and implies *not* the opposite of being, but only what is other than being.

*Theaet.* Beyond question.

*Str.* What then shall we call it?

*Theaet.* Clearly, *non-being*; and this is the very nature for which the Sophist compelled us to search.

*Str.* And has not this, as you were saying, as real an existence as any other class? May I not say with confidence that *non-being* has an assured existence, and a nature of its own? Just as *the great* was found to be great, and the beautiful beautiful, and the not-great not-great, and the not-beautiful not-beautiful, *in the same manner* (!) *non-being* has been found to be and is *non-being*, and is to be reckoned one among the many classes of being. Do you, *Theaetetus*, still feel any doubt of this?

*Theaet.* None whatever.

*Str.* Do you observe that our scepticism has carried us beyond the range of *Parmenides*' prohibition?

*Theaet.* In what?

*Str.* We have advanced to a further point, and shown him more than he forbade us to investigate.

*Theaet.* How is that?

*Str.* Why, because he says—

'Not-being never is, and do thou keep thy thoughts from this way of enquiry.'

*Theaet.* Yes, he says so.

*Str.* Whereas, we have not only proved that things which are not, are, but we have shown what form of being *not-being* is; for we have shown that the nature of *the other* is, and is distributed over all things in their relations to one another, and whatever part of the other is contrasted with being, this is precisely what we have ventured to call *not-being*.

*Theaet.* And surely, *Stranger*, we were quite right.

*Str.* Let not any one say, then, that, while affirming the opposition of not-being to being, we still assert the being of not-being(!); for, as, to whether there is an opposite of being, to that enquiry we have long said good-bye—it may or may not be, and may or may not be capable of definition. But, as touching our present account of not-being, let a man either convince us of error, or, so long as he cannot, he too must say, as we are saying, that there is a communion of classes, and that being, and difference or other, traverse all things and mutually interpenetrate, so that the other partakes of being, and by reason of this participation, *is*, and yet is not, that of which it partakes, but other, and being other than being, it is clearly a necessity that *not-being* should be. And again, *being*, through partaking of the other, becomes a class other than the remaining classes, and being other than all of them, is not each one of them, and is not all the rest, so that, undoubtedly, there are thousands upon thousands of cases in which being is not; and all other things, whether regarded individually, or collectively, in many respects are, and in many respects, are not.

*Theaet.* True.

*Str.* And he who is sceptical of this contradiction, must think how he can find something better to say ; or, if he sees a puzzle, and his pleasure is to drag words this way and that, the argument will prove to him that he is not making a worthy use of his faculties ; for there is no charm in such puzzles, and there is no difficulty in detecting them ; but we can tell him of something else the pursuit of which is noble and also difficult.

*Theaet.* What is it ?

*Str.* A thing of which I have already spoken ; letting alone these puzzles as involving no difficulty (!) he should be able to follow and criticise in detail every argument, and when a man says that the same is in a manner other, or that other is the same, to understand and refute him from his own point of view, and in the same respect in which he asserts either of these affections. But to show that somehow and in some sense the same is other, or the other same, or the great small, or the like unlike ; and to delight in always bringing forward such contradictions, is no real refutation, but is clearly the new-born babe of some one who is only beginning to approach the problem of being."

Thus is the master of dialectic willing (surely) to confess himself baffled and ready to fall back from the task he has set himself of telling us what non-being is.

## II

And now let us take note of Plato's identification of non-being with an entity altogether different from the generalised notion of 'that which is not' (what it has been mistakenly supposed to be). In the *Republic*, for instance, Plato identifies non-being with the entity which the Greeks called 'matter.' Now (as we consider) there is no one feature of Greek philosophy more in need of emphasising than the fact that what the Greeks in general (not, of course, Democritus ; or, rather, not the traditional 'Democritus') called matter is not what we moderns call matter. That is, with the Greeks, matter was not pre-eminently a compounded type of being as our matter is, but the elemental stuff out of which all compounded forms (matter in the modern sense) are and have been made. It was therefore an eternal substance : a deity therefore. Hence the reason that all the Greeks accepted the dogma of the eternality of matter, Plato being no exception, 'matter,' for him (*e.g.* in the *Timaeus* and the *agrapha dogmata*), being, *chora i.e.* place : the matrix



of creation or spatial 'nurse of generation'; also the mother of creation (generation). Hence the general derivation of the term 'matter,' which, as we point out elsewhere, is the same term as the Greek *meter* (mother), the Latin *mater*, and the Latin *materia*. The Greeks thus knew of a stuff which, as a mother-substance, was an existence prior to that compounded stuff which we moderns, as good 'Democriteans,' call by the misnomer *matter*. They knew, that is, of an eternal *meter*; *mater*; *matrix*; *materia*; *matter* who was the cradler, home, nurse and mother of (generator of) the world of nature, and what this substance was Plato tells us very plainly in the *Timaeus*<sup>1</sup>:

"This new beginning of our discussion of the universe requires a fuller division than the former; for then we made *two* classes; now, a third must be revealed. The two sufficed for the former discussion: one, which we assumed, was a pattern<sup>2</sup> intelligible and always the same [the Logos]; the second was only the imitation of the pattern, generated and visible [*i.e.* the world of nature]. *There is also a third kind which we did not distinguish at the time, conceiving that the two would be enough.* But now the argument seems to require that we should set forth in words another kind, which is difficult of explanation and dimly seen. What nature are we to attribute to this new kind of being? We reply that it is the receptacle, and, in a manner, the nurse, of all generation [nature]. I have spoken the truth; but I must express myself in clearer language, and this will be an arduous task for many reasons, in particular, because I must first raise questions concerning fire, and the other elements, and determine what each of them is; for to say, with any probability or certitude, which of them should be called water rather than fire, and which could be called any of them rather than all or some one of them, is a difficult matter. How, then, shall we settle this point, and what questions about the elements may be fairly raised?" [Here follows Plato's familiar and much imitated argument for the indicating of what a matrix (a substratum) is. Plato then goes on]:—"Wherefore . . . we must acknowledge that there is one kind of being [*i.e.* the pattern] which is always the same, uncreated and indestructible, never receiving anything into itself from without, nor itself going out to any other, but invisible and imperceptible by any sense, and of which the contemplation is granted to intelligence only. And there is another nature [nature itself] of the same name with it, and like to it, perceived by sense, created, always in motion,

<sup>1</sup>Section 49 ff; Jowett's translation.

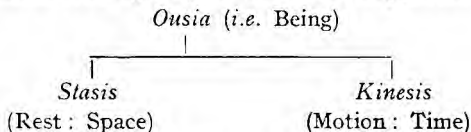
<sup>2</sup>This Platonic pattern we identify with that part of Space (*i.e.* the Logos) to which we give the title of the Seedbed, the 'seeds' of things being (in our opinion) what we are to understand by the Platonic ideas or supernatural prototypes of things. See chapter xxi.

becoming in place and again vanishing out of place, which is apprehended by opinion and sense. And there is a third nature, *which is Space, and is eternal, and admits not of destruction, and provides a home for all created things, and is apprehended without the help of sense, by a kind of spurious reason, and is hardly real*, which we, beholding as in a dream, say of all existence, that it must, of necessity, be in some place and occupy a space. . . . Of these, and other things of the same kind relating to the true and waking reality of nature, we have only this dreamlike sense, and we are unable to cast off sleep and determine the truth about them."

This entity, however, which is "difficult of explanation and dimly seen," apprehended "without the help of sense, by a spurious kind of reason" and "hardly real," this entity (we repeat) it was which Plato in his unwritten teaching (so Aristotle implies) identified, after the 'Persian' manner, with non-being and (as the female world-principle), with evil, *i.e.* with the left-handed, sinister principle which is all lack and imperfection: a way of thinking which reminds us that Plato had been a pupil of the Heracleitean Cratylus, and that, much as Plato owed to the great Milesians and Eleatics, he differed from them in respect of their most characteristic feature of according full measure running over of honour to matter, *meter, mater, proto-hyle*, the mother-principle, Space, Heaven the Nun, contrasting her against her 'sister' (*i.e.* Hyperourania: the 'Space beyond the fixed'), the Aristotelian (and, at times, the Platonic) 'one supreme God.' Indeed, as we shall suggest in a later chapter, one of the most characteristic features of the Aristotelian philosophy took form as an effort to get rid of this 'Persian' element of the Platonic philosophy.

We must not leave this subject of 'Plato on non-being' which has proved so fruitful a source of obscurity for all subsequent philosophy without taking note of two further matters. The first of these is an outcome of Plato's faulty interpretation of the significance of the negative particle to which we referred earlier. For one immediate consequence of this was that Plato was led to lay down (for instance, in the *Sophist*) the position that there are *five (!) summa genera*: four other terms of the highest order, besides the true *summum genus* (being), crowding the latter's throne! Plato had just affirmed his (historically-important) belief that both rest (*stasis*) and motion (*kinesis*)

exist. (" Like children, ' Give us both,' say we," is how he puts it.) Plato thus follows Democritus in the latter's important break-away from the Eleatic and Heracleitean positions equally, and has, by right, thereby put himself in possession of the following initial ontological position : the true position :—



But, unable to leave well alone, and misled by his misconception relative to the meaning of the negative particle, Plato now proceeded to take the almost incredible step of making the variant terms descriptive of the two classes yielded by any application whatsoever of the negative particles (the two classes which we may call the ' this-class ' and the ' not-this-class ' ; or, again, the classes of ' the same ' and ' the other ' ) into *genera-in-themselves* ! Accordingly, just as, earlier, Plato had dragged *ousia* (being) down from its high pinnacle of *summum genus* by declaring it to be possessed of a contrary [a move which put it on the same level of limited applicability as *stasis* (rest) and *kinesis* (motion)], he now further degraded it by adding to it two other terms [*tauton* (the same) and *heteron* (the other)], and it was in this way that he found he had on his hands *five genera* of equal rank. And he would have had six had he not tacitly identified non-being with *heteron*, a situation which surely should have informed him that his highest art (dialectic : ontology) lay in ruins. The fivefold Platonic pinnacle (as *summa genera* of equal rank) of the classification-scheme of the universe thus consisted in the following :—

*Ousia* (Being).

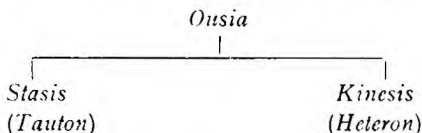
*Stasis* (Rest : Space).

*Kinesis* (Motion : Time).

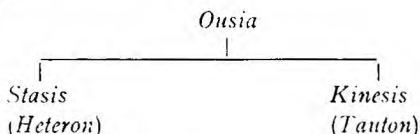
*Tauton* (the Same, i.e. that member of a pair of contraries which does *not* carry the negative prefix).

*Heteron* (the Other, i.e. that member of a pair of contraries which *does* carry the negative prefix ; hence, *one* form of the Platonic non-being).

The rightful placing of these five terms is the following :—



Or (in view of the essential transposability of the sign of the negative as regards the members of any given pair of contraries), as follows :—



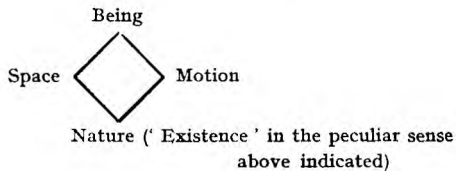
Thus did the art of dialectic (ontology) fare at the hands of its greatest admirer.

In mitigation of these criticisms brought against the Greek thinkers on account of the gratuitous difficulties they imported into ontology, one has to bear in mind the facts (1) that the 'science' (the art, actually) was in its infancy<sup>1</sup>; (2) that the great Greeks, Plato particularly, howsoever defeated, returned again and again to the fray. Thus, although the *Sophist* ranks as one of the later of the Platonic dialogues, the *Timaeus* is later still, and in this dialogue Plato is to be found endeavouring to build a fresh system out of the wreck made in the *Sophist*. Thus, whereas, in the latter, Plato had five highest genera [he would, as has been said, have had six had he not identified non-being with 'the other' (*heteron*)], in the *Timaeus*, he presents himself before us, not, indeed, with the true ontological trinity but yet with the true cosmogonical trinity which consists in his three cosmogonic entities of world-mother, world-father, and world-child, a beneficial reduction he had effected as follows :—In the first place, he has dismissed

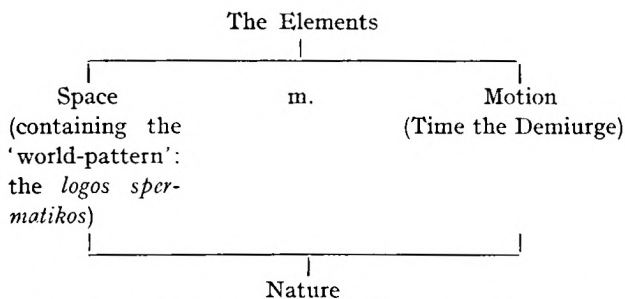
<sup>1</sup>We might also charitably bear in mind that even to-day there is scarcely any improvement; a claim to which it might, on the other hand, be retorted that that fact is largely due to our tendency to take uncritically the teachings of the great Greeks: of Plato in particular.

<sup>2</sup>For an interesting discussion of this, see *Mind*, New Series, No. 2 (Jan. Oct. 1902). *The Later Ontology of Plato*. By A. W. Benn.

altogether, apparently, *ousia* (being) in the sense of a *summum genus*, using the term in that sense which the term 'existence' carries in the Vedic creation-hymn and the sense in which the 'Democritean' philosophy had accepted it: the sense, that is, which equates it with evolving material nature which, fully matured, is Plato's 'god which is to be.' Using, then, the term *ousia* in a sense corresponding to nature (*kosmos : mundus*), Plato now reduces his remaining four principles to two by identifying Space with 'the same' and motion with 'the other': a very complete change round indeed. However, by these means, strange as they are, Plato was enabled safely to reach stable ground in the sphere of *cosmogony*. Hence (as we believe), the explanation of the extraordinary fascination which the *Timaeus* has had for mankind for over twenty centuries. What, actually, Plato had done was to thrust the supreme *ontological* problem aside altogether, confining himself exclusively to the *cosmogonical*. That is, of the tetrad of entities :-



Plato has, in the *Timeaus*, while retaining the name, left the signification of the uppermost term (being) out of the picture altogether; and as it was this term which had been throwing his cosmogony no less than his ontology all awry, the fact that he did so is one to be rejoiced over. For, by so doing, Plato, as a recognised 'master' of subsequent ages, gave his followers something they could get a truly satisfying grip on in that it was a true thing. And so very firmly indeed did grateful after-ages lay hold of the measure of cosmogonic truth he thus gave them, that the fact that he duplicated his kinesis-principle (in the separate person of a Demiurge) scarcely inconvenienced them. What they had before them for their apprehension was the following :-



The chief ground for bewilderment here is that Plato is always supposed to have conceived the 'pattern' as existing *beyond* the ouranian Heaven; while the dogma<sup>1</sup> of how this extramundane (hyperouranian) pattern mirrored a true version of itself into the ouranian Heaven, though current, was not sufficiently so to render the meaning of the *Timaeus* easy of access.

<sup>1</sup>For a statement of this dogma, see chapter **xxi**.

## CHAPTER XV

### ARISTOTLE ON NON-BEING

We now have to note (it will be very briefly) Aristotle's treatment of the term non-being. For even Aristotle, the great logician, found a place in his philosophy for this logically disreputable term, thereby preventing himself from putting the top-stone to his ontological structure. For him as for his predecessors, non-being is no non-meaning-fraught shape or sound, but one to which significatory force is accorded in the highest degree. Everywhere, that is, Aristotle takes for granted that the term being can have a contrary: can, that is, carry the symbol of negation; and, by implication, cannot be the *summum genus*. It was, indeed, the world's master-logician who launched the idea (an idea which has been dressed out afresh by certain modern logicians) that the propositional copula (the term *is*) does not signify existence: being. That is, in order to make logical standing-room for this foolish term non-being, Aristotle was prepared to torture the plain meaning of the verb 'to be,' and in more places than one he is to be found arguing that, when one says that 'not-being is so and so,' *e.g.* thinkable, this does not imply that 'not-being exists,' because, forsooth, the term 'is' in this connection does not connote existence. However, when we remember that Aristotle, like Plato, was a victim of the vulgar error which confounds the real type of being with being-in-general, we know what weight to put on this particular argument, master-logician though he be. We are assured, that is, that there is no need to alter the meaning of our most fundamental verb to get round the difficulty which drove Aristotle to the extreme of doing so. We shall merely have to reiterate the statement meet for novices in logic (ontology) that being-in-general includes types of being of many kinds, and that the real type is only one among several, the latter including, for instance, all merely thinkable types. We have, that is, to reiterate the statement that, when it is said 'a certain thing is not,' what is meant is that the thing in question 'is not'

in some one particular category (*e.g.* the real), but just as certainly *is* in some other category, *e.g.* that of the thinkable which contains beings like (for instance) winged horses, hypotheses, pure lies, false suspicions. For, if entities like these (winged horses, let us say) had no being, we should not be able to think specifically of them—as certainly we are. Accordingly, the point is not to be allowed to Aristotle (nor yet to any modern) that the term 'is' does not carry its normal meaning when it is functioning as the copula of predications.

Let us, however, note some of the uses which Aristotle found for this term to which he so wrongly allowed connotation; for, like Plato, Aristotle gave to the term more than one meaning. Of these meanings, we will pass over without comment (as being too weak a specimen to be truly representative of Aristotle) his acceptation of the term in the sense of the false (and of the imaginary generally); the meaning, for instance, which he gives to the term in his 'book of definitions'<sup>1</sup>:

"'Being' and 'is' means that a statement is true; 'not-being' that it is not true but false; and this alike in affirmation and negation; for instance, 'Socrates is musical' means that this is true . . . but 'the diagonal of the square is not commensurate with the side' means that it is false to say that it is."

Without pausing, then, over this, we pass to the important use which Aristotle makes of the term in the realm of high philosophy: cosmogony: the use which caused Aristotle to become so deeply implicated in that confusion of ideas which we have labelled cosmogonic monism and whereunder the ultimate cosmogonic *Two* (who, of necessity—in that they are causative—must be contraries, and, hence, dual in number) are mixed up with the ultimate ontological *One* (which latter, as implying the express overriding of all contrariness, soars high above every form of contrary). Thus, cosmogonic monism found a conspicuous and notable victim in Aristotle, and this in spite of the fact that it was he who asserted so strenuously the basic cosmogonic truth that the elements are twofold. Nor, indeed, is this surprising. In the Greek period, the art of logic (ontology) was still in its infancy as a formally-stated art, and, so, could scarcely be expected to have been differentiated sharply from the cause-

<sup>1</sup>*Metaphysics*, V. 7. 3.



seeking activity which constitutes science. As a matter of historic fact, indeed, although we are now well into the third millennium since the time of Aristotle, our own most distinguished thinkers are today asking that very question which Aristotle so bewilderedly asked so long ago: the question whether or not the *highest genera* of things are the same as the *first causes* of things. For example, one finds that great French historian of the sciences to whose classical researches we ourselves in a later work are indebted so considerably, a historian with the complete panorama of classical and mediaeval wisdom before him, putting just this same question. We refer to the late Professor Pierre Duhem, author of the valuable and highly-documented work: *The History of Cosmogonical Theory from the time of Plato to that of Copernicus*, who, in his own theoretical work: *La Théorie Physique*: puts this self-same question<sup>1</sup> and argues it with scarcely more assurance than Aristotle. But, in our opinion, it witnesses to a defective understanding of the very rudiments of ontology so much as to speak of *summa genera*. For, while there is a *highest genus*: the *summum genus*: this latter represents a sole and unique entity in that it represents the entire universe. How, then, can there be 'in' the universe, *plural universes*: *summa genera*? Hence (we urge) no understanding ontologist should speak of plural *highest genera*. On the other hand, no understanding ontologist can fail to recognise the existence of plural *penultimately* high genera, two in number, which constitute the primordial pair of contraries, and which, as to identity, consist in Space (Heaven: Rest) and Time (Motion), and which (again) as extended substances, mutually limit one another's territory within the universe. An equally striking example is afforded by Professor J. Burnet's very valuable work: *Early Greek Philosophy*. Thus, a primitive name for Space (the vault of Heaven) was the gap: the abyss: the yawning gap: a term which Burnet identifies with the Hesiodic cosmogonic entity *chaos*. Now, as we have seen, it is essential that ontology shall be able to 'go behind' *both* members of the primordial pair of contraries of which Space (that is, the gap) is one. Otherwise, ontology would not be able

<sup>1</sup>This second work was, however, we note, earlier than the first.

to arrive at its master-term, the *summum genus*, which comprehends Space (the gap) and motion (Time) equally. Accordingly, when we see early European thought attempting to effect this essential ontological move, it is in the highest degree desirable that we shall appreciate the great value of it. But, on this very point, Professor Burnet, in an opening chapter which states the outlook of his entire work, writes as follows. Speaking of Hesiod he says :

"Hesiod shows himself a child of his time. His *theology* is at the same time a *cosmogony*, though it would seem that, here, he was following the older tradition rather than working out a thought of his own. At any rate, he only mentions the two great cosmogonical figures, Chaos and Eros . . . [which] seem to belong . . . to an older stratum of speculation. The conception of Chaos represents a distinct effort to picture the beginning of things. It is not a formless mixture, but rather, as its etymology indicates, the yawning gulf or gap where nothing is as yet.<sup>1</sup> We may be sure that this is not primitive. Primitive man does not feel called on to form an idea of the very beginning of all things ; he takes for granted that there was something to begin with."

But the gap (Space, chaos, the vault of Heaven) together with Time (*i.e.* Eros) was precisely *what there was* to begin with. That is, primitive man, in asserting that there was something to begin with (the eternal radicals, the prime contraries, Heaven and Time) not only formed an idea of the 'beginnings' of things but gave chapter and verse, so to say, as to what *were* the beginnings. These latter were, they said, the prime contraries, the two contrasting (though equally eternal) radical types of being. They were Chaos and Eros ; the 'gap' and its fertilising stream of motion ; Space and its tenant Time. But, *neither* of these twain could (as mutually contrasting types of being, each limiting the other) constitute the 'One Being' sought for by ontology, and there was, accordingly, the very highest measure of philosophic correctness in the primitives' search for what was 'behind the gap' (also, for that matter, behind Eros : behind Time). How differently, however, this matter appears to the author quoted, is shewn by the following :—

"We have records of great activity in the production of cosmogonies during the whole of the sixth century B.C. and we know something of

<sup>1</sup>The author points out in a note that the word Chaos certainly means the 'Gape' or 'Yawn,' and links it up with a term occurring in the Rhapsodic Theology (fr. 52). He points out also that Grimm compares it with the Scandinavian *Ginnunga-Gap*.

the systems of Epimenides, Pherekydes, and Akousilaos. If there were speculations of this kind even before Hesiod, we need have no hesitation in believing that the earliest Orphic cosmogony goes back to that century too. The feature common to all these systems is the attempt to get behind the Gap, and to put Kronos or Zeus [Heaven] in the first place. That is what Aristotle has in view when he distinguishes the 'theologians' from those who were half theologians and half philosophers, and who put what was best 'in the beginning.' It is obvious, however, that this process is the very reverse of scientific, and might be carried on indefinitely; so we have nothing to do with the cosmogonists in our present inquiry, except so far as they can be shown to have influenced the course of more sober investigations. The earliest cosmologists could find no satisfaction in the view of the world as a perpetual contest between opposites. They felt that these must, somehow, have a common ground, from which they had issued and to which they must return once more. They were in search of something more primary than the opposites, something which persisted through all change, and ceased to exist in one form only to re-appear in another. That this was really the spirit in which they entered on their quest is shown by the fact that they spoke of this something as 'ageless' and 'deathless.' If, as is sometimes held, their real interest had been in the process of growth and becoming, they would hardly have applied epithets so charged with poetical emotion and association to what is alone permanent in a world of change and decay. That is the true meaning of Ionian monism."

This, however, is not our reading of Ionian 'monism' in that we regard this as Being, in substance, an acceptable monism, not so much a cosmogonic monism as a screened ontological monism, yoked up with a cosmogonic dualism: a virtually correct philosophic system therefore. For (as it is highly desirable we should point out) it is not the One *in its entirety* (the 'One behind the Gap') which is 'deathless and ageless,' for this 'One' contains 'Gods and mortals' equally. The 'deathless and ageless' are essentially the two divine types of being, the two prime opposites constitutive of the prime contraries, the Gap and Time, *than which twain nothing can be more primary*. They *are* the primaries. And these prime opposites persist changeless throughout all change, deathless and ageless, being the substances out of which the mortal world has issued and into which it will ultimately be refunded. Yet, they are not the One: not the universe in its entirety: not the Absolute. They are not the all-comprehensive Being who includes beings of every type, mortals as well as immortals.

Now, how all this links up with Aristotle's (main) treatment of the notion of non-being will be seen from the following:— In the first book of the *Physics*<sup>1</sup> where Aristotle is treating of the subject of non-being, he points out (in apparent contradiction to what he tells us elsewhere) how all the early Greek philosophers adopted *dual* first principles consisting in a primordial pair of contraries. We have already quoted parts of this passage, but, in view of its importance, it will bear quoting:—

"Without exception, all the ancients take contraries as their principles. For instance, those for whom all is one and immobile (for Parmenides himself indeed takes as his principles the hot and the cold which, at times, he styles fire and water) do so; so do the partisans of the rare and the dense; so does Democritus with his full and the void, the former of which, in his opinion, is being, whereas the latter is *non-being*. . . . We see then that all the philosophers, each after his own manner, take contraries as their (first) principles. And rightly. . . . To this extent, then, there is a general agreement, an almost unanimous consent, as we have just said. All take contraries as their elements (as their principles, as they say) though they do so without any reasoned motive. . . . Some take such contraries as are the most readily apprehensible by the exercise of our reason; others take such as are most readily apprehensible by the play of our senses; some take the hot and the cold; some love and strife. . . . There is a superficial disagreement but an essential agreement in the main theme which is that the principles or elements must be contraries. And here we encounter the question whether these principles which are contraries are two in number, or three, or more. For, *one* they cannot be, being contraries; for no contrary can be made up of one alone. No more can they be infinite in number, for their being so would be a thing which would be unintelligible. . . . [But also] one can rightly refuse to regard their number as being two. . . . If we admit the former position [i.e. that the principles are contraries and therefore, at least TWO in number] we must, in order to defend our possession of these two principles, postulate a third. . . . We should be very embarrassed if we did not place, as a support to the contraries, a third nature."

And then follows an argument the purpose of which is to establish Aristotle's contention that *all* contraries must perforce have, as a support in which each contrary equally inheres, a *subject*. Accordingly, Aristotle now undertakes the labour of discovering a third entity to serve as subject for the prime pair of contraries constitutive of the two first principles or elements. Now, as we know, it so happens that, in the universal scheme of things,

<sup>1</sup>Aristotle, *Physics*, I, 7.

there is such an entity *i.e.* the One or Absolute constitutive of the *summum genus*: the One Being 'greater than the Gods' who is so widely recognised in primitive thought, being the entity whose 'body' (we say) is Space and whose 'breath' (for she is the great *living* One) is Time. Hence the excitement with which one watches the play of Aristotle's thought as it hovers round this question of the identity of the subject in which inhere the two prime contraries (the elements or Godhead). But, in order for Aristotle to have made the required move here, it would have been necessary for him to have handled successfully the notion of the *summum genus*. But Aristotle quite failed to do this, expressing himself as dubious whether 'being' is, actually, the *summum genus*. And even had he expressed himself otherwise, the bare fact that he recognised the status of the term *non-being* would have been sufficient to obscure the question of the *summum genus* and to veil from him the significance of his own demand for a 'subject' in which the primordial contraries might be considered as inhering. Consequently, the move one is waiting for (the identification of the 'subject of the prime contraries' with being *quà* being: the *summum genus*) does not effect itself. On the contrary, Aristotle, while still holding by the contention that there are three entities involved in the ontologico-cosmogonical situation, identifies the mysterious third with non-being itself! For he identifies it with that third Aristotelian first principle, *to wit*, *steresis* (privation). This, then, *steresis*, is the Aristotelian 'non-being' on the cosmogonic scale.

And here let us note a distinction made by the Aristotelian philosophy on the making of which Aristotle greatly prided himself as rendering his own reading of the ontologico-cosmogonical tangle so much more admirable than the 'unwritten' dualistic Platonic philosophy, which latter, identifying non-being with, at once, the Ouranian Heaven (the world-mother) and the principle of evil, knows nothing of Aristotle's 'third' first principle (*steresis*). The distinction in question thus makes Aristotle, after a fashion, the defender of the reputation of Heaven, although (we must note), in adopting this chivalrous rôle, Aristotle is mindful not to run to excess and to commit

himself too far. Thus, in this connection, Aristotle explains his 'principle' of *steresis* as a principle of self-insufficiency which infects continually the *meter* principle (first matter, *protokhyle*, Heaven), causing the latter constantly to be in a condition of desire for something she has not got: something which is better than she herself is; for instance, the opposite principle. Now this condition of desire Aristotle regards as, itself, bespeaking a dissatisfaction with the desirer's own self. Hence this constant seeking for (and ensuing of) *change* designed to alter it. As Aristotle gallantly puts it: "As the ugly desires the beautiful: as the wife desires the husband," so does the *meter*-principle (as self-expressed in her *steresis*-condition), desire the good she herself is not and has not (for instance, the opposite principle). However (and as, indeed, Aristotle himself seems sufficiently to feel), the dividing-line between the *meter*-principle and her 'desirous state' constitutive of non-being (*steresis*: lack) is very thin. Yet still he seems to think it served him in that it not only enabled him to differentiate Heaven, in some measure, from the Devil, and, so, score one over Plato's ('unwritten') teaching, but provided him with a 'somewhat' distinct from Heaven to which he could apply the embarrassing 'non-being' label. It is, therefore, for this latter unblest end, that the dual, the veritable<sup>1</sup> Aristotelian first principles (*matter* and *form*; *hyle* and *morphe*; *dynamis* and *energeia*; *stasis* and *kinesis*; *rest* and *motion*; or, as we—not Aristotle—should say, *Space* and *Time*) are swollen out by this third thing, *steresis*: privation: non-being.

In conclusion we would make the suggestion that Aristotle's disastrous falling-short on the subject of non-being [and his consequent failure to set logic (ontology) upon lasting foundations by confirming it in the possession of its master-term, the *summum genus*], is best described under the assertion that Aristotle failed to comprehend that his 'first philosophy' (the study with which the name of Aristotle is inalienably associated and the one the cultivation of which he regarded

<sup>1</sup>Veritable, that is, if we allow what we should not, that *the law* of motion (Logos: Time-bed) is the same thing as motion itself. For this is what Aristotle's so-called second principle (*Eidos*, *Morphe*, *Nous*, *Physis*, *Form*) amounts to. It is, that is, the *law* of motion (not motion) which Aristotle (quite wrongly) takes as the second element complementary to the first (i.e. to Space: *dynamis*).

as pre-eminently the activity proper to the philosopher) was a *composite* study. He failed, that is, to analyse first philosophy into its component disciplines of :

- (1) ontology, the art of dialectic, consisting in an accurate classification of the kinds of entity existent in the universe ;
- (2) theology : cosmogony ; the science of the elements or first principles.

Thus, Aristotle never realised the fact that the study of ' wisdom ' (his own variant name for first philosophy, or, as his remote disciples came to style it—*metaphysics*) was a compound study made up of two wholly differentiable intellectual activities the master-ideas of which were, respectively (1) the unitary *summum genus* : (2) the dual *elements* or primordial pair of contraries ; and it is for this reason that we find him bewilderedly asking the significant question whether or not the highest genera are identical with the first principles (the prime causes) of things, while nowhere do we find him giving a confident answer. Hence our inference that Aristotle never apprehended the distinction between the two intellectual activities, ontology and cosmogony (theology). Accordingly, since Aristotle's system harboured a confusion of these dimensions, we need not be astonished that even this influential thinker failed to put an end to the career of the term *non-being*.

## CHAPTER XVI

### POST-ARISTOTELIANS ON NON-BEING

We have seen how, from Xenophanes to Aristotle, ontological misery among the Greeks continued to deepen, and it was this acute intellectual misery which constituted the ontological heritage of the post-Greek age down to the opening of the modern period. For, in ontology, no change for the better took place when Greek culture gave way to the Hellenic, this basic confusion relative to the concept being *quà* being (which expressed itself: in part, at least: in the quasi-concept of non-being) remaining unremedied. Accordingly, wherever we turn throughout the Hellenic period, whether to Peripatetic, neo-Platonic, Jewish, Gnostic or Christian speculation, we shall always find ourselves confronted with the term non-being. And not merely singly, but duplicated as, at once, the 'one God' and the 'Devil.' Nor is there anything strained in this dual Alexandrine teaching concerning non-being, this being simply the natural development of the teachings of the great Greeks themselves. For, while, on the one hand, Plato, for instance, had (in his unwritten teachings, says Aristotle, as well as in the *Republic*) identified the *chora*, *protokhyle*, or Ouranian Heaven with the material substrate, and this, again, with illusion, non-being and the principle of evil, the Elcatics had identified Heaven in general with the one and supreme God. Accordingly, with only minor shades of difference, the Hellenic age opened as the Ionian age had ended, *i.e.* with an entity named 'non-being' who was now the 'one God' and now the Devil. The differences imported consisted in the readiness with which the Hellenic age taught the doctrine of a 'non-being God,' this being a speciality of the period, but all without prejudice to the doctrine (equally widely-taught) of the non-being entity who was the spirit of evil. It is, however, the Alexandrine version of non-being as the 'One God' which is the more familiar to us, in that this notion became a staple of our Christian culture, the non-beingness of the 'One God' (God the Father so-called)



translating itself into Christian culture in the notions of the *ineffability* and the *inherent unknowability* of God, notions which echo like a weary dirge all down the centuries of the Christian era, being as evident today, indeed, in the works of such men as Kant, Mansel, and Otto as they were in the days of Chrysostom and earlier.

We propose to glance only very rapidly at the history of the term non-being as it appears in Jewish, Gnostic, neo-Platonic and Christian thought in post-Aristotelian times:—As to this notion in the Jewish element in Alexandrine culture, one has to recognise it as playing not only an important part in the thought of Philo of Alexandria, whose ‘one God’ was the hyperouranian Unmoved Mover, the *deus absconditus* of Aristotle, which, as being neither Space, Time nor matter, was, for Philo, non-being, but as giving the needed philosophic foundations to the very aggravated form of masculine monotheism into which Hebrew culture of the historic period had degenerated. This it did under the form which, adopted by Philo, was a form harmonising with views which go by the name of the ‘secret wisdom’ of the Jews (‘kabbalism’), which latter, like historic gnosticism, formed an important ingredient in that amalgam of philosophic notions which is constitutive of historic Christian theology. Thus the Hebrew word by which the rabbis designated God was one which meant *nothingness* or *non-being*, and it was as thus conceived that the Jewish God constituted the ‘ancient of ancients’ and the ‘mysterious of the mysterious.’ According to Duhem<sup>1</sup>:

“ In the *Zohar*, there is one outstanding feature . . . which we shall find repeated more or less explicitly in the Chaldean translation of the bible made by Onkelos, in the works of Philo, and in the ‘wisdom’ books. It is that, in God, it is necessary to distinguish two aspects. On the one hand, we have to consider what God is ‘in Himself’ as He was before He created the world and became its king; on the other, what He is under that aspect of Himself which He reveals in and by His works *i.e.* in and by the world of creation. Thus, under the first aspect, God is held to be essentially non-apprehensible, incomprehensible, ineffable. Indeed, when it is a question of telling us the measure in which God is incomprehensible, the kabbalists rival the neo-Platonists (Proclus in particular), Denys the Areopagite, and John Scot his translator. . . . Tradition tells us

<sup>1</sup>P. Duhem, *Système du Monde*, vol. v., p. 83 ff.

that the name of the 'ancient of days' was known to no one, and that it appears once only in the scriptures. This is when the Little Face ('God made manifest') makes a vow before Abraham, and where it is written 'I swear by Myself (*Bi*), saith the Lord.' Here, the Lord is the Little Face, whereas Myself (*Bi*) is the 'ancient of days.' The names Great Face and Long Visage and 'nothingness' are given to the 'Hidden God' in a long allegory which occurs in the Occult Book, while that of Little Face, is assigned to God as made manifest in his works." "Thus," continues Duhem, "God as immanifest and hidden went by the name of Jehovah; but God as manifested in creation they called Elohim. And they regarded Jehovah as a male, and Elohim as a female, the latter being regarded as an emanation from the former, and called the wife of the former. She is also called the Son, and has, herself, two aspects, one visible, one invisible."

These brief allusions show that the 'secret wisdom' of the Jews, so far as the quasi-concept non-being is concerned and the attempt to identify the deity with it, is in no basic sense different from the teachings to be found in Philo. Passing, therefore, from post-Aristotelian Jewish teachings to those of the Gnostics, we come upon another and remarkably frank identification of the 'one God' with non-being in a fragment cited in the work of the Christian writer Hippolytus in a lengthy criticism directed against its heretical author, the gnostic Basilides, whom Hippolytus charges with concocting a system out of borrowings from the pagan philosophers in general, but, in particular, from Aristotle. Thus, in the course of proving his charges against Basilides, Hippolytus is led to let fall a passage from the latter which throws a vivid light on the question of the gnostic use of this 'conception,' non-being. Hippolytus writes:—

"Basilides, and his true son and disciple Isidorus, assert that Matthew (the evangelist) revealed to them certain secret doctrines which had been specially communicated to himself by Christ."

Hippolytus then begins to quote Basilides himself in a passage which reads<sup>1</sup>:

"There was a time when there was nothing; nay, not even that 'nothing' which has anything of being, but barely and without reserve and without any sophism . . . altogether nothing. When I use the term 'was,' I do not mean to imply that this nothing *was*; but, in order to explain what I wish to set forth, I employ the expression 'there *was* absolutely nothing.'"

Basilides then goes on:

<sup>1</sup>Hippolytus, *Refutation of all Heresies*.

" Now, that which is called ' ineffable ' is not absolutely ineffable ; but we ourselves give it that name of ineffable where it is not even ineffable . . . but infinitely above every name that can be named. Thus, as for the visible world, so multifarious are its divisions that we have not names enough [to name these], and we are reduced to conceiving many of its properties from the names of the properties already named, such properties being ineffable."

This, interpolates Hippolytus, is a direct plagiarism from Aristotle's discussion of synonyms in his work *On the Categories*. Basilides goes on :—

" When therefore nothing was—no substance, no non-substance, no simple, no compound, no incomprehensible, no sensible, no man, no angel, no God—when there was nothing whatever of what is called by name, perceived by sense, conceived by the mind, but all (and even in a more refined sense than this) being put out of the question—then this no-being God [Aristotle's God : ' the thought of a thought,' comments Hippolytus, which Basilides alters into the ' no-being God '], without thought, without purpose, without counsel, without passion, without desire, willed to make the world. I use the word ' willed ' merely to express my meaning, it being without will, without thought, without sensation, that this was done ; and by ' world ' I do not mean that world created afterwards and divided by latitude and longitude ; but I understand by it ' the seed of the world.' This ' seed of the world ' contained ' the all ' within itself, just as the germ of the mustard-seed contains the root, the stalk, the leaves, the grain, the last containing again the rudiments of others innumerable. Thus, the no-being God created the no-being world out of no-being things, when he deposited the seed containing within itself the complete seeds of the universe. And to give an illustration of my meaning : the egg of any bird of diversified plumage—the peacock, for example—although itself single, yet includes within itself the many-coloured, multifarious forms of multifarious substances ; so, in like manner, did this ' seed of the world ' deposited by the no-being God include within itself the multifarious seeds of the universe."

Having, therefore (as Hippolytus comments) got this ' seed ' for his starting-point [it is, we need scarcely say, a variation of the *logos spermatikos*], Basilides goes on :—

" Whatever I speak of as ' made ' after this, there is no need of inquiring out of what it was made ; seeing that this seed comprehended within itself the principles of ' the all.' Now let us examine what came out of this seed in the first, second, and third place. There was in the seed a sonship, triple, of the same substance with the no-being God, and generated by him. In this triple sonship, one part was subtile, another gross, the third in need of purification. Upon the first projecting of the seed, the subtile element disengaged itself, ascending aloft ' like a feather

or a thought,' and arrived at the no-being One. [This latter again Aristotle's God, who rules the world as 'object of the world's desire.'] For Him all Nature desireth by reason of the super-eminence of his beauty and perfection. The gross part endeavoured to imitate its example, but was weighed down by its coarser nature, and detained within the seed. To assist it, therefore, the Sonship equips it with a *wing*, such as Plato in his *Phaedrus* wings the soul withal. Now this wing is the Holy Ghost which the grosser part [*i.e.* 'extra legal' Space] putting on, is both advantaged itself, and advantages the other. For the wings of a bird are not able to fly if severed from the bird, neither can the soul fly if separated from her wings. Such, then, is the relationship borne by the Sonship to the Holy Ghost, and also by the Holy Ghost to the Sonship. Soaring aloft, therefore, upon his wings—that is, upon the Holy Ghost—this soul-part carried its wings, the Holy Ghost, along with it up to the no-being God and the sensible Sonship, but was unable to comprehend the latter, because its own nature is not constituted of the same substance with Him. In the same way as dry and pure air is repugnant to the nature of fishes, so the place, more ineffable than the ineffable one, and more lofty than all names than can be named, the seat of the no-being God and of the subtile part, was contrary to the nature of the Holy Ghost. On this account, the Sonship left it *near to* that place which cannot be conceived by mind, nor described by words; though not altogether abandoned by himself but retaining something of his power (or essence) just as a vessel once filled with a precious perfume ever retains traces of that perfume, however carefully it may have been emptied. And this is manifestly like the ointment upon the head 'which ran down to Aaron's beard'—that is, the perfume of the Sonship brought down by the Holy Ghost, even into the impurity and degradation of mortality, out of which, itself, in the beginning, has soared aloft . . . as it were, on eagle's wings. . . . For all things struggle upwards from that which is below towards that which is above, from the 'worse towards the better,' whereas nothing of that above in the better place seeks to descend below."

Now all this may seem unintelligible enough: the very antithesis of an acceptable philosophy of the first principles. And yet, this is what it is, barring its garbling of such philosophy under the twofold influence of (1) Aristotle's refusal to allow the title of Space to hyperouranian Space, and Basilides' consequent identifying of it with non-being; (2) the usual (and false) description of Space the matrix (together with her 'wing,' *i.e.* the Logos) as male instead of female; and, hence, the obscuring of the well-known and wholly intelligible primitive dogma of the Three Spatial Regions, *i.e.* the *Three Women* (1) Hyperourania; (2) Ourania; (3) Sophia the Logos, which are here pre-

sented to us in the guise of the triple sonship in place of that of the triple mother: triadic Space. As to the causes of this garbling, whether *e.g.* this was due to:

- (1) Basilides' own ignorance of the ancient imagery, and, hence, his own involuntary distortion of it;
- (2) his desire to veil his knowledge and give it a cryptic form under imagery which the initiated could spell out in its proper form; or,
- (3) to Hippolytus's garbling of the opinion of an opponent;

is a matter upon which we cannot pretend to decide. Nor, indeed, need we try, our sole interest here being to exhibit the disastrous effects which the play made with the term non-being had upon the ancient *divine gnosis* out of which Christian philosophy was born, and the devastating effects its use had upon Christian philosophy so far as the latter's intelligibility was concerned.

Resuming, then, our (necessarily very summary) survey of the history of the concept non-being, we now give specimens of neo-Platonist uses. However, to render the passages here quoted more intelligible, we offer a further word of explanation about the entity which, known to the Greeks as *protokhyle*, has, since the scholastic age, been familiarly known as 'first matter': *materia prima*. For the neo-Platonists make great use of the notion of non-being as *protokhyle*, the material substrate, *materia prima*, the principle of evil, without, however, dismissing the idea of the non-being God. Unless, therefore, we get a very firm grip upon the notion of *triadic Space*, this very pronounced use of the two forms of non-being made by the neo-Platonists will prove bewildering. Let us, therefore, make one or two recapitulatory remarks bearing upon the matter of triadic Space. We begin with the affirmation that *all Space* (like *all Time*) is divine, being a radical substance, and, therefore, eternal. But eternal Space, like eternal Time, has parts. How eternal Time can be conceived as having parts is a matter the discussion of which we do not propose here to enter upon in that we deal with this in detail in our second volume: *The Mystery of Time*. But, as regards the God Space, the threefold divisions of *her* substance is a matter the consideration of which cannot be

postponed in that the dogma of the triadic character of Space (amply recognised as this was in mythopoeic literature and art alike, and still living on in Greek culture of the historic period) is an absolutely indispensable dogma of primordial (Christian) theology: that is, of the primitive science of the first principles, the findings of which (in howsoever garbled a form) all later races of men have inherited. Thus, if one wishes to enter even the outer portals of theology as traditionally taught, one must make oneself familiar with this dogma of the three spatial entities (the 'Three Women') whom we indicate under the names of Hyperourania, Urania, and the Logos. Now, of these three 'women' (and this is the point we would here direct attention to), the neo-Platonic theologians regarded the first only as a God, this being the ineffable non-being God who was identified with God the Father. The second 'woman' they regarded as 'first matter' (*i.e.* non-being in the disparaging sense; evil; illusion; the female world-principle or Space-beneath-the-firmament); the third they amply recognised for what it was under the title of the *diakosmon*, *i.e.* the *logos spermatikos*: an entity which was always held to be divine if not quite an independent deity.

Accordingly, having made somewhat more precise this ancient dogma of the triadic character of Space, we can now proceed to quote on the subject of non-being the views of the four outstanding neo-Platonists who have so greatly influenced European culture. These are:

- (1) Plotinus;
- (2) Porphyry;
- (3) Proclus;
- (4) Dionysius the Areopagite (the pseudo-). Possibly, this last-named was a Christian.

But first a word about 'forms' and the 'principle of forms':—The primitive view of the 'forms' (or 'seeds') of things was that they were the expressions of the inherent character of Space (Heaven: First Matter: *Meter*), sleeping, safe-housed, in the *logos* or 'principle of form,' to be awakened into the natural order of being by the on-coming Time-stream: the mobile principle. Such is the Egyptian, the

Babylonian and the Vedic view. It is the view according to which the 'male' principle is regarded as the manifesting principle only of the invisible and supernatural 'forms' which, themselves, are the inherent property of Heaven, the female divine principle. That is, it is the view which considers that Time *reveals* the 'forms' but does not create them in that they are the eternal, increate, spatial prototypes of things. Later masculinist monotheism, however, altered this, teaching that the active principle not only *reveals* 'forms' but actually contributes such to Space. The latter, accordingly, is styled the 'formless.' Thus, according to Plotinus<sup>1</sup>:

"First matter possesses no form, no quality, no extension. . . . That which is purely and simply matter must hold its being from outside itself. That, therefore, which has received form, cannot already be a volume; it receives volume at the same time that it receives some other quality." Its own volume is a 'phantom volume.' "The phantom of geometrical extension will be something which will precede volume, and will prepare 'first matter' to receive it."

"Concerning what is called first matter, we say that, potentially, it is all beings. How, then, can we allow that it is, actually, any being? (Were it so) it would cease to be, potentially, *all* being. . . . But if it is none of the things which are in it, and if these things are beings, it must of necessity, be a non-being[!]. . . . How then is it the matter of beings? Doubtless potentially. But, inasmuch as it is something potentially, is it not therefore already what it is going to become? . . . . No, for that which it is, potentially, is not such and such a thing; what it is, potentially, is 'all things'; it is not, therefore, in itself, anything. . . . It is a non-being."

Such is the type of logically confounded affirmation which, repeatedly, comes from the pens of Plotinus and Porphyry, for both of whom 'first matter' is non-being, both alike committing the error of confusing the purity (the unmixedness: the radicality) of being characteristic of the three-dimensional raw material of the universe with *non-being*. Thus Porphyry:

"Matter is that which is destitute of power; it is the appeal to become substance. . . . It is the destitution of all being. . . . To be in an indeterminate manner, to be in an indefinite manner, to be in a non-qualified manner, is the same thing as being after the manner of matter.<sup>2</sup> . . . [First Matter] is destitute of all form; it is changing, it is indefinite, it is without power. . . . It is the image and phantom of volume. It is, so

<sup>1</sup>See Duhem: *Système du Monde*, vol. ii. pp. 439-443, citing Plotinus, *Enneads* ii, bk. iv.

<sup>2</sup>First matter, of course.

to say, the primitive of volume. That is why [Porphyry goes on] it is, not being, but non-being. And its non-existence is not like that of movement; it is a veritable non-being."

Similarly Proclus:

"Matter," says Proclus<sup>1</sup>, in a passage reminiscent of Heracleitus at the one end of European history and of Hegel with his identification of contraries at the other, "is formless, changing, limitless, destitute of all power. Indeed, it is not a being, but a veritable non-being. . . . Ceaselessly it presents itself now little, now big; sometimes, as something deficient. It exists in a state of perpetual becoming, though it has not the power to flee away, for it is the very privation of existence. Indeed, whatsoever it promises, its promise is a lying promise; at the very moment when it seems great it becomes small. It is like a thing which makes sport of us, taking refuge in non-being."

With Proclus, Hellenistic culture was already touching its end, ostensibly the victim of a culture (Christianity) supposed to be something radically different from itself. Yet, as we can see (and as later, we shall have explicitly to show), the differences obtaining between the different periods of human culture relate not so much to the gist of any given culture as to the presence or absence of the desire that mankind's primordial culture shall be generally shared in. Thus (we contend) there is no culture anywhere throughout human history on the high philosophic grade except (primordial) Christianity. Obviously, since primordial Christianity (mythopoeic culture generally) is the science of the first principles and nothing other, while all high philosophy is this science and nothing other<sup>2</sup>. Hence the reason that all the nations of the earth share in a common cultural heritage dating from (undated) mythopoeic ages, the variations in the different types of philosophic (religious) culture which obtain in different epochs reducing, in the last resort, to matters of difference of temper merely; for instance, to that of a generosity (or otherwise) of intellectual temper as expressed in considerations having to do with how much of the old mythopoeic culture concerning the first principles shall be hidden away and how much shall be told forth. Hence the destitution of all true import in statements implying that Hellenism died and Christian culture took its place. Hence, again, the small need

<sup>1</sup>Proclus, *Works: On Sacrifice*.

<sup>2</sup>As we have already said, this view has the support of a theory of knowledge shewing why this should be so.



for surprise that Christian culture should be found proving itself identical with the Hellenistic down even to the errors of the latter. Hence the ironical fact that the one feature, as attributed to the deity, which could command the consent of all Christendom (almost) is that of the divine *unknowability*. Hence, finally, the presence of the notion non-being in Christian (*e.g.* mediaeval) culture. Let us indicate this:—In a *Commentary* of Aquinas upon Proclus's *Book of Causes*, the commentator draws attention to the similarity which exists between the views of Proclus and those of the pseudo-Dionysius the Areopagite, the latter an unknown author who exercised an enormous influence over Christian thought, and one whom the Middle Ages mistakenly took now for the disciple of St. Paul and now for Denys, the first Bishop of Paris. But the views of Dionysius are, broadly, those of Plotinus and Proclus, though it is neither of these but a certain fictitious philosopher (*St. Hierotheus*), whom he puts forward as his 'master' and to whom he attributes the three hymns (in ch. iv of *The Divine Names*) which embody the plan on which he constructs his philosophy. Now, in the last of these hymns there occurs the following:

"From the Supreme God [Aio] emanates a simple force, which, in itself, is capable of determining a movement towards a union of love. This force is propagated to the extreme limits of things; then, from these limits, it comes back, rounding on itself and returns to God."

Dionysius thus sets himself to teach that notion of the cyclic cosmic road (the Way of the Cross: of the Logos: which leads *from* and *back to* 'the Source') which Heracleitus had spoken of a thousand years back, and which Anaximander had expounded prior even to Heracleitus. He is teaching, indeed, a notion of dateless antiquity precisely as the apostle Paul is when he says:

"All things come from Him [*i.e.* from Time when resting in his well, his source, the summit of inspiration, the mount of God, where he constitutes the Messiah, otherwise the God AIO, Plato's Highest God, the 'Supreme Good'] and return to Him."

But, note:—It is this very notion of the Platonic 'one God': the Supreme Good (a quite different notion from the Aristotelian and Philonic 'one God' which is that of the Unmoved Mover: Hyperourania) which Dionysius places above being and identifies

with non-being ! And also note :—John Scot (Erigena), the ninth century Irishman (or Englishman or Scot) who translated into Latin the works of the pseudo-Dionysius, and, so, opened a sluice for the ancient culture (then embodied chiefly in the forms of the Greek language) to flow into the western world, also fell into this error-frosted-with-age about non-being being the very source of all things, and honoured it as such. Thus, Scot, brave intellect though his was, could not extricate his intellectual barque from the whirlpools which swirled about this monstrosity of a term ; with the consequence that, with him as with the rest, the usual phraseology is to be met with<sup>1</sup>:

“ Not only those things which are, are good, but even those which are not are called good. Nay, the things which are not are called better than the things which are ; for, in so far as they transcend essence (being), they approach to the superessential good (*i.e.* the Platonic Good, the Supreme God, whom Erigena calls ‘ nothing’]. But, in so far as they participate of being (essence) they are separated from the supra-essential Good.” “ No category (of being) can properly include God in its signification.” “ God is above all form, and is, therefore, rather no form than form.” “ God is beyond being, and is, in general, beyond the utterable and the intelligible.”

And thus Erigena’s bold intellectual craft went down, and with it went every prospect that the mediaeval church (fertilised though this was by the fresh blood of the races of the north) would be able to salve, in its entirety, the ‘ Christian ’ wisdom bequeathed by the mythopoeic ages. For, alarmed by the reasonings of Scot and his successors, the mediaeval church withdrew all the essential truths concerning the first principles of physics from the common debating-arena, making them ‘ mysteries,’ making it indeed an offence for masters or bachelors of the university of Paris (the latter the intellectual core of the mediaeval ecclesiastic organisation) to debate on the basic dogmas of Christianity.

Now we do not propose to continue our survey of the term non-being into the modern period. Rather, in the modern period, we propose to follow the career of this notion under a different name, that of pure Space<sup>2</sup>. This account of Space, however, we present in an appendix to this work in the form of a

<sup>1</sup>See *De Divisione Naturae*, lib. iii. cap. xix.

<sup>2</sup>Appendix i.

*symposium* ; utilising what remains of this present chapter to call attention to an outstanding difference which obtains between the modern age of culture and earlier ages, a difference which explains, indeed, why it is appropriate we should not continue our survey of the ontological term non-being into the modern period.<sup>1</sup> Thus, the cultural feature which makes modern thought a different thing from ancient and mediaeval is that, in it, a breakaway is effected from the type of culture in which *ontology* holds the first place to that type in which that cause-finding activity which culminates in *cosmogony* is given first place. That is, whereas the pre-modern ages gave their attention principally to the art of grouping like with like, the modern age began by giving its attention powerfully to science : that is, to the activity of discovering the constitutive factors of things, the activity which has (as we have just said) its culminating move in the discovery of the two first causes or irreducible dual elements. Now (and needless almost to say) it is only folly which would argue that the one activity, *i.e.* science, is a *better* activity than ontology, for the two are of equal merit in that both are essential to any genuine understanding of the complete scheme of the universe. There is, however, this to be said in favour of the great modern breakaway from ontological pursuits primarily, *i.e.* that, whereas ontology had been given a fair chance to justify itself, but (thanks, largely, to mischief arising out of the accepted presence in ontology of the term non-being) had failed to do so, science (prior to the modern period) had not had a fair chance. Hence the importance—and the inner meaning—of the ' Baconian ' crusade in support of experimental science.

Now, as we all know, science has (unlike ontology) returned full value for all the ardent—if belated—attention bestowed on it, succeeding, indeed, in these nineteenth and twentieth

<sup>1</sup>Our survey of the notion of Space in the modern period is carried in this volume only as far as Kant, Newton being omitted. Carried further, account would have to be taken of the notion of ' non-Euclidean ' Space and as our study of this notion comes only in vol. ii, the survey can be continued most profitably after this study has been made. Even so, the illustrations provided in this present volume by the *symposium* of opinions on Space in modern times are sufficient to prove that a revision of men's judgment as to the relationship existing between matter and Space is the foremost concern of the science of the first principles in modern times ; and, in our second volume the meaning of the issue between Newton and the twentieth century version of Relativism will be stated in terms of this relationship. Hence our omission of Newton's views from our present survey.

centuries, in presenting men with the world's cosmogonic ultimates: the two supra-material and indestructible energies with which we identify magnetism and electricity. But (as our survey of the career of the illicit term non-being goes to show) ontology never succeeded in discovering the ontological ultimate, for ontologists (dialecticians) never succeeded in mastering the primary ontological truth that ontology's master-term (the *summum genus*: being *quà* being) tolerates no contrary, being the term which, by definition, overrides and subsumes all contraries, not excluding the primary contrary made up of the two members of the Godhead. Hence, it is a still ungrasped truth that ontology is required, wittingly (*i.e.* for understood reasons), to expel from the body of accredited connotative symbols this illicit term non-being: while, until this expulsion is made, the great intellectual endeavour (the ontological endeavour) which absorbed men's main energies during the twenty-five centuries prior to the modern period, must perforce remain a structure (the noblest structure ever raised by the mind of man) without a topstone. Hence, the irony of the fact that, when, in the modern period, 'dialectic' once more dared to venture forth on the grand scale (as it did in the Hegelian dialectic) it should announce itself in terms of the most elaborate play ever made in a single philosophic system upon the notion of non-being. For nowhere (we conceive), is it possible to find a dialectic in which the term non-being is brought more to the fore than in the Hegelian: a fact which the quotation we append<sup>1</sup> to this volume will make sufficiently evident. As regards this passage, we do not point out the nature of the fault in Hegel's use of the term non-being. We leave that as an exercise for the reader. The quotation is taken from a study made by the Hegelian, the late Professor John McTaggart upon a certain aspect of Hegel's thought, and it will, we conceive, serve to show how steadily this quasi-term has kept its place in the mainstream of philosophic thought right down to the present.

<sup>1</sup>Appendix iii.

## SECTION IV

### CHAPTER XVII

#### THE ARISTOTELIAN PROOF OF THE EXISTENCE OF THE GODHEAD

In entering upon the consideration of the historic proofs of the existence of the deity we again refer to the fact referred to at the beginning of this survey, *i.e.* that the latter was undertaken not only as an end in itself but as a means of illustrating how, throughout the historic period, speculative thought has been disinclined to do its duty by that scientific notion in terms of which, alone, the intelligibility of the scheme of the universe admits of logical statement, *i.e.* the notion of the cosmogonic trinity. This dual purpose of our study re-stated, however, we may proceed at once to the consideration of these famous 'proofs':—The most notable of these can, by a little elaboration, be spun out to as many as five (St. Thomas Aquinas, for instance, offers five); or they may be reduced to three (Kant, in that analysis of his in which he rejects all as non-proven and non-provable, declares them to be three). Our view of the matter is, however, that there can be (as will become abundantly clear when we have indicated the structure common to all the proofs) as many variant forms as one can devise variant definitions of the deity; but our survey here will, naturally, limit itself to those forms which have assumed importance historically. Before indicating the structure of the proofs we ought, perhaps, to make one general criticism. This is, that all alike stand in need of a change of title. For proofs of God's existence they are not and do not so much as make a beginning at being. For the proof of the fact of the Godhead's *existence* emerges, not out of a consideration of the term God itself, but out of that of the wider term 'being' which comprehends equally both 'Gods and mortals'; while this wider consideration itself informs us that everything whatsoever has being. Hence, just those considerations which require us to say that even chimeras and

phantasms form part of the body of being, compel us to acknowledge the existence of God. That is, that absolute universality of the attribute 'being' which argues the inadmissibility of the term non-being as a connotative term, informs us that, without any shadow of question, 'God is,' and we may therefore reject in advance, as so many works of supererogation, all efforts to prove the existence of God. But the formulators of the historic positions we are about to scrutinise, though nominally engaged in proving the fact of God's existence, do not seize this obvious means of gaining their end, and we know the reason, *i.e.* they instinctively feel they can *assume* the bare fact of God's existence. Accordingly, what these proofs are designed to prove is God's *real* existence: a very different matter, and one to be effected by a totally different form of argument. We should therefore be wasting our time (in that we should be arguing at cross purposes) if we insisted on taking the intention of these proofs as nominally stated. Rather, we must make that initial correction in all of them which consists in seeing in them claims on behalf of the Godhead's *reality*. Now, as we saw earlier, a reality corresponding to an idea can be argued in two different ways. In the first place, one can argue it by the *a priori* method which reasons from the fact of an idea's inherent simplicity of structure to that of a real existence necessarily corresponding to it. In the second place, one can argue it by the *a posteriori* method, where proof of reality is established in terms of a submental experience of the thing which corresponds to the idea. But (let us say), in respect of both these methods of proving the reality of an idea, it is a first condition of their profitable application that the idea considered shall not be guilty of *indefiniteness*, but shall put before us, nominally at least, a perfectly clear notion, to the end that we may know, surely, at what the argument is driving. Hence the explanation of the outstanding fact that the groundwork of all the various proofs we are about first to consider consists in *a definition*, each of the three proofs first to be considered entering correctly upon its labours by advancing a definition of what the deity is conceived to be. They differ, however, widely as to the definitions they respectively offer, but they become alike again in that,

having advanced their definition, they seek to establish the point that the being *as defined* must, perforce, exist in the category of real things and not merely in that of conceptual (imaginary) things. Let us, then, indicate the differing definitions which the three 'proofs' we consider first (the Aristotelian, the Ontological and the Cosmogonical) respectively offer of the Godhead:—

The *Aristotelian* definition of the Godhead is: the unmoved mover. God is the causer of the world's motion. God is that stationary region (that being or entity) which exists outside the firmament (the latter, the 'outermost' of the supposed fifty-five heavenly spheres). It is this Aristotelian God 'beyond the heavens' which, without itself moving, gives to the revolving firmament (the *primum mobile* or 'first moved') its original motion; while, *viâ* the *primum mobile*, all smaller and subsidiary bodies receive from it their original motion.

The *Ontological* definition of the Godhead is: the greatest being imaginable; *or*, the most perfect being imaginable.

The *Cosmogonical* definition of the Godhead is: the first cause(s): that out of which and by which the world of created being has been created.

These, then, being their respective definitions, all three proofs now seek to prove that the divine being thus variously styled the unmoved mover of the world; the greatest or most perfect being imaginable; the first cause(s) of the world of nature, is a being which exists in the real category of existence, and not merely in the conceptual, and what our inquiry here undertakes is the examining of, at once, the manner in which this aim is pursued and the quality of the definitions tendered.

The philosopher whose name was first associated with a deliberate attempt to build up a proof of the existence of God was Aristotle, and it is, therefore, fitting that we should give first place in our study to the proof for which Aristotle himself was responsible:—Needless almost to say, Aristotle's proof of the existence of God does not attempt to prove the bare existence; and even had Aristotle made the attempt, the faulty Aristotelian ontology, which recognises the concept of non-being, would have deprived him of the power to do so

(would have deprived him, that is, of the power to use the argument that there *is* no non-being: that *everything* is; that all that which is merely nameable *is*; therefore, *God is*). What Aristotle was seeking to prove was that the entity indicated in his own definition of God (the entity to which *we* give the title of 'Hyperourania,' but which philosophy knows better as the 'unmoved mover'; also as the *deus absconditus* or 'hidden God' whose abode is beyond the earth, beyond the orb of the moon, beyond all the remaining orbs, beyond even that outermost orb of all, the fifty-fifth, which is the Aristotelian *primum mobile*), *was a reality*. Hence the strange-seeming form which Aristotle's argument takes. For the end to which Aristotle harnesses his argument is that of showing how the 'region beyond the fixed' must necessarily be the generator of motion, and, hence, real. But the mischief is, so far as Aristotle is concerned, that motion is held to be an eternally-existent entity, *i.e.* an element. Hence, the mobile principle, far from requiring an explanation of its own existence in terms of some other entity's generative potency, is, itself, one of the universe's prime generators, itself ungenerated. And Aristotle's attitude in this regard is all the more strange in that he is, as we have seen, quite conversant with that primitive 'Pythagorean' notion according to which the universe is the 'ever-living One' whose life is as integral to her as her being; *hence*, whose breath (*i.e.* cosmic motion) is as integral, essential and native to her as her being.

However, notwithstanding Aristotle's knowledge concerning, and his adhesion to, the dogma of the eternity (radicality) of motion, his determination to prove 'Hyperourania' the one God led him into those amazingly complicated Aristotelian arguments about some supposed generation of motion which constitute the Aristotelian argument for the (real) existence of the Godhead. Let us indicate these. Says Aristotle:

"Everything which moves is set in motion by another."

Hence, if the outermost heavenly orb (which, as the *primum mobile*, is the sphere instinct with the most primary order of motion), were set in (or were eternally maintained in) motion by an entity which was itself in motion, this causative entity



would (in virtue of Aristotle's above-given arbitrary postulate), itself have been 'set in motion by another'; and so on and so on, indefinitely. Hence, in order to avoid an interminable regression of efficient causes (which Aristotle—faultily, as we consider—asserts cannot possibly obtain), he postulates this claim, *i.e.* that the mover of the *primum mobile* must be *immobile*: must be, that is to say, the *primum movens immobile*. This, accordingly, is the origin of the Aristotelian conception of the Unmoved Mover who eternally confers on the *primum mobile* its motion. Hence, too, the fixation of the place of residence of the Unmoved Mover. For, pursuant upon Aristotle's additional postulate that any motion which is impressed upon any entity *can* be thus impressed by immediate contact only, it follows that the unmoving generator of motion must, perforce, occupy a place which is in immediate contact with the *primum mobile*, the outermost rotating heavenly orb. But, the 'unmoved' cannot be situate on the hither side of the *primum mobile*, for everything on the hither side is (says Aristotle) in motion. *Ergo*: the motionless entity which endows the *primum mobile* with its motion must reside on the farther side of this outermost heavenly orb. That is, it must be the entity we have termed Hyperourania.

Such, then, is the identity and situation of the Aristotelian Godhead. As to this entity's substance, this (Aristotle argues), can be neither Space nor motion nor matter. That it cannot be motion is the claim which—as above indicated—Aristotle seeks to establish on the strength of his claim that a regress to infinity in the way of 'moving movers' is an impossibility. Hyperourania thus is, for Aristotle (as for us), essentially motion-free. And that the substance of this region cannot be matter, is a claim which Aristotle proves by the (valid) argument that all matter is infected with motion—a claim which (as *we* claim) is rendered true in virtue of the sub-atomic constitution of matter. Finally (so Aristotle further claims), Hyperourania *cannot be Space*. For (he argues), the void (Space) is definable as:

“That in which body does not exist but in which it might come to be.” His whole argument, in this very important connection, reads as follows:

" From<sup>1</sup> what has been said it is clear that there is not, and cannot be, a mass of any kind of body outside the heaven ; for the cosmos as a whole<sup>2</sup> contains all the matter that properly belongs to it, namely, physical body perceptible by the senses. Consequently, there are not now, and never have been nor can be, more heavens than one, but our heaven is one, unique and complete. Also, it is plain that, outside the heaven is neither place, nor void, nor time. No place, or void, for, in any place, it is possible for body to exist, and void is defined as that in which body does not exist, but might come to be ; no time, because time is the number of motion, and motion cannot exist apart from a physical body. But we have shown that there is not, and cannot be, body outside the heaven. Clearly, then, there is neither place nor void nor time outside it. Consequently, the things there are of such a nature as not to be in any place, nor does time make them grow old, nor is there any kind of change that affects anything that is set above the outermost sphere of spatial motion. They cannot change nor be affected in any way, but they live the best and most self-sufficing life throughout all their duration (*aion*). This term 'duration,' used by the ancients, expresses their inspired insight. 'Duration' is the name given to the fulfilment comprising the complete span of time during which anything lives, and beyond which there is no natural development. On the same principle, the end of the entire heaven, the end which comprises all time and infinity, is 'duration,'—*aion* being derived from *aiei on*, 'being for ever,'—immortal and divine. From it are derived, with diverse degrees of clear expression or of dimness, the being and life of all other things. In popular philosophical discourse about divine things we are often told that the divine—anything that is primary and supreme—must be unchangeable. This is true and bears out what has been said. For there is nothing superior to it that might cause it to move (such a thing, if it existed, would be more divine), nor has it any imperfection or lack of any good proper to it."

Now, it is in connection with this claim of Aristotle's that the 'region beyond the fixed' is neither Space, Time, matter, nor motion (for Aristotle does not—as we do—identify Time *with* motion) that we may, the most conveniently, begin our criticism of the quality of his definition of the Godhead and the validity of the arguments by which he seeks to substantiate the defined entity's claims to reality. As to the first, we argue as follows:—Every monotheism is, perforce, a pantheism. But, every pantheistic system is eaten through and through with insuperable logical difficulties. Yet, even so, it is per-

<sup>1</sup>Aristotle, *On the Heavens*, I. ix. 12. 279a, 6.

<sup>2</sup>The 'cosmic cavity' is the Space existing beneath the *primum mobile*. It is the orb which contains the *cosmos* or world of nature.

missible to allow that pantheism has two sides, a worse and a better. Now, the better side of pantheism consists in the fact that it preaches the doctrine of the *immanence* of God in the world. Its worse side consists in the fact that it takes away all power to differentiate the world (nature) from the Godhead. Now, this latter pantheistic (monotheistic) disadvantage Aristotelian monotheism is full well aware of; not only so, indeed, but it determinedly seeks to circumvent it. This, however, it does at the cost of identifying God with an entity which is situated far away from the world: at the cost, that is, of doing away with pantheism's one valuable dogma, the divine omnipresence: the divine immanence. Hence, the Aristotelian God is the absentee-God, the hidden-God, the *deus absconditus*, above the world but not of it. But (as we argue), a valid science of the first principles must be able to show not only how the Godhead is transcendent of the world but, also, how it is immanent within it. That is, such science must justify the dogma of the twofold Godhead, for it is only by doing so that the dogmas of the divine immanence and the divine transcendence can simultaneously be saved. Thus, a sound theology will so conceive the Godhead that the latter will appear as lending part of its substances to form the world-units, and not as some mere agency outside the world which gives the latter its original 'kick-off' and thereafter leaves it to follow its own devices. For this latter conception most seriously injures the religious sense of mankind, in that it disturbs men in their instinctive awareness of that nearness of God to the world which goes by the name of the divine omnipresence; whereas, for the religious sense to work efficiently, it must feel that God is above the world, assuredly, but, at the same time, about it, and in it, and very near. Moreover, by his claim that the Godhead is neither Space, Motion, Time nor matter, Aristotle further disturbs men's religious sense in that, unwittingly, he encourages men to say that, since the Godhead is none of these things, it must perforce be *nothing at all*; for, under some one of these headings, men subsume all the things they can conceive: everything which is. Hence the integral connection between the Aristotelian theology and the dogmas not only of the incompre-

hensibility of God but of the Godhead's identity with *nothingness*. Hence (conversely) the strong religious sanction behind the claim that some one of these three entities—Space, Time (Motion) or matter—divine being needs must be. Hence the reason that the very great influence which the Aristotelian definition of the Godhead has exercised over later ages has been a misfortune, constituting, as it has, one of the most potent of those influences which have sustained our Christian culture in its basic agnosticism. Hence, were it for no other reason than that it drove the Aristotelian definition from the field, one would have to regard the Copernican revolution as a blessing to humanity. *Why* this change in astronomy ousted the Aristotelian argument for the (real) existence of the Godhead is obvious; but the argument had maintained its authority down to the very close of the Middle Ages as the proof *par excellence*, St. Thomas Aquinas giving it paramount place among the five proofs he resumes, while he recognises Aristotle's idea of God (*i.e.* the Unmoved Mover) as, unquestionably, for Christians, the true idea.

Now, before turning from the question of the quality of the Aristotelian definition to that of the quality of the proof of the defined entity's *reality*, let us ask why Aristotle went out of his way, as it seems, to define the Godhead in this manner, notwithstanding the endless difficulties in which it involved him. Why, let us ask, did he not define the Godhead in the old traditional Greek way as the 'deathless and ageless,' and, therefore, as the elements. For (as we have already said so often) the Ionian thinkers were in no doubt as to what entities were to be regarded as divine. For them, the divine entities were the eternally existing substances out of which created beings derive their being and back into which they will ultimately refund it. Now, to attribute motives in the absence of very definite circumstantial evidence is notoriously risky, and perhaps to do so in the present case will prove equally so. And yet we venture to suggest a motive, the gist of which we can state as follows:—All about him, Aristotle saw his brother philosophers identifying now this and now that of the two elements with non-being and the principle of evil. More commonly, it was

Space which was thus identified, Space the matrix-principle, the world-mother. For, owing to the increasing consideration given to the idea which lies at the base of so-called ' Persian ' ethical dualism (the idea, that is, that the source of *evil* in the world resides in the matrix-principle which is the Space ' beneath the fixed '), the reputation of this particular part of the element Heaven had fallen under a cloud, and Aristotle can be credited with feeling a quite comprehensible repugnance about identifying with it the Godhead. At all events, by crediting him with such a motive, one can understand the otherwise incomprehensible labour he puts himself to, to differentiate the Godhead from this part of this element. Thus (as we conceive), in order to set a barrier between his God and the entity made to go under the then-current offensive appellations of evil, illusion, seeming, and non-being, Aristotle sought for another entity upon whom he might bestow the supreme divine name. Hence his insistence upon limiting the title of the one God to that *mere part of Space* (Hyperourania) to which, as lying beyond ordinary visible Space, he could refuse to accord the title of Space. Not, of course, that Aristotle was unique in identifying the one supreme God with this entity; for Plato also thus identified it. What made Aristotle unique in this regard was the persistency and consistency with which he clung to it (for Plato subscribed to another and different conception of the ' one God,' *i.e.* the Ultimate Good, the God Aio, or, as we should say, the Messiah). And this brings us to the point where we have to criticise the arguments by means of which Aristotle seeks to establish the fact of the reality of his ' one God.'

In order to give show of reason for his eclecticism in regarding only a single part of a single element as the divine, Aristotle felt he must endow this hyperouranian region of Space with a unique cosmic function, and the functions he accordingly attributed to it were:

- (1) the pointless one of standing as ' cause ' to motion—pointless because motion was recognised by Aristotle himself as eternal and, therefore (as we should say), as an uncaused, causeless element, independent of all pre-suppositions and causes;

(2) the invalid one of standing as the entity which (supposedly) brought the so-called 'regress to infinity' in the way of causes to a halt in the causeless ;

Now Aristotle's anxiety to justify these asserted functions of the Unmoved Mover led him into the attempt<sup>1</sup> to establish the two following (false) postulates :

(1) Whatever is in motion has been made to move by another.

(2) A regress to infinity in the causal series is an impossibility.

That is, as forming part of his attempt to answer the question : why should Space alone, and this particular part of Space (the hyperouranian) alone, be considered the 'one God' ? Aristotle advanced a chain of arguments of which these two postulates form the hinge-positions and the gist of which analyses out as follows :

- (1) Everything that is in motion has been put in motion by something else ;
- (2) But, it is a matter of sense-experience that there IS movement (*i.e.* things *are* which *are* in motion) ;
- (3) Hence, there must be something which has given rise to this existent motion ;
- (4) Now, this movement-generating 'something' is either itself (a) moving ; (b) immobile ;
- (5) Let us suppose it is moving ;
- (6) But, if so, there must be some other mover which imparts movement to *it*, and so on, indefinitely ;
- (7) But this *cannot be* ;
- (8) Therefore, the 'first mover' cannot be moving, but must be immobile ;
- (9) It is, accordingly, the *primum movens immobile* ;
- (10) This *primum movens immobile* cannot exist on the hither side of the firmament, for everything under the firmament (save our earth) is in motion (*e.g.* the whole Heaven moves round the earth daily—according to the pre-Copernican astronomy) ;
- (11) Accordingly, the *primum movens immobile* responsible for the world's motion by imparting motion to the outermost heavenly sphere or *primum mobile* (and, from thence, to all the rest), is the entity existing on the farther side of the firmament (*i.e.* is Hyperourania) ;
- (12) This is the one supreme God.

Now, obviously, in the above chain of reasoning, the weak links are precisely the chain's hinge numbers, *i.e.* numbers one and seven, which, failing, let collapse the entire argument.

<sup>1</sup>It is this attempt which (needless perhaps to point out) constitutes Aristotle's proof of the reality of the Aristotelian God : the Unmoved Mover.

Our consideration, accordingly, will appropriately limit itself to these two numbers:—We consider first argument number seven. This is the inadmissible Aristotelian argument about the impossibility of an infinite causal regress. Now, whereas Aristotle argues that it is not possible that one mobile impulse should give rise to another mobile impulse, while another should have given rise to the previous one, and so on, indefinitely, *we* say that this is not only possible, but that it is impossible it should be otherwise, granting (as Aristotle rightly does grant) the postulates of the eternity of (1) first matter; (2) motion. That is, we contend that the infinite causal regress Aristotle has in mind is not only not an impossibility but is an inescapable necessity. However, let us, at once, acknowledge that the 'regress to infinity' argument exists in two forms, and that the regress as stated in one of these forms *is* an impossibility. As these two forms are very commonly confounded together, it is here advisable to state very precisely which form of the regress to infinity *is* an impossibility. It is that form which has led men to argue that 'nothing comes from nothing,' and that, therefore, nothing can analyse down into nothing. It is, obviously, the argument from which one (rightly) infers that, besides derived causes, there exist also first causes, *i.e.* the 'raw materials' or elements of the universe in the shape of the eternal (increate and indestructible) Godhead. Thus, in this sense, the causal nexus *is* limited, brought to a halt by the existence of the elements: the first causes. It is the sense according to which portions of the substances constitutive of the first causes go to form the very stuffs of created things, basically, here and now, in this immediate present. The causal nexus is limited, then, in the sense that the universe possesses divinity, and in this sense, accordingly, the denial of the possibility of the 'regress to infinity' has justification. But this is *not* the Aristotelian sense, which relates to a quite different set of circumstances entirely, wherein a regress to infinity is not only not an impossibility but is an inescapable necessity. Thus, Aristotle fails to take cognisance of the fact that the phenomenal life of the universe is carried on on the principle—eternally in operation—of 'passing it on,' where what is passed on is the

mobile impulse of the principle of Time which, being eternal, is ceaselessly in operation, and, therefore, ceaselessly causing one caused form to develop into and give place to another caused form. Perhaps our point would become clearer if we said that, while an infinite causal regress is not an impossibility if we take, so to say, a *horizontal* section of the flux of things, and, so, trace this flux backwards in Time, it is an impossibility if we take a *vertical* section of it so as to cut down to the elements of things, either here and now or at any other time. That is, we do not, and cannot, arrive at the first causes of things by tracing the history of the cosmos rearwards through Time, (although we do—as we shall later endeavour to prove—arrive at one unique moment which appears in the life-history of every succeeding cosmos which is possessed of such peculiar features as to permit us to style it 'the beginning' of some one particular world of creation, and, so, enables us to espouse the dogma which teaches that there is a 'moment of creation' in every succeeding cosmos). But we may, here in this very present, arrive at limits to the causal nexus by analysing down to the basic constituents of any single created thing whatsoever, anywhere. As we might put the matter, we cannot descry the features of the Godhead by straining our vision rearwards over the history of creation, but we *can* descry them here, to-day, by analysing any existing unit of creation down to its elements. That is, we can lay hold of the fragment of the hem of the skirts of God at any time on a laboratory table, and this because, in every existent, created (natural) thing, portions of the substances of the two divinities, the two supernatural, uncaused, increate, indestructible radicals are implicated, constituting indeed all that the created thing has, fundamentally, of being.

Such, then, are the considerations which lead us to say that argument number seven is defective. Now let us note the defect in argument number one, which runs: 'Everything which moves has been set in motion by another':—Concerning this postulate our first observation is that the assertion: 'Every *caused* thing which moves has been set in motion by another,' is *true*. Not only so, but, conformably with what has just been said concerning the inevitability of the 'horizontal'



regress to infinity, Aristotle's postulate requires to be expanded into a denial of that very Aristotelian position the establishment of which constitutes the *raison d'être* of the Aristotelian argument. For one is required to say that every caused thing is (or has been) called into being and set in motion by an entity *which is itself moving*. That is, every form which has a place in the causal nexus (which latter is infinite, transversely, *i.e.* horizontally, *i.e.* historically viewed) has been moved by another which, itself, was infected with motion. But, when we speak of 'every *caused*' form, we do not include, but expressly exclude, Motion (Time) itself, for this is *not* a created thing but an eternal element. We exclude, that is, just that particular entity which Aristotle's argument was seeking to draw into its net. Indeed (and as anyone can see), Aristotle drags in the term 'moved things' only to the end that he may be enabled to draw, on the lines of analogy, just this inference which is the one prohibited, and it is in order to do this that he disregards the commonsense rule that, in arguing from analogy, one must not argue from the character of an action of a weaker sort to what will be the character of that of a stronger. For instance, while the movements of all mere creatures require an impulsion from a motor-force outside themselves to account for them, that creative mobility *in excelsis* which is the created world's ultimately efficient (*i.e.* manifesting) cause, does not require such. For this 'efficient cause' of the entire created world is the supra-mundane mobile principle: the unbegotten, causeless breath of the universe: the universe's indefeasible life substantiated. But (as we saw earlier), the universe has to be regarded as being alive *essentially* and not merely *by accident*; that is, as being not contingently alive, but alive in virtue of the fact that its breath is essentially eternal, owing its existence to none. It is; it has been ever; for ever it will and must be. Eternally it is the complement of the One's 'body' (*i.e.* first matter, *i.e.* Heaven, *i.e.* Space). Hence the utter defectiveness of Aristotle's almost incredibly complicated argument relative to the matter of the genesis of (eternal) motion. Hence, therefore, the absence of need to inquire further into Aristotle's laborious arguments in proof of the

inadmissible claim that 'all that moves (inclusive of the eternal mobile principle) has been set in motion by another which is itself unmoved.' We accordingly bring to a close our survey of the Aristotelian argument in proof of the real existence of the Aristotelian God with a sample of Aristotle's own terms taken from a well-documented passage in Sir T. Heath's *Aristarchos of Samos*. This passage reads as follows:—

"Motion,<sup>1</sup> according to Aristotle, is, like form<sup>2</sup> and matter,<sup>3</sup> eternal and indestructible, without beginning or end.<sup>4</sup> [However], motion presupposes a *primum movens* which is itself unmoved; for that which is moved, being itself subject to change, cannot impart an unbroken and uniform movement;<sup>5</sup> the *primum movens* then must be one,<sup>6</sup> unchangeable, absolutely necessary;<sup>7</sup> there is nothing merely potential about it, no unrealised possibility;<sup>8</sup> it must therefore be incorporeal,<sup>9</sup> indivisible,<sup>10</sup> and unconditioned by space<sup>11</sup> as well as motionless and passionless,<sup>12</sup> it is absolute Reality and pure Energy,<sup>13</sup> that is, God.<sup>14</sup> In another aspect, the *primum movens* is the Final Cause, pure Being, absolute Form, the 'object of thought' and desire;<sup>15</sup> God is Thought;<sup>16</sup> self-sufficient,<sup>17</sup> contemplating unceasingly nothing but itself,<sup>18</sup> the absolute activity of thought, constituting absolute reality and vitality and the source of all life.<sup>19</sup> The *primum movens* causes all the movements in the universe, not by any activity of its own<sup>20</sup>—for that would be a movement and, as immaterial, it can have no share in movement—but by reason of the fact that all things strive after it and try to realise so far as possible its form;<sup>21</sup> it operates like a beloved object, and that which is moved by it communicates its motion to the rest.<sup>22</sup> Motion takes place only by means of continuous contact between the motive principle and the thing moved. Aristotle insists upon this even in a case where the contact might seem to be only momentary, e.g. where a thing is thrown. The motion in that case seems to continue after contact with the thrower has ceased but Aristotle will not admit this; he assumes that the thrower moves not only the thing thrown but also the medium through which the thing is thrown, and makes the medium able to act as moved and movent at the same time (i.e. to communicate the movement); and further that the medium can continue to be movent even after it has ceased to be

<sup>1</sup>Sir T. Heath, *Aristarchos of Samos*, pp. 225-7.

<sup>2</sup>*Metaphysics*. Z.8. 1033 b 16.

<sup>3</sup>*Ibid.* 1071 b 4.

<sup>4</sup>*Metaph.* D.8. 1073 a 25.

<sup>5</sup>*Ibid.* D.6. 1071 b 12.

<sup>6</sup>*Ibid.* D.9. 1075 a 7.

<sup>7</sup>*De anima*. iii. 2. 426 a 10.

<sup>8</sup>*Metaph.* D.7. 1072 a 25.

<sup>9</sup>*Metaph.* D.7. 1072 a 26

<sup>10</sup>*De caelo*. ii. 12. 292 b 5.

<sup>11</sup>*Metaph.* D.9. 1095 a 10.

<sup>12</sup>*De caelo*. ii. 12. 292 a 22.

<sup>13</sup>*Phys.* i. 9. 192 a 22-32.

<sup>14</sup>*Phys.* viii. 6. 259 b 22.

<sup>15</sup>*Ibid.* D.7. 1072 b 7-11.

<sup>16</sup>*Ibid.* D.6. 1071 b 20.

<sup>17</sup>*De caelo*. i. 9. 279 a 18 sq.

<sup>18</sup>*Phys.* viii. 10. 267 b 18.

<sup>19</sup>*De caelo*. loc. cit.

<sup>20</sup>*Eth.* N.x.8. 1178 b 21.

<sup>21</sup>*Metaph.* D.9. 1074 b 25.

<sup>22</sup>*Metaph.* D.7. 1072 b 28.

<sup>23</sup>*Metaph.* D.7. 1072 a 26.

<sup>24</sup>*Ibid.* 1072 b 3.

moved.<sup>1</sup> God, then, as the first cause of motion, must be in contact with the world,<sup>2</sup> though Aristotle endeavours to exclude contingency in space from the idea of 'contact' which he often uses in the sense of immediate connexion, as of thought with its object.<sup>3</sup> The *primum movens* operates on the universe from the circumference, because the quickest motion is that of the (outermost limit of the) universe and things move the quickest which are nearest to that which moves them.<sup>4</sup> Hence in a sense it could be said that God is, to Aristotle, the extremity of the heavens;<sup>5</sup> but Aristotle is careful to deny that there can be any body or space or void outside the universe; what is outside is not in space at all: the 'end of the whole heaven' is life immortal and divine.<sup>6</sup>''

<sup>1</sup>*Phys.* viii. 10, 266 b 27-267 a 18.

<sup>2</sup>*De gen. et corr.* i. 6. 323 a 31.

<sup>3</sup>*Metaph.* 1051 b 24.

<sup>4</sup>*Phys.* viii. 10. 267 b 7-9.

<sup>5</sup>*Sextus Emp. Adv. Math.* x.33 : *Hypotyp.* iii. 218.

<sup>6</sup>*De caelo.* i. 9. 279 a 16-28

## CHAPTER XVIII

### THE ONTOLOGICAL PROOF OF THE EXISTENCE OF THE GODHEAD

We now turn to a still more famous proof of the existence of God: the *ontological*. This is a form which, adumbrated by St. Augustine in the fifth century and formally stated in the eleventh by Archbishop Anselm, and, later, advocated by Alexander of Hales, Bonaventura and Duns Scotus, only came into first favour after the Copernican revolution had undermined the bases of the Aristotelian proof. Aquinas, for instance, questioned the validity of the ontological proof; but when, at the outset of the modern period, the superseding of the Ptolemaic astronomy cut the ground from beneath the Aristotelian proof, those who sought for an alternative naturally reverted to this argument of Anselm. Thus, Descartes himself, while offering in one context and another, every one of the known types of proof, gave the ontological his preference. Kant likewise, while rejecting all the known types as invalid, gave what preference he was master of to the ontological. Locke, on the contrary, gave sharp expression to his preference for the cosmogonical as against the ontological, and resented the action of those who attempted to make the latter the supreme proof. Let us, then, look into it:—Needless to say, the existence the proof is built up to prove is not that of bare existence. Implicitly, though not explicitly, it is an argument purporting to prove the *real* existence of the Godhead. As to form, this famous argument, like the Aristotelian, rightly takes its stand upon an assertion of the 'whatness' of God, *i.e.* upon a definition of what the Godhead is. It advances therefore after a method wholly sound, but one which can be fruitful only if the definition fixed on be sound. Now, unfortunately for the thinkers conspicuous for their reliance upon this form of proof, the definition chosen was very inadequate. For instance, *both* the ontological definitions offered by Anselm were, for different reasons, untenable. Let us state these. Anselm defines God in a two-

fold way in terms of what he takes to be the Godhead's essential characteristic. He declares God to be :

- (1) The highest thinkable : *the summum cogitabile* ; the *summum omnium* ; the *maxime ens*.
- (2) The greatest thinkable : the being *quo majus non cogitari potest*.

As to Descartes's definition, this is, essentially, Anselm's *summum omnium* : *he summum cogitabile*. God is, says Descartes :

" That which we understand to be supremely perfect and that in which we can conceive nothing involving defect or limitation of its perfection."

Now, advancing from these definitions of what God is, the rest of the ontological proof labours to convince us that we must allow reality to be involved in the very terms of this definition of the Godhead. That is, the supporters of the ontological argument believe and declare that these definitions themselves are such as to enable us to assert *a priori* that they indicate something real. The ontological proof of tradition thus claims so to define the Godhead that we may infer, in advance of all sensorily-grounded demonstration, the fact of the Godhead's reality. Now, as we have seen, it is possible for us, in certain well-defined circumstances, without waiting for any definite sensory demonstration of the truth of our claim, to pass straight from the assertion of the existence of an idea to the assertion that a real counterpart must exist corresponding to that idea. An exceedingly important epistemological law authorises us to do so ; to prejudge, that is, of the fact of the existence of a reality corresponding to an ideal form in advance of a formal appeal to sense-experience. The law which authorises us to do this bases itself (see ch. vi) on our knowledge of the mode in which all non-real ideas (that is, all ideas destitute of real counterparts) are built up, *i.e.* by making a mosaic or complex of simple ideas (which latter themselves are, perforce, derived from real experiences), and taking liberties with the order of juxtaposition of the parts combined together into that complex. But, obviously, in respect of simple, homogeneous ideas, the possibility of taking such liberties does not exist. *Ergo* : all our simple ideas must perforce have real counterparts. Accordingly, we possess *a priori* knowledge (as it is called)

that certain of our ideas (*i.e.* simple ideas) must possess real counterparts, and this knowledge constitutes a veritable life-line where ideas are concerned like that of the Godhead whose corresponding reality is deeply involved in doubt. Hence, as regards the ontological proof of the reality of the Godhead, we have to say that it is not the *apriorism* involved in such proof which is at fault; for, as we know, there is a case where *apriorism* is based upon wholly sound argumentation.

However (let us say at once), this true support of the *a priori* argument for the real existence of the Godhead is not the support which the advocates of the traditional ontological argument lean on. On the contrary, they lean upon a conception of the deity which is essentially complex, but a conception which (of course) they believe has the quality of reality implied in it. They thus run two risks:—

- (1) That the idea, being a complex one, will, after all, not possess the attribute of reality. For, having abandoned the feature of simplicity, they have abandoned their hold upon the one genuine *a priori guarantee* of reality;
- (2) That the idea thus built up will not form an acceptable definition of the deity. This is the mishap which overtakes *both* of Anselm's definitions, and that of Descartes also.

However, let us state the argument itself in the form given to it by its foremost advocates, Anselm and Descartes, for, as we have said, the 'perfect being' argument of Descartes may quite well be identified with the *summum cogitabile* of Anselm,<sup>1</sup> a perfect being not being appreciably different from the 'highest conceivable being.' The case would, of course, be different in respect of the definition of God as the being 'than whom no greater can be conceived': if, that is, the 'greatest being' were construed, not qualitatively as the equivalent of highest (as Anselm construed it), but quantitatively, as being the most comprehensive. For this reason, we shall, briefly, consider Anselm's definition from this second point of view also, though Anselm himself expressly declared that this was not his primary meaning, what though (as he allows) this meaning can ultimately be read into it.

<sup>1</sup>From whom he is supposed to have borrowed it.

We will begin with the *summum cogitabile*<sup>1</sup> or 'perfect being' form of the argument. This argument can be stated formally as follows:—

A Perfect Being is a Being which has, necessarily, a real existence, real existence being a necessity of perfect existence in that real existence is a higher mode of existence than imaginary existence.

God is a Perfect Being.

∴ God is a Being which has, necessarily, a real existence.

Now, concerning this argument, let us say that, formally, it is correct. Where it errs is in the substance of the minor premiss which purports to be a definition of the Godhead. What is amiss is clear. A definition is a proposition of sorts; that is, it is not a ratiocinative proposition but a tautology, the denotation of its predicate being identical with that of its subject. It is, however, a tautology saved from the worthlessness characteristic of tautologies by the fact that (if it be a veritable definition) its predicate substitutes a plain, well-comprehended term (or set of terms) for the term constitutive of the subject, which latter falls short in respect of the attribute of clarity: a fact witnessed to by its standing in need of definition. Hence, either clarity and absence of vagueness must characterise the predicate of a definition, or the proposition fails as a definition, thereby falling automatically into that class of assertions so called, which everyone is familiar with as worthless tautologies. Now, in the light of this truth that clarity is an indispensable characteristic of the predicate of definitions, let us look at Anselm's definition of God as 'a perfect being.' Let us, for instance, suppose that I interrogate myself on the subject of the meaning of the term 'perfect being,' asking myself: "What is a perfect being?" To this, of a surety, the answer will be: "I scarcely know." If, however, I put on pressure and query: "But it will be, at least, a real being, will it not?"

<sup>1</sup>This is not Anselm's own term. Anselm's most characteristic expression was the being "quo majus non cogitari potest." The *summum cogitabile* first appears as the contracted equivalent of Anselm's phrase in a treatise (*De Primo Principio*, vii. 24) attributed to Duns Scotus, who held by the validity of the ontological proof. See J. M. Rigg's *St. Anselm of Canterbury*, p. 67.

the answer will be : " Well, perhaps, if you care to say so." And if then I retort with : " Come, now, that won't do. Exert yourself and tell me whether or not I may say that a perfect being is characterisable as being, necessarily, a *real* being," the answer will be on lines like the following :—In the first place, I shall say I have no sure and ready notion of perfection, a perfect creature never having, to my knowledge, come my way except in such a sense as where, for instance, the attribute ' perfect ' implies trueness of a member of a species to its type, *e.g.* a perfect flower. And I might, indeed, be able to arrive at an idea of ultimate perfection, but, in order to do so, I should need to build up a whole philosophy to provide the base for it. Therefore (so I should have to say) a definition of God as ' a perfect being ' would not be of any immediate help or illumination to me. On the contrary, in order to give to it any justification, I should have to embark on a long and arduous labour. But, suppose I was countered with : " Yes, but, all the same, you will agree that there is nothing essentially incorrect in the assertion that God is a perfect being ? " my reply would be that there is a radical ineptness in the application of the term ' perfect ' to the Godhead. For perfection implies the being true to a given standard or to a set law. Thus, for instance, we mortals (if we had the moral force), might be perfect, in that there exists (as we think) a law (a cosmic law) laid down by God for our guidance and adherence, while absolute adherence to this law on our part would constitute in us perfection. For instance, in that ' philosophy of perfection ' to which we have just now referred, we should have to show how there is a man : a certain ' Coming Man ' : the coming of whom mankind has anticipated and is looking forward to, and who, by name and by foreknown fact, is ' *man made perfect* ' in that he fulfils the cosmic law absolutely. Hence (we should say), notions of perfection and imperfection are quite in place in respect of creatures : sons of the Godhead : for whom a cosmic law is set, but are inapplicable to the Godhead who lays down the law as well as ensures its ultimate fulfilment. Furthermore, in a general way, people do not expect to have definitions served up to them on the understanding that they themselves supply a



deep and difficult philosophy in order to invest them with a semblance of meaning. Rather, they take them as given, and with as much power of illumination as appears on the surface. But, thus taken, the assertion that God is a perfect being is one which has to be rejected as destitute of illumination, because, in truth, it is destitute of definite meaning. It is (one would have to say) a definition without any bite in it, and, so, launches an argument the wheels of which fail to take the rails, and turn and turn futilely. In this regard, the ontological definition differs wholly from the Aristotelian, which latter, howsoever inaccurate it may be in substance, is yet arresting, and such that the mind can get a satisfying grip on. Hence, the 'perfect being' argument for the (real) existence of God, although rightly banking on the power of definition for an elucidation of the situation, *fails* because its predicate or defining term fails to come up to the normal standard of clarity required of any definition.

This charge of vagueness, however, which serves to render the 'perfect being' argument for the real existence of God a futility, cannot be preferred against Anselm's definition of God as couched in its alternative form of the *maxime ens*; not, that is to say, when this latter is construed quantitatively as implying that 'than whom no quantitatively greater can be conceived' (*quo majus cogitari non potest*). Let us, therefore, try our fortunes with the ontological argument in this second form:—

As we have said, the Anselmian definition thus quantitatively construed is a veritable definition in that its predicate possesses the one characteristic vital to a definition, *i.e.* that, as a term, it is clearly comprehensible. However, while the charge cannot be made that the definition of God as the 'being than whom none greater can be conceived' is imperfect formally (*i.e.* as a definition), the charge *can* be made that the entire argument forms a syllogism in which major and minor premiss alike are false. Here is the syllogism:—

A Being	is a Being which is, necessarily, a
(than whom nothing	real existence.
greater can be	
conceived)	

God is a Being than whom nothing greater can be conceived.  
 ∴ God is a Being which is, necessarily, a real existence.

Now let us consider the minor premiss of this syllogism and note in what consists its falsity. To do this we have merely to give ourselves the task of framing in the mind the idea of a being 'than whom nothing greater can be conceived.' Let us suppose someone says: "I conceive a being so great that it includes, in itself, the sum-total of all realities." "But I," retorts another, "conceive a being so great that it contains not only all real beings but all imaginary beings, all hypothetical beings, all possible beings; contains, in short, every type of being which is." Now, here, obviously, the second speaker has it, for he has, knowingly or unknowingly, fixed on the concept of the greatest being conceivable, *i.e.* the *summum genus*, the One, the All, the entire Universe with its mixed content, real and other, of all the manifold types of being which are. And, *in* so choosing, he has manifested the inaccuracy of Anselm's major premiss. For the being *quo majus cogitari non potest* includes, necessarily, not merely the really existent, but every type of existent whatsoever, including, as it does, realities and vain imaginings. For the *summum genus*, as the *summum cogitabile*, subsumes not only the Godhead: the basically real: but the secondarily real, together with the non-real, *i.e.* the purely imaginary, and all the remaining types of being which are. Hence our certain knowledge that both premisses of this argument are inaccurate. For we know that, while the Godhead is in the world, and while also it transcends the world, and while (again) it constitutes the world's fundamental realities, there is yet a being *quo majus cogitari non potest*, who, in her all-comprehensive fulness and completeness, transcends even the Godhead. This is the Absolute, the One Being, in whom all contraries are transcended, the contrary of 'Gods *versus* mortals' not excluded. The ontological argument can, then, derive no help from the move which consists in construing the *summum cogitabile* (most perfect being) as the *maxime ens* (greatest being conceived quantitatively). Hence, in what follows of

this study, we restrict our reasoning to that version of the ontological argument which defines the deity as the most perfect being conceivable.

Now, comprehensibly enough, this ontological argument immediately gave rise to criticisms, many of which are, however, as indicative of bewilderment in the critic as the argument itself is in its author. Let us quote a modern opinion on the subject :<sup>1</sup>

" Here . . . for the first time in the history of thought, is the formal, explicit, articulate expression of what has since come to be termed the ontological, or a *priori* proof of the being of God, the watershed, as it may fitly be designated, of metaphysical speculation. Rejected, for want of perfect apprehension, by St. Thomas Aquinas and the later scholastics generally, with, however, the notable exception of the seraphic and subtle doctors [Bonaventura and Duns Scotus]; revived in a modified form by Descartes (*Princ.* l. 14), and virtually admitted by Leibnitz; converted, in the Cartesian form, to pantheistic uses by Spinoza (*Ethics* I.5.6); subjected to searching criticism after the manner of Gaunilon by Kant; and, finally, reformulated by Hegel, this celebrated theorem will probably continue, in one form or another, to command the assent of the speculative thinker, and provoke the mirth of the man of the world to the end of time."

Now, in our opinion, it will do neither; for, on the one hand, mirth anent an argument the defect in which the mirth-maker cannot indicate, will of necessity be hollow; hence, fleeting; while, on the other hand, the vague but general apprehension that the argument is somehow fallacious, must, necessarily, as time goes on, put thinkers on their guard against it; and we propose, in this place, to examine the arguments of two thinkers who did, definitely, withhold their assent from it:

- (1) Gaunilon, monk of Marmoutier;
- (2) Kant.

In the course of his argument in the *Proslogion*, Anselm had used the quotation: "The fool hath said in his heart, there is no God," and a contemporary of Anselm's, a monk of Marmoutier (the Comte de Martigny), humorously underscored his impression of the small worth of Anselm's argument in a work which he entitled *Liber pro Insipiente* (*Apology for the Fool*). In this *Apologia*, the monk makes the valid point

<sup>1</sup>J. M. Rigg, *St. Anselm of Canterbury* (London, 1896), p. 68.

that, while there *are* ideas (as we should say, those ideas which have the characteristic of *homogeneity* or *simplicity*) whose character is such that we may infer that only real forms of experience could have given rise to them, the notion of the *summum cogitabile* (the highest thinkable or most perfect being) is not of this kind. And he illustrates his argument by means of an image. He asks us to conceive (*i.e.* imagine) 'a most perfect island' supposedly existing in the ocean:

"Some say that somewhere in the ocean is an island . . . whereof they fable (much more than of the Isles of the Blest) concerning the inestimable fecundity in natural resources and all manner of delectable and desirable things by which (though uninhabited) it excels whatever lands men till."

Here then is a postulated (*i.e.* imagined) 'most perfect island.' Now, proceeds the monk:

"I may hear tell of such an island, and easily understand what I hear, for it presents no difficulty; but, if my informant were to add: 'Now, you cannot doubt that such an island, excelling all other islands, exists somewhere in fact as well as in your mind. Because, to exist in fact is more excellent than to exist in imagination. Hence, if this most perfect island did not exist in reality, any island which does so would be more excellent than it.'"

To this probing ironical criticism Anselm retorts:

"Well, let us assume that it need not exist [in reality] merely because it is thought. Mark the consequence. That which can be thought without really existing would not . . . be the *summum cogitabile*; so that, by the hypothesis, the *summum cogitabile* is, and is not, the *summum cogitabile*; which is in the last degree absurd. It is certain, then, that the *summum cogitabile*, if it can so much as be thought, also *really* exists."

And Anselm was so convinced of the soundness of this reasoning that he had the confidence to go on:

"If anyone will discover for me anything existing, either in fact or in pure thought, to which the concatenation of this my argument will not apply, I will discover that Lost Island, and make him a present of it, no more to be lost."

Let us then earn the archbishop's island:—As has already been pointed out, there is one feature of exclusively conceptual existences which distinguishes the latter from ideas which have real existences corresponding to them. This feature has its seat in the fact that the order of arrangement obtaining between the (necessarily plural) ideal factors brought together in purely

imaginary ideas is not matched in the sphere of reality : that is, is not one which can be sensorily apprehended, and the enormous pull which free imagining has over thought carried on strictly in terms of things existing in reality has its origin in precisely this feature. Now, obviously, it is by the exercise of this human power of free imagining (always applicable wherever a complex notion is in question) that the monk Gaunilon constructed his particular notion of the most perfect island, *putting together*, to form *his* special brand of perfect island, any ideas which occurred to him as being in harmony with his notion of the most delectable thing in islands. For, of course, *his* most perfect island need not be the same as any other man's ; for, even as men's tastes in more usual matters differ, so, when what is at issue is a most perfect island, will the content of the notion vary from man to man : a fact which, in itself, very well illustrates what was said earlier about the inadmissibility of the term ' perfect ' as the predicate of a definition : this, on the insuperable ground of vagueness. We will illustrate this at a little greater length. Archbishop Anselm will, let us say, at the end of this chapter, owe us an island, the ' most perfect island imaginable.' But, suppose that, in place of this island, his debt to us was a *hundred thalers*. Now, in either case, the certainty is we should have long to wait for the debt's discharge. Note here the difference however ; for, whereas, in the case of the hundred thalers, the debt would remain—as being something quite definite—just a hundred thalers, in the case of the most perfect island, part of the time during which one would be waiting for the debt to be paid could, quite permissibly, be spent in swelling out the conception of what the island was to consist in. Thus, any desirable feature which one had previously failed to put in a claim for as appertaining to it could now be added, the process of addition (or subtraction) being obviously indefinitely extendable, and being so in consequence of the vagueness of the term ' perfect.' Hence the generalisation that a term the significance of which is definitely fixed (and, hence, a term which can, *with propriety*, be used as the predicate of definitions) does not lend itself to the play of free imagining. For instance, a hundred thalers cannot, by any mental sleight

of hand, be mistaken for a hundred sovereigns, and while the 'hundred thaler' conception can be imaginatively linked up *as a whole* with other conceptions in a freely imaginative way (and so form an indivisible 'brick' of some imagined structure), it is, in itself, too definitely the mental correlative of a real thing for the imagination to play fast and loose (as the imagination's manner characteristically is) with it. Very different however is the term 'most perfect island,' or, indeed, 'most perfect anything,' in that this very vagueness which makes the term 'perfect' inadmissible in a definition, lends itself most admirably to the unbridled play of the imagination. Thus, as one can see, there is no limit (*save one*) beyond which, in respect of it, the imagination may not go; for, when, in imagination, men are piling one good thing upon another to make the most perfect thing imaginable, they can, without involving themselves in any contradiction, swell the many already-assembled perfections with any additional notion of perfection which may appeal to them, and it is this very power which (we would point out) Anselm himself is unconsciously relying on in his feeling that he can overtop any man's suggestion of perfection where what is under consideration is the 'most perfect being conceivable.' Every notion, that is, EXCEPT ONE. And this is truly hard luck for the advocates of the ontological argument, in that their entire case has been made to rest on precisely that one feature which is unique in this, *i.e.* that it is the one feature barred to their 'composition': the sole feature they may not, seriously, allow to their most perfect entity *imaginable*. For the one barred notion is the supposition that the imagined composition has its correspondent in the sphere of *reality*. Let us, in illustration, consider a concrete case. Let us, for instance, substitute for the term the highest (most perfect) being conceivable (*i.e.* imaginable), that of the 'richest conceivable.' Now, on the one hand, where is the limit to the wealth of the wealthiest imaginable? Obviously, nowhere; for any sum which anyone may suggest as a limit, can instantly be doubled (or squared, or cubed, or raised to the *n*th power). But where, on the other hand, is the compulsion to believe that this wealthiest conceivable exists in reality? Again, and equally

obviously, nowhere ; for, while, in respect of every suggested concrete instance of a wealthy person, the imagination can render such person comparatively poverty-stricken by its power of unlimited multiplication, it does so all on the condition that this imagined wealth shall not be taken as existing *in reality*. Of course, one may, by special licence, so to say, and in order to invest the situation with greater realistic similitude, nominally invest one's imaginary notion with that contradiction in terms : an 'imaginary reality,' just as, so it is said, authors of works of fiction often do. But, precisely as the work of fiction, all realistic in atmosphere as this may be, is still a fiction, so are men's conceptions of the most perfect island (or most perfect being) imaginable. This situation we can sum by saying that, in respect of all merely conceived or imagined entities, we barter our entire right to any claim for a place for them among real things for the privilege of allowing to our leaping imaginations that elasticity of which the free mental juxtaposing of forms (the latter, the very essence of the activity of imagining), is the exemplification. Hence, a realistic novelist, using his imagination, can call into being a character who is the wealthiest man in Europe (or in the world, or in the universe) by just a few strokes of his pen, but he would find himself inside a prison (or an asylum for lunatics) if he attempted seriously to make this wealthiest-conceivable his guarantor for a pound. But, as anyone may see, it is precisely this elasticity which Anselm is banking on when, in reply to Gaunilon, he unstringently argues :

" Let us assume that it need not exist [in reality] merely because it is thought. Mark the consequence. That which can be thought without really existing [*i.e.* that which can exist in imagination without existing in the realm of reality] would not . . . be the *summum cogitabile* ; so that, by the hypothesis, the *summum cogitabile* is, and is not, the *summum cogitabile*."

Anselm's point is that the 'highest imaginable' must be imagined as real, because, forsooth, reality is a good, and the highest imaginable, being endowed with every conceivable good, ought certainly to be endowed with reality. What Anselm thus overlooks is the fact that the one excluded attribute of the 'highest imaginable' is reality, *reality being the very*

*differentium in consideration of which these two classes become contraries.* Hence the consequence that he becomes guilty of the quaint confusion which confounds 'the highest' in the one specific class (*i.e.* that of the imaginary) with 'the highest' of its contrary class (*i.e.* that of the real). Thus, reality is the *essential* characteristic of the one class, and it is on this account that even the highest in this class must be limited by the condition that it must be *sensorily-apprehensible* (this latter being the one essential mark of the real). On the other hand, reality is the one sole feature which the contrary class (the conceivable) specifically and expressly divests itself of, and it is only in compensation for its doing so that it comes into possession of a 'highest' which is such that no limits whatsoever appertain to it ; for, as we pointed out in respect of (for instance) the 'richest imaginable,' the vaulting imagination can go on from height to height indefinitely in a progressive approach to the imaginary's ever-receding 'highest,' *i.e.* the *summum cogitabile*: the highest conceivable. It can even (as we have allowed) go to the childish lengths of postulating a contradiction in terms and invest its highest with an imaginary reality, but this only on the express understanding that the reality in question is not to be regarded *as* real. Accordingly, Anselm, in his dealings with the 'highest conceivable' (*i.e.* the highest imaginable), operating as he thus is exclusively in the category of the imaginary, knows that he has the power to outtop any conception that can be offered to him as being the highest imaginable, even to the length of attributing to his conquering conception an imaginary reality. But the very fact that he knows himself to be in possession of this elastic power, is, itself, like stolen goods in the hands of a thief, the means and ground of his conviction, this power being the very witness that he has bartered his right to have the forms he is imagining accorded a place in the sphere of reality. Accordingly, because Anselm did not realise this, we have to say that he here permits himself to play solemnly that game which children play merrily, the game of '*Let's pretend.*'



## II

When, in the foregoing, we made mention of the term a 'hundred thalers,' we did so looking forward to another well-known line of criticism to which the ontological proof of the (real) existence of God has been subjected: the well-known 'hundred-thaler' criticism of Kant. Thus, Kant put forward the proposition that there is no difference between:

- (1) the *idea* of a hundred dollars;
- (2) the idea of a hundred dollars *existing*.

What does this mean? In our opinion, just the simple truth that *ideal* existence is as truly a species of existence (of being) as the *real* species, and Kant's argument is noteworthy precisely because it sets forth Kant's realisation (howsoever vague) of the basic ontological principle that every type of being *is*. For instance (and to use Kant's own example) a hundred conceptually-existent thalers (dollars) as truly exist as a hundred really-existent dollars, although (one should add) the two have not the same sort of existence, belonging, as they do, to two quite distinct existential orders. That is to say, the fact is that the attribute of *existence* may be assumed (without saying) as belonging to every type of existence whatever, so that nothing significant or amplifying is added to an idea by the affirmation that it exists. But to what use does Kant put his vague realisation of this ontological truth? To discover this, let us note the situation in which he is employing of it: the situation where Kant is criticising the argument which contends that certain of our ideas (*to wit*, those of a 'supreme being': the 'most perfect being'), existing conceptually as they do, must perforce be matched by a corresponding existence in the realm of reality. But, let us now ask, what connection is there between these two things:

- (1) Kant's assertion that there is no difference between the idea of a hundred dollars and the idea of a hundred dollars *existing*;
- (2) the *a priori* argument which reasons from the fact of the existence of a form in the realm of ideas to an existence corresponding to such ideal form in the realm of reality?

*None whatever*, is our answer. We mean, Kant's connecting

of the *a priori* argument that reality will correspond to certain of our ideas with the ontological truth that *all* things exist (and, hence, that, the adding of the term 'existing' to the phrase 'the idea of a hundred dollars' adds nothing to the phrase's significance) is just a piece of confused thinking on Kant's part, the seat of the confusion being that Kant does not take the trouble to be precise in his statement of the aim of the ontological argument. For this is, not to affirm the Godhead's existence, but its *real* existence, and this on *a priori* grounds. Now, a prime defect of the many defects of the ontological argument in its traditional form is its failure to make use of the proper means for the attaining of its own desired (and quite attainable) end: the means which consist in our power to argue from the fact of the bare existence of a thing *in idea* to a necessarily corresponding existence in the sphere of reality; and the point requiring to be made against Kant here is that, in his criticism of this argument, he does not suggest that it should do so. On the contrary, he draws the false conclusion that what the ontological argument is seeking to do (*i.e.* to argue *a priori* from the idea of an entity to its corresponding reality) cannot be done, using this vaguely apprehended (and very badly stated) truth about another matter altogether (the truth, that is, that even ideal forms of existence exist), in supposed support. Hence our knowledge as to the value to be put upon Kant's famous criticism of this famous argument. However, let us allow Kant to express his case in his own terms:

"If," says Kant,<sup>1</sup> "I take the subject [*God*] and say *God is*, I do not thereby (*i.e.* by saying that *He is*) put a new predicate to the concept of God. Both terms [*i.e.* *God* and *God is*] must contain exactly the same kind of thing, and nothing can have been added to the conception by my thinking its object as simply given, and saying, *it is*. Thus the real does not contain more than the possible." [It should be noted that this term *possible* is one which Kant uses throughout as being identical with the *conceptual*, although the two things are quite differentiable from one another. But to proceed]:—"A hundred real dollars," Kant goes on, "do not contain a penny more than a hundred possible dollars<sup>2</sup>."

<sup>1</sup>Kant, *Critique of Pure Reason*. Bk II. ch. III. sect. IV.

<sup>2</sup>This point, of course, that the *idea* of a thing must tally with its *correspondent form* in the realm of *reality* is a different matter from the argument that nothing is added to the idea of a thing by the assertion that it exists. It is a matter having to do with the reason why *ideas* (simple ideas) are copies of the things they are the ideas of. Accordingly, inasmuch as this matter raises

For, as the latter signify the concept, the former the object, it is clear that, in case the former contained more than the latter, my concept would not express the whole object, and would not therefore be its adequate concept. In my financial position, no doubt, there exists more by one hundred dollars than by their concept only, but the conceived dollars are not in the least increased through *the existence* which is outside my concept. [Thus] by whatever, and by however many, predicates I may think a thing, nothing is really added to it, if I add that the thing exists. Otherwise, it would not be the same that exists, but something more than was contained in the concept and I could not say that the exact object of my concept existed. If, then, I try to conceive a being as the highest reality, the question still remains whether it exists or not<sup>1</sup>. For though, in my concept, there may be wanting nothing of the possible real content of a thing in general, something is wanting in its relation to my whole state of thinking, namely, that the knowledge of that object should be possible *a posteriori* also. And here we perceive the cause of our difficulty. If we were concerned with an object of our senses, I could not mistake the existence of a thing for the mere concept of it; for, by the concept, the object is thought as only in harmony with the general conditions of a possible empirical knowledge. If, however, we are thinking *existence* through the pure category alone, we need not wonder that we cannot find any characteristic to distinguish it from mere possibility. Whatever therefore our concept of an object may contain, we must always step outside it, in order to attribute to it existence. With objects of the senses, this takes place through their connection with any one of my perceptions, according to empirical laws; with objects of pure thought, however, there is no means of knowing their existence, because it would have to be known entirely *a priori*, while our consciousness of every kind of existence, whether immediately by perception, or by conclusions which connect something with perception, belongs entirely to the unity of experience, and any existence outside that field, though it cannot be declared to be absolutely impossible, is a presupposition that cannot be justified by anything.

We thus see to what little use Kant puts his vague realisation of the truth that conceptual being 'is' equally with real being. In the first place, and as if to give the impression that conceptual being somehow 'is not,' he gives it the name of possible being, and this in spite of the fact that all conceptual types of being, as conceptual, are actual, *i.e.* actual as conceptual types. Why

the entire philosophy of the origin of ideas, and also, inasmuch as it does not truly affect the present argument, we do not here deal with it. The entire subject is treated in our volume: *The Constitution of Mind and Knowledge*.

<sup>1</sup>But Kant's argument up to this point has suggested that the mere concept implies existence, with the consequence that to say of a thing (conceptually experienced) that it exists *adds* nothing to it. Kant's statement of what is in his mind is extremely confused.

he does this is clear. Not making the distinction sharp between the two types of being (1) conceptual; (2) real, he slips into the usual non-philosophic way of regarding the real type as 'being as such,' referring to it under the unqualified title of existence: being. By this erroneous mode of expression he leaves himself destitute of any existential category for conceptual being, and, hence, becomes haunted by the idea that the latter is, so to say, a non-being, and it is for the expression of the latter that (inadequately enough, in that possible being is itself a species of being quite distinguishable even from conceptual being in general), he avails himself of the phrase *possible being*. Accordingly, so far as the formal stating of the problem at issue is concerned, it has to be said that Kant wasted his vague intuition of the truth that conceptions have being and that nothing is added to the conception of a thing by the assertion that it exists, for he was not inspired thereby to make the definite formulation that being-as-such is of many kinds, the *real* kind, the *ideal* kind and the *possible* kind being just so many species thereof. Still less was he inspired to point out—definitely denying indeed—the truth that the *apriorism* upon which the advocates of this form of 'proof' base their case is not radically false, but, rather, essentially true, in that certain characteristics (simplicity: homogeneity) in an ideal type of being betray the fact that all members so characterised of this type will have a correspondent form in the category of real things. And (we may here add) not only does Kant thus fail in respect of his criticism of the *a priori* proof of the real existence of God; he fails altogether to realise that there exists an *a posteriori* proof: the kind which, as he asserts, did it exist, would make all the difference to the situation. For Kant did not apprehend that the Godhead was the title of the elements (things-in-themselves), and that the elements are identical with Space and Time. Moreover, had he made this identification of the Godhead with the elements and the elements with Space and Time, he would still have been left powerless to infer, on a *posteriori* grounds, the reality of the Godhead. For Kant belonged to (was indeed one of the founders of) that modern school of thought which denies reality to Space and Time,

having no inkling of the truth that men (in company with all organic forms) possess senses of Space and Time. Thus, for Kant, Space and Time are ' constructions of the apprehending mind ' ; that is, they are something which the latter imposes upon reality (sense-experience) rather than receives *as* sense-experience (forms of reality). Moreover (again), even had Kant been able to surmount all these difficulties, he would still have found himself entangled in that faulty confounding of the Godhead with the ' One Being ' which, in itself, baffles men's powers of comprehension of the Godhead. Whence it is that, if we have to say (as we have) that the traditional ontological argument was a poor argument, we have to say that the Kantian criticism of it was a piece of superlatively poor criticism. Indeed, it may in all justice be said that, in the sphere of theology (high philosophy), Kant was an extremely bewildered thinker. And, this being so, we need not wonder that the Kantian philosophy did not hesitate to undertake the task of demonstrating the impossibility of *any* veritable proof of the (real) existence of the Godhead, proclaiming it an impossibility for man to acquire any direct and intellectually-demonstrable knowledge of the existence of the Godhead. All that the mind of man could hope for (said the Kantian philosophy) was a knowledge of how men's minds come to be haunted by ideas of an entity so remote and so inaccessible to the human reason. But now let us pass to the consideration of another traditional proof, taking leave of the ontological with the remark that, right though this is in form, and right (so to say) by instinct, it is, in the historic forms in which it has come down to us, hopelessly wrong as to procedure. For, while it is permitted to us to argue *a priori* from the bare idea of a thing to its reality, the ontological argument of tradition does not know how to do so. On the contrary, in that it deliberately fixes upon a definition of the Godhead which presents complex elements, it allows itself to run the risks (and is, as a matter of history, patently overtaken by them) of forming a conception which need not necessarily have a real counterpart corresponding to it.

## CHAPTER XIX

### THE COSMOGONICAL PROOF OF THE EXISTENCE OF THE GODHEAD

The proofs previously considered have had to be rejected on account of the inadequacy of the definition they tendered ; rejected, that is, in independence of the argument they offered in proof of the *real* existence of the entity defined. As regards the cosmogonical proof however [with which we identify also that known as the argument from the necessary and the possible (the necessary and the contingent)], we have to acknowledge this fundamental difference, *i.e.* that (in our opinion) the definition here given is (with one reservation), acceptable. And it is so equally whether it defines the Godhead as (1) the first cause(s) ; or (2) the universe's necessarily-existent being(s) ; for both these terms denote the elements which, admitting neither of creation nor decay, constitute nature's eternal foundations. But, in order for these (supra-material) materials to be able, out of their own substance, to produce something so different from themselves as mortal beings, there must be a plurality of them : at least two (but, by the law of parsimony, not more than two). Consequently, and in spite of this definition's essential correctness, exception has to be taken to it to the extent that it defines the Godhead as the first cause of creation instead of its first causes. This objection apart, however, we accept the proof's first part (*i.e.* its *defining* part), and proceed to an examination of its second, where what is attempted is a proof that the first cause(s) of things must have a place in the category of real entities. Now, inasmuch as our own philosophy adopts the cosmogonical definition, the burden of deciding what would be the truly satisfying proof in this regard has to be recognised as our own. We therefore submit the opinion that the one truly satisfying proof of the reality of the world's elements is the experimental. That is, any culture which accepts this definition of the Godhead (as did, for instance, the mythopoeic and Ionian cultures)

must find implicit in its acceptance a command that its sons shall endeavour to get into touch with these elements in the particular way which carries with it supreme conviction, *i.e.* the practical way which enables men to lay hold of the elements as substantial realities. And it was (we believe), inarticulate obedience to this command which caused men of an earlier age than our own to be drawn into those unfruitful ways of experimental science which are known as *magic*. For our suggestion is that magic was nothing other than scientific inquiry of the experimental order which had failed to 'strike oil.' It was experimental science applied (rightly) in the sphere of the first principles, but unsuccessful as yet in striking the required fertile vein: a very common condition indeed in experimental science. Thus, any successful experimental scientist will be ready to confess (cp. Faraday) how many bad shots he made experimentally before he managed to hit the target. Further, this very significant fact needs to be noted, *i.e.* that magic is not so far removed from ultra-modern science as it is customary to think. For instance, the very name *magnetism* derives from the name of a country, Magnesia, which was christened after the Magna Mater (*i.e.* Heaven; the Magnetic Ocean), the modern term having incontestable affiliations with that M-N (and N-M) verbal complex which is one of the titles of the Mighty Mother everywhere. Thus the worshippers of Heaven (*e.g.* the Minyae, the Magnetes, and the like), settling in any land whatsoever, hastened piously to name their places of settlement the land of Heaven's children. Hence such a place-name as this of Magnesia. And the word *magic*, too, itself derives from the same source, the term admitting of being linked up with the name (of the Goddess) Maya which itself is cognate with the word *magna*. The practitioners of magic (*e.g.* the magi) were thus (we contend) abortive experimental scientists seeking to experiment with the potencies of Heaven the Magnetic Ocean: Heaven the Magna Mater, Maia, Maya, Mene, Mona, Mana, Mens. Hence the lodestone's title of the 'love-stone,' the title which it bore among the Chinese at least four to five thousand years ago when magnetism was being used practically (*i.e.* in one form or other of the compass)

as well as in religious rites. Hence too, the philosophic implications behind Thales' explanation of the attractive power of *amber i.e.* that it had soul in it, the Magna Mater being that 'soul of the world' which, identified by Thales with Space or 'celestial water,' was declared by him to fill all things with the divine. Hence, too, the myth of Magnes the shepherd, *i.e.* shepherd of souls : *shepherdless* of souls, as we say : Heaven's innermost core : the ark of God with its soul-cargo : the *logos spermatikos*. Hence, again, the wild stories which obtained currency relating to the powers of the Great Goddess ; for she who (the force which), in the great temples (*e.g.* the temple of Diana at Ephesus and that of Serapis at Alexandria), was seen to be capable of sustaining in the air, 'unsupported,' the images of the gods,<sup>1</sup> could be credited with power to work all manner of 'magical' wonders. Hence the persistency with which tales of magic maintained themselves right down to modern times, *i.e.* to the moment when magic struck oil in response to the superior 'methods of magic' introduced by Gilbert of Colchester.<sup>2</sup>

We contend, then, that, on its serious side, magic has the status of experimental gropings for the fertile experimental

<sup>1</sup>The images were supported by magnetic bodies introduced into the ceilings of these temples.

<sup>2</sup>Gilbert, physician to Queen Elizabeth, in his epoch-marking work *De Magnete magneticisque corporibus* (1600) gives a remarkable picture of men's belief in his own day in the unlimited powers of the omnipresent 'mana' before these powers had begun (largely through Gilbert's own labours) to be more precisely scheduled according to a fruitful experimental method. Thus Gilbert tells that it was believed that : "' If a lod-stone be anointed with garlic, or if a diamond be near, it does not attract iron,' and that ' if pickled in the salt of a sucking fish, there is power to pick up gold which has fallen into the deepest wells.' There were said to be ' various kinds of magnets, some of which attract gold, others silver, brass and lead ; some even which attract flesh, water, fishes,' and stories were told about ' mountains in the north of such great powers of attraction that ships are built with wooden pegs, lest the iron should be drawn from the timber.' Certain occult powers were also attributed to the stone. It was ' of use to thieves by its fume and sheen, being a stone born, as it were, to aid theft,' even opening bars and locks. It was effective as a love potion, and possessed ' the power to reconcile husbands to their wives, and to recall brides to their husbands.' And much more of the same kind, which, as Gilbert says, had come down ' even to [his] own day through the writings of a host of men, who, to fill out their volumes to a proper bulk, write and copy out pages on this, that and the other subject, of which they know almost nothing, for certain, of their own experience.' Gilbert himself absolutely disregarded authority, and accepted nothing at second hand. His title to be honoured as the ' Father of Magnetic Philosophy ' is based even more largely upon the scientific method which he was the first to inculcate and practise than upon the importance of his own discoveries. Careful experiment and observation, not the inner consciousness, are, he insists, the only foundations of true science. Nothing has been set down in his book ' which hath not been explored and many times performed and repeated ' by himself. ' It is very easy for men of acute intellect, apart from experiment and practice, to slip and err.' " (*Encyclopædia Britannica*, 11th edition. Vol. xvii., p. 352. Article : *Magnetism*.)



vein, and, as such, was work along the normal scientific line; while what these magical essays, at their deepest, were directed towards was a proof of the cosmogonic definition of the Godhead. Hence, they are to be conceived as having met their reward (in that the right method of procedure was then alighted on) in the workmanlike move of the chemist Robert Boyle who, as late as the seventeenth century, proposed a temporary (pragmatic) definition of an element as 'that which successfully resists being analysed down into anything simpler.' Thus viewed, physical chemistry is to be regarded as the normal justification of the brave postulate of the trinitarian structure of the universe laid down by early human culture, and of the still braver efforts to vindicate this postulate which equate with the serious side of magic. That is, we submit that the discovery of the sub-atomic structure of matter and the discovery of the dual supra-material energies, magnetism and electricity, form the fully satisfying experimental vindication of the age of magic. Contrariwise, we recognise that, just as far as pre-modern science is removed from the amazing scientific achievements of nineteenth and twentieth century science, so far was the power lacking to supply the ultimate proof of the (real) existence of the Godhead in the thinkers whose proofs we are here about to look into.

We begin our study of these proofs with the observation that, while there was lack of power to present the *experimental* type of proof, there was no veritable lack of power to present two other types, both valid, and both having value. These are, respectively, a certain type of a *posteriori* proof and the *a priori* proof. Both these proofs were (we say) well within the competence of pre-modern theologians, being, indeed, just those proofs which were supplied in chapter vii of this present treatise. Not the means, therefore, but the impulse to apply them, it was which was lacking in the traditional (and, as we contend, defective) form of cosmogonic proof of the reality of the world's first causes.

It was the Aristotelian argument<sup>1</sup> about first principle(s) necessarily having an existence which the scholastic thinkers

<sup>1</sup>This argument was not used by Aristotle himself to this end.

commandeered to serve as the base of their defence of the cosmogonical argument. Thus, that ardent Aristotelian, the eminent twelfth century Jewish philosopher Maimonides, laid hold of Aristotle's argument to this end, while Maimonides' form of proof was adopted almost verbally by St. Thomas Aquinas. Now, Maimonides could not, as required, argue directly that it is not possible that 'something should be made out of nothing,' embarrassed as he was by the biblical dogma subscribed to by Jews and Christians alike that the world itself was created out of nothing. Indeed, this biblical dogma about the creation of the world out of nothing, contradicting as it did the Aristotelian dogma that the world was created out of its elements, formed a tremendous stumbling-block in the way of the very many Aristotelian Jews and Christians of the mediaeval period, its due negotiation exercising their ingenuity to the utmost. Accordingly, in Maimonides' hands, the cosmogonic argument takes the following circuitous form (the form which, as we have said, was adopted later by Aquinas):—

It is a question (argues Maimonides) whether or not the universe possesses radicals or permanent roots: possesses, that is, 'raw materials' out of which nature is compounded and back into which it can be refunded, such radicals being, themselves, unintermittently necessary; that is, eternal; that is, non-born and imperishable. Now Maimonides argues that the possibilities as regards the claim for the existence in the universe of *elements* can be put as follows:—

*Either*, (1) No being is *born*, and no being *perishes*;

*Or*, (2) All beings are *born*, and all beings *perish*;

*Or*, (3) Some beings are *born* (these are also the *perishable* beings), but certain other beings are *not* born; neither do they perish. These are the *Godhead*.

Whereupon, criticising these three possibilities, Maimonides removes the first as patently false, contradicted as it is by the daily witness of our senses. Only two positions therefore remain, and, of these (since they are contraries), one must be true, the other false. As to which is false, this, says Maimonides, is the second, and he sets himself to prove his claim in the

following curious way—curious, that is, in that Maimonides, like Aquinas later, allows himself, as a good Aristotelian but bad Jew (or Christian), to argue on the assumption of the correctness of the dogma of the eternity of the world. (This latter he holds to be a possibility but not an actual fact):—If *all* things (argues Maimonides) are of the kind which are born and perish, perishability is a possibility with all things. But, in the course of the infinite duration of the world, every possibility will already have had sufficient time to realise itself. Hence, everything must once have perished. But, if everything has once perished, nothing could now be; for (says Maimonides) absolute nothingness could give birth to nothing. Hence, nothing ought now to be. But, obviously, something now is. *Ergo*: the proposition: 'All things are born and all things perish' cannot be true. But, if this proposition be not true, its contrary, the remaining one of the three conceivable propositions, *must* be true; that is, the proposition that some things are which are born and which perish, while other things are (or, rather, Maimonides, as a monotheist, says *another thing is*) which are not born; neither do they perish. And these (this) unborn and unperishable being(s) constitute(s) the Godhead.

Now, passing over without cavil the use of the postulate of the existence of the world through an infinite range of Time—a postulate which neither Jew nor Christian was supposed to hold by—we have to say that, while the above argument is ingenious, one does not feel happy about it, and certainly would not rest upon it any argument one cared about. Thus, in the first place, it is the reverse of helpful to speak of the already accomplished realisation in the past of the universe's every possibility; for the human heart sinks dismayed before such a notion of dreadful world-monotony. Hence, although we, like Aristotle and unlike Maimonides and Aquinas, hold by the dogma of the eternity of the world (while yet holding by the dogma of 'a' creation), we cannot countenance the claim that, even in the courses of an eternal Time, *all* the existent possibilities of the universe have been realised. Quite the contrary. Indeed (as we hope later to be able to show with greater explicitness), there is a certain inherent characteristic

of the substance of the Mother-God (Space) which definitely precludes such a notion. But, if this contention be not acceptable, the entire proof collapses. We therefore dismiss the cosmogonical proof as presented after the scholastic manner, and turn to the modern period in hopes of meeting a better account of it.

The cosmogonical proof of the (real) existence of God was as little the essential proof with the middle ages as the ontological. The essential scholastic proof was, as we have said, the Aristotelian. This, however, resting upon the Aristotelo-Ptolemaic astronomy, was too seriously discountenanced by the Copernican revolution to survive into the modern period. Hence the consequence that the modern age, at its opening, was called upon to find, either in the ontological or the cosmogonical proof, a substitute for the Aristotelian. Now, as between the two, Descartes (while trying all) gave preference to the ontological, the outstanding Cartesian definition of the Godhead being that of 'the most perfect being.' One might even surmise that Descartes' lack of an adequate epistemological equipment would necessarily cause the vague, ontological definition to prevail with him by reason of its vagueness (as later with Kant also); for he could handle the implicated argument with less mental uneasiness than one based on a clear-cut definition, such as is, for instance, the cosmogonical. There is, moreover, a further reason why Descartes did not, by preference, handle the cosmogonical proof. For, on the subject of the elements, Descartes had engineered himself into the same predicament as Aristotle (and very many others). Both philosophers had, that is to say, anchored on the truth that the universe possesses elements, and that these are *dual*, but both had committed the error of identifying the Godhead with an entity *other than* these. They had, that is, alike, committed the error of imagining that

<sup>1</sup>We might note, here, that Descartes was very confused in his entire philosophy of the causal aspect. He did not, for instance, understand that the causal aspect is not universally distributed. He did not realise, that is, that the meaning of a first cause is such as to render absurd, in respect of it, the question: *What is its cause?* Hence the explanation why we may hear Descartes (in his *Arguments demonstrating the existence of God . . . drawn up in Geometrical fashion*) laying it down as one of his axioms that "*Nothing exists concerning which the question may not be raised—'what is the cause of its existence?'*" For this question may be asked even concerning God. Not that He requires any cause in order to exist, but because, in the very immensity of His being, lies the cause or reason why He needs no cause in order to exist."

the first cause(s)<sup>1</sup> with which they identified God, was something distinct from the elements. As regards Descartes, this becomes clear in his famous declaration: "Give me matter and motion and I will create the world," a declaration wherein, unwittingly, he is giving utterance to the modest request that he shall be invested with the whole fulness—and competency—of the Godhead. For the Cartesian 'matter' was *Space*. At least, Descartes held that *Space* was to be comprehended under the category of matter, holding (very mistakenly), that there is no radical distinction between *Space* and matter (as the latter term is construed in modern times), the fact that he did so forming the most colossal of the many errors of the Cartesian philosophy. But, matter as identical with *Space* is *Meter*: God the Mother: the World-Mother: *protohyle*: 'first matter': Heaven: the three-dimensional first cause, precisely as *Motion* is *Time*: Father *Time*: God the Father: the World-Father: the World-Christ: the mobile and linear first cause, the two together being the two entities who, out of their own substances, without help from any one of us, can, and do, create the world. And inasmuch as Descartes thus falls into line with Aristotle, we may allow ourselves to class him, in this regard, among the mediaevals. Not, of course, that he carries forward the stock Aristotelian argument. In face of the Copernican reconstruction and reinterpretation of the facts of astronomy he could not possibly do so. But he adopts the Anselmian argument, and (as we have just said) commits himself to that cardinal error of Aristotle which consists in differentiating the first cause(s) from the cosmogonic elements. Hence, the modern temper only specifically declares itself when the bias in favour of the cosmogonical proof declares itself, and this declaration was made by Locke. For Locke made the formal claim that it should not be regarded as anything amiss, from the theological point of view, to disregard or neglect the ontological proof, and adopt another, *to wit*, the cosmogonical. And the same claim was reiterated, with emphasis, a few years later, by Dr. Samuel Clarke, the spokesman of Newton in the Leibnitz controversy, and the monotheistic (!) philosopher of the trinity. Let us, therefore, look into Locke's version of the cosmogonical argument:—

Locke starts off correctly with the advancement of a definition of God :— ‘ *God is* (for Locke makes no attempt to escape the monotheistic deadlock, being, as is ordinarily the case, quite unaware that monotheism constitutes a deadlock, or that it is hostile to trinitarian Christianity) *that which is and has been from all eternity.*’ It is that out of which everything created has *been* created. The Godhead is the increate and indestructible origin of things. But, if anyone chooses not thus to call it : “ *it matters not. The thing is evident.*”

“ There is no truth more evident than that something must be from eternity. I never yet heard of anyone so unreasonable, or that could suppose so manifest a contradiction, as a time wherein there was perfectly nothing, this being of all absurdities the greatest, to imagine that pure nothing, the perfect negation and absence of all beings, should ever produce any real existence.”

Presumably Locke had not heard, for instance, of Basilides the gnostic, and of the type of thought which argues in terms of non-being. Locke now seeks to make two preliminary points against the Cartesian position. We do not (he declares) owe our sense of God (as Descartes had contended) to the fact that we are endowed with an innate idea of God :

“ God has given us no innate ideas of Himself. He has stamped no original characters on our minds wherein we may read his being.”

And then Locke registers his protest against the overweening claims made on behalf of the ontological proof which had been the most favoured proof of Descartes :

“ How far the idea of a most perfect being, which a man may frame in his mind, does or does not prove the existence of a God, I will not here examine. For, in the different make of men’s tempers and application of their thoughts, some arguments prevail more on one, and some on another, for the confirmation of the same truth. But yet, I think this I may say, that it is an ill way of establishing this truth, and silencing atheists, to lay the whole stress of so important a point as this upon that sole foundation, and take some men’s having that idea of God in their minds (for it is evident some men have none, and some worse than none, and the most very different) for the only proof of a Deity ; and, out of an over-fondness for that darling invention, cashier, or at least endeavour to invalidate, all other arguments ; and forbid us to hearken to those proofs, as being weak or fallacious, which our own existence, and the sensible parts of the universe offer so clearly and cogently to our thoughts that I deem it impossible for a considering man to withstand them. For I

judge it as certain and clear a truth as can anywhere be delivered, that 'the invisible things of God are clearly seen from the creation of the world, being understood by the things that are made, even his eternal power and Godhead.' [However] though our own being furnishes us, as I have shown, with as evident and incontestible proof of a Deity (and I believe nobody can avoid the cogency of it, who will but carefully attend to it) as to any other demonstration of so many parts; yet, this being so fundamental a truth, and of that consequence, that all religion and genuine morality depend thereon, I doubt not but I shall be forgiven by my readers if I go over some parts of this argument again, and enlarge a little more upon them."

The section in which Locke treats of the subject runs as follows:—

"Though God<sup>1</sup> has given us no innate ideas of himself, though he has stamped no original characters on our minds wherein we may read his being, yet, having furnished us with those faculties our minds are endowed with, he hath not left himself without witness: since we have sense, perception, and reason, and cannot want a clear proof of him, as long as we carry ourselves about with us. Nor can we justly complain of our ignorance in this great point; since he has so plentifully provided us with the means to discover and know him, so far as is necessary to the end of our being, and the great concernment of our happiness. But, though this be the most obvious truth that reason discovers, and though its evidence be (if I mistake not) equal to mathematical certainty, yet it requires thought and attention; and the mind must apply itself to a regular deduction of it from some part of our intuitive knowledge, or else we shall be as uncertain and ignorant of this as of other propositions which are in themselves capable of clear demonstrations. To show, therefore, that we are capable of *knowing, i.e. being certain* that there is a God, and *how we may come by this certainty*, I think we need go no farther than *ourselves*, and that undoubted knowledge we have of our own existence.

I think it is beyond question, that man has a clear idea of his own being; he knows certainly he exists, and that he is something. He that can doubt whether he be anything or no, I speak not to; no more than I would argue with pure nothing, or endeavour to convince nonentity that it were something. If any one pretends to be so sceptical as to deny his own existence (for really to doubt of it is manifestly impossible), let him, for me, enjoy his beloved happiness of being nothing, until hunger or some other pain convince him of the contrary. This, then, I think I may take for a truth which every one's certain knowledge assures him of beyond the liberty of doubting, *viz.*, that he is *something that actually exists*.

In the next place, man knows by an intuitive certainty, that bare *nothing can no more produce any real being, than it can be equal to two right*

<sup>1</sup>Locke, *Essay on the Human Understanding*, vol. II., pp. 306ff.

*angles.* If a man knows not that nonentity, or the absence of all being, cannot be equal to two right angles, it is impossible he should know any demonstration in Euclid. If, therefore, we know there is some real being, and that nonentity cannot produce any real being, it is an evident demonstration that *from eternity there has been something*; since what was not from eternity had a beginning; and what had a beginning must be produced by something else.

Next, it is evident, that what had its being and beginning from another, must also have all that which it is and belongs to its being from another too. All the powers it has must be owing to and received from the same source. This eternal source, then, of all being must also be the source and original of all power; and so *this eternal Being must be also the most powerful.*

Again, a man finds *in himself* perception and knowledge. We have, then, got one step further, and we are certain now that there is not only some being, but some knowing, intelligent being in the world. There was a time, then, when there was no knowing being, and when knowledge began to be; or, else, there has been *a knowing being from eternity.* If it be said there was a time when no being had any knowledge, when that eternal being was void of all understanding, I reply, that then it was impossible there should ever have been any knowledge, it being as impossible that things wholly void of knowledge, and operating blindly and without any perception should produce a knowing being, as it is impossible that a triangle should make itself three angles bigger than two right ones. For it is as repugnant to the idea of senseless matter, that it should put into itself sense, perception, and knowledge, as it is repugnant to the idea of a triangle, that it should put into itself greater angles than two right ones.

Thus, from the consideration of ourselves, and what we infallibly find in our own constitutions, our reason leads us to the knowledge of this certain and evident truth: *that there is an eternal, most powerful, and most knowing being,* which, whether any one will please to call God, it matters not. The thing is evident, and from this idea only considered will easily be deduced all those other attributes which we ought to ascribe to this eternal Being. If, nevertheless, any one should be found so senselessly arrogant as to suppose men alone knowing and wise, but yet the product of mere ignorance and chance, and that all the rest of the universe acted only by that blind haphazard, I shall leave with him that very rational and emphatical rebuke of Tully (Lib. ii. *De Leg.*), to be considered at his leisure: 'What can be more sillily arrogant and misbecoming than for a man to think that he has a mind and understanding in him, but yet in all the universe beside there is no such thing? Or that those things which, with the utmost stretch of his reason he can scarce comprehend, should be moved and managed without any reason at all?'



From what has been said, it is plain to me we have a more certain knowledge of the existence of a God than of anything our senses have not immediately discovered to us. Nay, I presume I may say that we more certainly know that there is a God than that there is anything else without us. When I say we *know*, I mean there is such a knowledge within our reach which we cannot miss, if we will but apply our minds to that as we do to several other inquiries."

Now the comments called forth by the foregoing are very obvious. In the first place, one has to say the argument is very much after the armchair manner, and would profit by a closer stringing up. In the second place, we point out that, while the definition which Locke virtually gives of the Godhead as the 'original material(s)' of the universe is one which may be demonstrated by either or both of the two types of argument: (1) the *a posteriori*; (2) the *a priori*; and while Locke was in a position to demonstrate both, he *demonstrates* neither. As to the *a posteriori* proof, while this, truly enough, in its *experimental* form, was, in Locke's day, an achievement far beyond the existing capacity of science, there was that second form of the *a posteriori* proof which consists in identifying the Godhead with the elements, the elements with Space and Time, and Space and Time with sense-given data, a form which Locke was in an especially favourable position to make use of in that he, unlike the vast majority of the moderns, held by the opinion that we *have* a sense-experience of Space and Time. But Locke did not present this argument. Again, as to the *a priori* proof (the one based upon the epistemological truth that all ideas which are truly simple in structure can be adjudged to possess real counterparts in advance of any specific proof from sense-experience), this also lay within Locke's competence, in that he was acquainted with the epistemological principle underlying it. Yet he did not make use of it. And, indeed, this argument is not one which can be employed in the easy manner of the fireside philosopher, consisting as it does in a stringent set of propositions for the due stringing together of which a philosopher has, so to say, to take his coat off. That is, the *a priori* brand of proof of the real existence of the Godhead is one which calls for labour. Not, of course, that one would

suggest, in any general way, that Locke shirked labour, especially since he had, as we have said, in the different parts of his philosophy, fashioned almost all the complex epistemological machinery required by this form of proof. All that one would imply is that Locke needlessly failed in respect of this question to make *the assemblage* of the various pieces required, his failure being, as we think, due to the fact that he did not make a frontal attack on the problem of the (real) existence of the Godhead, but tried to take it in his stride in his exposition of a more general argument. Hence that lack of formality and hence of stringency, in respect of which the modern author compares but ill with, for instance, the mediæval thinkers, Maimonides and Aquinas. But had Locke keyed up his energies to the pitch his task required, he would (we think) have realised not only that, in his own distinctive philosophy, he was in possession of two of the most important pieces involved in the cosmogonical proof, but, also, that, in order for creation to have sprung out of elements, the latter must, perforce, be *plural*. However, as he did not, Locke, like the rest, flounders in the mire of the cosmogonico-ontological confusion which is monotheism: cosmogonical monism. Further (and as we pointed out in chapter vi) Locke gratuitously hampered himself with difficulties by his obstinate profession of ignorance as to what constitutes 'substances' (in the sense of substrates: things-in-themselves: first causes). As if these were not, obviously, the entities creation is made out of, *i.e.* the Godhead. Hence the lack of bite in the Lockean argument. Hence, too, the small influence it exerted on subsequent theological theory.

The arguments of Dr. Samuel Clarke (who, a few years later than Locke, put forward an expanded statement of the views advocated by the latter), we will not pause to analyse in detail. What rather we would point out is the fact that Clarke, the aspiring philosopher of the Christian trinity<sup>1</sup> was,

<sup>1</sup>We cannot, of course, here appropriately enter upon a discussion of the trinity, but we can reiterate the truth that this dogma is a staple dogma of theology and can only be adequately considered in relation to theological data fully given. The various forms of trinity (for there are several) are given in the chapter entitled *Triads and Trinities* in our succeeding volume: *The Mystery of Time*. But, no matter what may be the particular form of the trinity one may be considering, the pre-condition of the explanation of it will always be a full acknowledgement of the fact of the duality of the elements of the Godhead: a truth which Clarke very strongly (not to say testily) denied and resisted.

before all things, a monotheist, and, hence, predestined to fail in the attempt to give a solid philosophy of the trinity. And we would also point out that Clarke, as a monotheist, was, like Aristotle, led (in his endeavours to show that there must be some uncaused first cause) into the quagmire of the (false) doctrine of the impossibility of the (transverse) regress to infinity. Thus Clarke asserts that :

“ To suppose an infinite succession of changeable and dependent beings produced one from another in an endless progression without any original cause at all, is only a driving back from one step to another, and (as it were) moving out of sight the question concerning the ground or reason of the existence of things.”

Then in a footnote, he has the following :—

“ This matter has been well illustrated by a late writer : ‘ Suppose a chain hung down out of the Heavens, from an unknown height ; and, though every link of it gravitated towards the earth, and what it hung upon was not visible, yet it did not descend, but kept its situation. And upon this, a question should arise : what supported or kept up this chain ? Would it be a sufficient answer to say, that the first or lowest link hung upon the second, or that next above it ; the second or rather the first and second together, upon the third ; and so on *in infinitum* ? For, what holds up the whole ? A chain of ten links would fall down, unless something able to bear it, hindered. One of twenty, if not stayed by something of a yet greater strength, in proportion to the increase of weight. And, therefore, one of infinite links certainly, if not sustained by something infinitely strong, and able to bear up an infinite weight. And thus it is in a chain of causes and effects tending (or, as it were, gravitating), towards some end. The last, or lowest, depends or (as one may say) is suspended upon, the cause above it. This again, if it be not the first cause, is suspended, as an effect, upon something above it. And if they should be infinite (unless, agreeably to what has been said, there is some cause upon which all hang or depend), they would be but an infinite effect without an efficient. And to assert there is any such thing would be as great an absurdity as to say that a finite or little weight wants something to sustain it, but an infinite one (or the greatest) does not.’ (*Religion of Nature delineated*, p. 67) ‘Tis, in reality, and in point of argument, the very same supposition as it would be to suppose one continued being, of beginningless and endless duration, neither self-evident and necessary in itself, nor having its existence found in any self-evident cause. Which is directly absurd and contradictory.”

But, as we should say, the image of a chain hung out of Heaven, so far from being absurd and contradictory, is the very image under which primordial Christianity rendered the

scheme of things intelligible, for the chain here in question is the Logos, the cyclic law or bed of motion, which, joining its end to its beginning in Alpha and Omega (its 'source'), makes out of that end and beginning the "dim, far-off divine event towards which the whole creation moves," in that, in this unique spot is begotten a *single* and compounded form of nature in which every succeeding cosmos winds up its account. It is the form which pre-Christian Christianity knew, as 'man-made-perfect,' which Hebrew theology knew as the Messiah, and Greek theology as the cosmic entity and personage Aio: Plato's 'god that is to be.' Thus (and as we shall have to argue in detail later), it is not possible to arrive at an end of the series of created forms by tracing one created form back into its antecedent created form; for, *to infinity* (and *viâ* the unique bridge-form of the created Messiah: the 'Man-who-is-to-be'), created forms go back to created forms *to all eternity*. Indeed, it is this very situation which Aristotle (here standing on very firm ground) has in mind and is relying on when he lays down that dogma of the 'eternity of the natural world' which even a Jew like Maimonides and a Christian like St. Thomas Aquinas had to acknowledge and pay heed to, committed though they were to the (equally true) Judæo-Christian dogma<sup>2</sup> of 'a' beginning of the world in Time. Similarly, it is this self-same fact which a modern like John Stuart Mill has in mind when he says:

"The cause of every change is a prior change; and such it cannot but be; for, if there were no new antecedent, there would be no new consequent. If the state of facts which brings the phenomenon into existence had existed always or for an indefinite duration, the effect also would have existed always or been produced an indefinite time ago. It is thus a necessary part of the fact of causation, within the sphere of experience, that the causes as well as the effects had a beginning in time, and were themselves caused. It would seem therefore that our experience, instead of furnishing an argument for a first cause, is repugnant to it, and that the very essence of causation, as it exists within the limits of our knowledge, is incompatible with a first cause."

Incompatible, that is, with a first cause in the sense of an entity which brings *the series* of created (caused) things

<sup>2</sup>The entire conception under which these two (superficially opposed) dogmas of the eternality of the created world and 'a' beginning of the world are reconciled, is elaborated in volume II of this series: *The Mystery of Time*. The reconciliation is genuine.

to an end in Time. But this is not the function of a first cause. On the contrary, the very definition of the divine as eternal and changeless forbids that it should be. For, if the creative Godhead, eternally changeless, has existed from all eternity, its active creative potency must likewise (as Aristotle argued) have existed from all eternity. Hence, items of the created world (as the embodiments of the effects of the eternally-existent and eternally-operative creative potencies), must likewise have existed eternally. Hence the consequence, that the eternal ('horizontal') regress of caused forms, so far from being a contradiction and an absurdity, is an inescapable fact demanding from us amplest recognition. Hence, when an advocate of the cosmogonical proof of the (real) existence of the Godhead offers (as Clarke does) the dogma of the impossibility of the ('horizontal') regress to infinity as the ground of his defence, we may know at once that the meaning and genius of the cosmogonical proof has escaped him. For not thus is this proof proved, in that not this is that which the proof is intended to prove. That is, the first cause(s) do not reside at the upper end of any "chain (of creatures) hung out from the Heavens." Not in this sense are they first causes; rather, they are first causes in the sense that, in every creature which exists here and now or has ever existed anywhere, there exists (mortal though all such creatures be) portions of the substance of the two immortal elements: of the two indestructible, unborn and undying first causes. Hence (we repeat) one cannot recognise as valid Clarke's argument (it was the argument of Aristotle—here in patent contradiction with himself—and of countless others before it was Clarke's) that the ('horizontal': 'transverse') regress to infinity is an impossibility. Rather, we must recognise the validity of the very contrary of this. At the same time, we must argue that theology only begins to be in earnest when it apprehends in what sense (*i.e.* in the sense of *elements*) the Godhead constitutes nature's first causes, and, thereby, negates the possibility of a *vertical* regress to infinity in the way of causes. It is the one true business of the cosmogonical proof of the (real) existence of the Godhead to make fully clear this apprehension.

## CHAPTER XX

### THE COSMOGONICAL PROOF (Continued)

#### I

The outstanding weakness from which, in its traditional form, the cosmogonical proof of the Godhead's reality suffers, results from the fact that this proof's latest advocates never bravely 'followed the argument' and faced the truth that to say the Godhead constitutes the first cause(s) of things is to say that the Godhead consists in the increate and undying elements, and accordingly requires them, in their capacity of theologians, to set out to discover these. In this regard, the courage of the theological thinkers of the Christian era has fallen far short of that of the ancient mythologers who advocated the like position. For, the cosmogonical form of the theistic argument goes back not only to the early Ionians, but to the mythopœic ages prior to the Ionian whose own theology was merely the qualitative version of the personalising, organic construction set by man's instinctive culture upon the scheme of things; and what we propose, here, is to inquire into the question how the mythopœic ages came to conceive the Godhead in this superior, cosmogonic, trinitarian manner:—Our belief is that the mind of primitive man, in labelling a part of the latter's experience by the label 'God,' was not doing what, to itself, seemed subtle, abstruse and difficult, but, rather, what seemed quite ordinary and matter-of-fact and on the same obvious level as the naming of the wind, the rain, the sky, the earth, weapons, stocks, stones, implements and the family cooking-pot (supposing that fire, the means of cooking, was discovered at that remote time). We believe, that is, that a certain objective 'something' appeared to exist in primitive man's sense-experience which appeared to him to be unquestionably 'there.' Hence the reason that, automatically (man being characteristically a name-bestowing organism), a name was given to this 'something.' Hence (again), the present, high, dark and subtle question of the meaning of the name 'God' (the primitive meaning having,

meantime, been lost), did not originally have its present obscure character. For, not only was this name a name given to *sensorily-apprehended* entities, but to entities of a type that the mind of primitive man was very familiar with. These were (we hold) none other than that *sine quâ non* of any and every constructional project, *i.e.* the latter's constitutive materials, which, inasmuch as man was as characteristically a constructor (a maker) as he was a name-giver, must have been amongst his earliest recognised types, while *the idea* of them (the idea of any given thing becoming generable immediately the thing has acquired a name) must have been amongst the most familiar conceptual possessions of early man. These indispensable pre-requisites of any created (constructed) thing were :

- (1) the substance out of which a structure is made ;
- (2) the shaping force or agent which, out of this material, evolves the structure.

Thus, as regards (say) a hut, the necessary pre-requisites are the mud and the builder ; as regards a pot, the clay and the potter ; as regards a more elaborate structure, the wood and the carpenter ; and, as regards a later type of work (say), a piece of embroidery, the canvas with its pattern and the active, pattern-imitating embroidery-thread. Thus, thanks to man's congenital potency as a maker (a manufacturer), it would be impossible for him to regard any entity which appeared to him to be created save in the light of the dual forces which went to make it : the *causal* light, that is, which accounts for a fashioned, created thing in terms of its productive antecedents. And this attitude of mind would hold in respect of the greatest construction of all (*i.e.* creation : nature) equally with smaller constructions ; while, in virtue of nature's unique quality of *size*, its constitutive factors would receive a distinctive name. Hence the emergence of the notion of, and the name of, God. Hence, as we have said, questions which men now regard as having to do with the great and hidden truths of speculative philosophy, primitive man would regard—and tackle—as being of the selfsame matter-of-fact order as the things he dealt with in his mundane affairs. For this reason, it would never occur to him to affirm the formula ' nothing comes from nothing ' in

that the formula's contrary would not occur to him. With automatic ease, therefore, those primitive races of man among whom the idea of the Godhead originated must have arrived at this important notion.<sup>1</sup> Hence the assured position that the term 'God' holds in all languages, an assuredness pointing back to the time when the point of view of speculation was the exact inverse of what it now is. And the fact that primitive culture *had* this point of view is one which becomes more firmly established with each fresh advance of the science of anthropology; so much so that, allowing the mark of the philosophic mind to be breadth of grasp, allowing (that is) the distinguishing quality of the philosophic vision to be *size*, we can say that the primitive age of man was *essentially* the philosophic age, primitive man's science addressing itself—with the intellectual confidence born of racial youth—boldly and pointedly to the elucidation of the subject-matter of theology: the first principles of physics in their entirety. Hence, too, the explanation of the fact that the lore of primitive man is all lore concerning the Gods, early man, by preference and native bent, going to work with the longest of all threads upon the largest of all canvases, and this with an assurance which leads us to say that Man (the species *Homo*) emerged as a philosopher—from which high primitive estate modern man has declined. For, certainly, modern man is not, characteristically, a philosopher. *He* does not, naturally and habitually, think on the large scale. Rather, immersed almost wholly in matters of detail, he has divested himself of this initial human trait of *size of mental vision*. Nor, indeed, need we greatly wonder that this is so. For (not here to put the inquiry on that deeper biological level which has to explain the phenomenon of divine revelation) we can explain this seemingly strange difference by pointing out how the modern, bowed down under his wealth

<sup>1</sup>Hence it is (we believe), no mere accident that ages nearer to the youth of the human world (as, for instance, the early Greek age was) should so unanimously have espoused:

- (1) the dogma of the eternity of the basic matter of the world: its matrix-stuff (the dogma exemplified, for instance in the Thaletian *water*, in the Anaximandean *apeiron*, in the Anaximenean *air*, in the Platonic *chora*; in the Aristotelian *hyle* and *dynamis* and in the Stoic *soma*);
- (2) the complementary dogma of the eternity of motion *i.e.* of an active, form-manifesting, shaping energy, Time, the God Chronos.



of detail, and living under defeating conditions which his very knowledge of detail makes possible for him, no longer finds himself set in a world where the 'big lines' of things are his most familiar sense-experiences. Primitive man, on the contrary, with his poverty of detail—indeed, *because of* his poverty of detail—retained just this advantage. To take one instance only; the man of to-day (and also of a far-reaching yesterday) is an animal who lives in a poky coop of a dwelling whose lowly ceiling abruptly blocks his outward-spreading vision. Primitive man, on the contrary, was a tree-dweller and found his ceiling in "that great dome we call the sky;" that is, in a ceiling bounded by the 'big lines' of things: the biggest of all perceivable lines. And, since primitive man *was* man *i.e.* an animal possessed of that particular poise of bony structure which carries with it that concentrated power of sense-apprehension which confers upon all man's items of feeling the saliency which goes by the name of 'high objectivity,' it follows that any object to which he devoted his attention must have had, for him, this strong emphasis of outline: this high objectivity. Hence, upon that object on which, in his leisure, the eyes of primitive man naturally rested *i.e.* his roof, his ceiling, the neutral canvas of Heaven with its embroideries made in moving threads of light or fire, the whole genius of man was available to spend itself. The result was the emergence of a valuation which, itself, caused man to become a worshipping creature, for (as we pointed out in chapter viii above), worship is a human phenomenon grounded in man's belief that two of the prime data of astronomy have more worth (in that they are eternal) than have the fleeting existences of the cosmos or heavenly content. Thus, looking out into the night-time Heaven, primitive man arrived at the great cosmogonical generalisation which is the root-generalisation of theology and astronomy equally *i.e.* that Night and her fiery Runner are, at once, the universe's permanencies and the world-creators, and, in terms suggested to him by his own typically primitive activities (*e.g.* running, dancing, building, potting, track-making, carpentry), set himself to describe their interrelations. Hence the reason that man's first map was ouranographical rather

than geographical, the many places and events of which later ages have vainly tried to assign the terrestrial location *e.g.* the Flood, the Garden of Eden, the River Sambation, the River Alpha, having their place, not on earth but in Heaven: in the Sky: in Space.

Accordingly, the recognition was characteristic with him that Heaven lies about us and cradles us (and the whole created world) all the time, and not merely (as the poet says) 'in our infancy.' Hence the emergence, in the infancy of the human race, of the dogma of the omnipresence of God, the dogma of the God who, as the magnetic world-matrix, is the world-mother and the world-love at once, from whom nothing can separate us. For what can tear us out of this matrix which is Space? For these reasons, one can say that Heaven was primitive man's native sphere: the sphere in which he was most 'at home' in the sense of being in his most familiar *milieu*. Hence the reason that astronomy was primitive man's native interest, its data reducing (as they do) to:

- (1) a heavenly content picked out in lines of light against the background of Heaven;
- (2) motion (Time) as animating this content;
- (3) the all-embracing Heaven whom, as the primordial Goddess, primitive culture knew under the names of Night and Darkness: the entity who, as matrix, cradles Time and nature alike.

## II

The foregoing claim that the primitive human mind conceived Heaven (Space) and motion (Time) as creation's raw materials is amply supported by the surviving remnants of man's oldest literary productions. For instance, the primitive image of Space as the Dark Principle supports it and is world-wide. As we have seen, the Egyptian Goddess Nun was the *dark* cold 'water,' while this primordial entity was duplicated as Typhon the *Black* Dragon,<sup>1</sup> the Egyptian terms for dragon

<sup>1</sup>The dragon is the devourer with the great jaws, *i.e.* the crocodile, symbol of Night, the great swallower who engulfs the sun, moon and stars. The dragon is *not* a symbol equivalent in meaning with the serpent. Rather, it is the latter's contrary and complement. The serpent is the symbol of Time.

being *nai* and *neka*, cognates of Nu. Hence, too, the Black Isis. In Babylonian mythology, again, Typhon the Dragon appears as Tiamat the Dragon who herself is the equivalent of Ishtar, the Babylonian Isis, while Ishtar is referred to in the Izdubar legends, as: "She who is Darkness; She who is Darkness; the Mother of the Dawn," *i.e.* of the 'sun,' the mobile principle, Time. Hence, she is the Dark Lady, the Lady Nina, she who is, *not* Queen of Heaven, but *Heaven the Queen*, and it was as such that she was regarded as being essentially Eternity, and contrasted (wrongly, of course) against Time, the dawn, the day, the 'sun.' Hence the reason that the Nu, Nun, Nina, Nana root re-appears all the world over as the type-name for night (also for nurse and death), the Sanskrit *nakta* re-appearing, for instance, as the Greek *nyx*, the Latin *nox*, the German *nacht*, the Anglo-Saxon *nihht* or *neaht*, the Russian *nocyi* and the Irish *nochd*. The same word presents itself also as the Hindu Dragon-Goddess Naga, a fact which reminds us of the assertion which appears in the Vedic creation-hymn *i.e.* that what was 'in the beginning' was Darkness.

"The non-existent was not and the existent was not at that time . . . Darkness there was, hidden in Darkness."

Very naturally, therefore, the Dark Principle re-appears in the Persian systems which branched from the Hindu. The Black One here is Angra Mainya (*i.e.* Ahriman), Dark One and Evil One combined under a form which reveals kinship not only with the N-M (also M-N) forms already mentioned, but with that *Yang* principle which is the Chinese Principle of the Dark (the latter, like the Egyptian Nun, also the principle of the Wet and the Cold). Similarly, in the Maori legends, what existed 'in the beginning' was Darkness; the men of old, so the legends say, being "ever thinking of what might be the difference between Darkness and Light."

The notion of Night the all-mother appears also in Greek culture, the Greek 'Dark Lady' being the dark-robed Demeter and (even) the black Aphrodite, the two corresponding very exactly to the dark Ishtar and the black Isis. Hence the explanation of the presence of Night the Dark Principle in, for instance, a well-known passage in Aristophanes' *Birds* :

" In<sup>1</sup> the beginning of things, black-winged Night  
 Into the bosom of Erebus dark and deep  
 Laid a wind-born egg, and, as the seasons rolled,  
 Forth sprang Love, gleaming with wings of gold . . .  
 And Love in Tartaros laid him to sleep ;  
 And we, his children, nestled, fluttering there,  
 Till he led us forth to the light of the upper air."

And the Dark Principle, Night, is recognised equally by Homer and Hesiod ; for, if Hesiod does not place Night by express name among his first principles, he gives her equivalent, *i.e.* gloomy Tartaros, as one of three (the three entities constitutive of triadic Space, as we should say), *i.e.* Chaos, Gaia and Tartaros.

" First Chaos came to be, and Gaia next . . . and murky Tartaros, deep in the hollow of wide Earth. And next Eros."

As to Homer, we have the witness of Damascius the neo-Platonist commentator of the sixth century who, in his work *Concerning the First Principles*, says :

" But the cosmogony which is delivered by the Peripatetic Eudemus as being the theology of Orpheus, passes over the whole Intelligible Order [Logos] in silence, as altogether ineffable and unknown and incapable of discussion or explanation. He begins from *Night*, which Homer also constitutes his first principle . . . Therefore, we must not put confidence in the assertion of Eudemus, that Homer makes it commence from Oceanus<sup>2</sup> and Tethys ; for it is manifest that he regards Night as the greatest divinity, as is implied in the following line, where he says that She is revered by Jove himself :

' He feared lest he should excite the displeasure of swift Night.'  
 Homer, therefore, must be supposed to commence from *Night*."

Damascius informs us, too, that Acusilaus—an author so ancient that his work has almost receded out of the light of history—also regarded *Night* as the (supreme) first principle :

" But Acusilaus appears to me to regard Chaos as the First Principle and altogether unknown, and, after this one, to place the duad, Erebus as the male, and *Night* as the female, the latter being substituted for infinity and the former for bound."

Damascius likewise includes the Persians among those who held Night or Darkness to be a first principle :

<sup>1</sup>Aristophanes' *Birds*. 692.

<sup>2</sup>We might point out that there is no discrepancy in saying, on the one hand, that Homer takes Night for his supreme first principle, and, on the other hand, Ocean (Oceana). For, precisely as Nun is, at once, Darkness and the Celestial Water, so is Oceana Night.

" But, of the Magi and all the Arian race, according to the relation of Eudemus, some denominate the Intelligible Universe . . . *Place*, while others call it *Time* (Chronus), from whom separately proceed a Good Divinity and an Evil Daemon; or, as some assert, prior to these, Light and Darkness. Both the one, therefore, and the other, after an undivided nature, hold the twofold co-ordination of the superior natures as separated and distinct; over one of these they place Cromasdes as the ruler, over the other *Arimanius* " ;

Concerning the Egyptians, Damascius writes :

" Of the Egyptian doctrines, Eudemus gives us no accurate information. But the Egyptian philosophers who are resident among us have explained their occult truth, having obtained it from certain Egyptian discourses. According to them, then, it appears to be this. The One Principle of the Universe is celebrated as *Unknown Darkness*, and this three times pronounced as such."

In this connection the identification of Heaven the matrix-God with the cosmic ' mud ' is very pertinent. Thus we can point out (without going into the matter in any detail) that that coalescence of the two attributes : the Dark and the Wet : which is so prominent in the Egyptian Goddess Nun and the Chinese Goddess Yang has merely to give place to a coalescence of the two attributes of the Wet and the Substantial in order to give the notion of the matritial heaven as the divine mud (a word which indeed is, ultimately, of the same stock as the words *meter*, *mater*, *mutter*, *mother*, *materia*, *matter*, and appears as a proper name of the Mighty Mother in the Phœnician Mut and the Egyptian Māāt). Thus it is the primordial mud (first matter) which is referred to in Genesis v. under the terms *tōhu* and *bōhu* and which equate with that term *tēhōm* which our English version renders as ' the deep,' and which is the equivalent of the Babylonian *tiamtu* (ocean) which, again, is the same word as Tiamat the Babylonian Black-Dragon-Goddess who herself is one, at once, with the Phœnician Baau, the Yawning Gap, the Egyptian Typhon and Nun, and the Homeric Ocean and Night. Without a doubt, too, it is the entity Demeter, who, identified as she ordinarily is with the Earth-Goddess, is the Earth-Goddess only in the sense that matter is first matter, *meter*, the primordial matrix, a divinity in the sole acceptable sense of an existence who is primordial, uncompounded and eternal. Hence, too, the ' non-earthiness ' of the

earth-Goddess Gaia or Ge, the latter being, like Demeter and the Orphic cosmogonic earth-entity Chthonie, not earth but *Heaven*.

A like train of argument explains the presence in primitive human culture of the world-Mother as *the wood*. "What was the wood . . . from which they fashioned heaven and earth?" asks one of the hymns of the Rig-Veda (x. 81), a Vedic use which reminds us of the likeness between the Vedic divine substance *Soma* and the quasi-material *soma* which forms the primordial matter of the Stoic philosophers. But, indeed, the image of the mother-element as the *wood* is world-wide, and, as such, requires a more adequate treatment than we can here give to it. We can, however, point out that it is this image of Heaven which explains the existence of God the Father (the world-Christ) as the familiar *carpenter-God*. Thus, the elemental 'wood' which is the supra-material matrix has to ally herself with the cosmic carpenter (the latter only later known as the cosmic *father*) before the compounded entities which, in their sum, constitute the world of nature, can be brought into being. Accordingly, this second elemental entity (Time : Father-Time : the Christ) appears in the Vedas by the express name of Tvashtar the Carpenter, while the latter has his recognisable counterpart in the Egyptian artisan-God Ptah, in the Greek smith-God Hephaestus, and in the Latin smith-God Vulcan. In the Platonic *demiourgos*, too, we have introduced to us, by express name, the active God, the mobile element who is the eternal artisan, the cosmic worker-God or labourer. Indeed, under whatever name we are introduced to the active principle, let it be Hercules, Perseus, Theseus, Jason, Jesus, or any other, He is always to be recognised for *what* He is (*i.e.* the male God, God the manifesting-principle, God the Father) by the fact that he *is* the labourer, the story of the cosmic hero's labours (whether these be asserted to be at a carpenter's bench or elsewhere), always making a characteristic part of his life-story. Thus, even before the biological notion of fatherhood dawned, the notion of the mobile, shaping (or manifesting) element as 'the labourer' was present in human culture; with the consequence that, when a knowledge of the procreative facts of

organic life was arrived at, such knowledge did not succeed in abrogating the ancient practice of calling the manifesting cosmic principle the labourer. Rather, the newer practice of calling it 'God the Father' had to carry the older one according to which the second element was the labourer, the carpenter, the weaver, the builder, the smith, the demiurge in general.

These, then, are the preliminary kinds of consideration we offer to explain why there need by no mystery in respect of the question how primitive man automatically became a theologian and philosopher. And not only a theologian, indeed, but the theologian *par excellence*. In essence, they reduce to the contention that primitive man had a cultural advantage in consequence of the fact that it was the big lines of the scheme of things which were the first to impress themselves strongly upon the human senses: a fact which puts us in mind of, and, as it seems, endorses, that familiar method of pedagogy according to which the mind of the learner is required to be introduced first to a subject's big lines, its details being reserved until the assimilating mind has got its grip upon the main features. But, it is a knowledge of the 'big lines' of the universe which constitutes high science: philosophy: theology: the more extended the sweep of these lines the profounder the philosophy. Hence the otherwise amazing profundity of primitive divine lore. For early man, set free from all the profitless labour of guessing whether the Godhead has any real existence (knowing as he did 'who and what' its members were and the part they played in the scheme of the universe), was free to spend himself on the work of elaborating his initial theological knowledge about a cosmogonic trinity into that profounder trinitarian philosophy of the universe which constitutes our amazingly elaborated Christian theology, all packed as this is with its extraordinary and arbitrary-seeming dogmas. For, equipped with right knowledge on the *basic* matters of theology, men were able to make full use of what is known as the 'argument from design': an argument which (as we think) the moderns are familiar with only nominally. With this design argument we proceed to deal in our following and closing chapter.

## CHAPTER XXI

### THE 'DESIGN' ARGUMENT

With the three foregoing proofs of the Godhead's real existence another argument is commonly associated—the familiar 'design' argument—which is of so different a structure, however, that it has seemed advisable we should deal with it as a proof apart. The point in which, chiefly, this proof differs from those previously considered is that it does not consist in a formally-stated argument but in a mere suggestion which seeks its supports in a reasoning from analogy. In its most interesting form, it is commonly known as the 'Platonic' argument. And very correctly, indeed, for no other thinker has invested the design argument with the fulness of suggestion of Plato. Yet, even so, Plato's own argument was so vaguely stated that it has given rise to two of the outstanding problems of post-Platonic philosophy :

- (1) the problem of the meaning of the Platonic theory of matter ;
- (2) the problem of what is behind the Platonic ideas *ante rem* : the problem, that is, which served to split mediæval scholasticism into the two great philosophic parties of nominalists and realists.

We bring, then, our historical survey to a close in an examination of this fateful argument :—First, let us point out that the design argument is not so much an argument about the existence of God as about the *character* (characterisation) of the Mother-God. As we might put the matter, it is an argument grounded in a belief in the non-Euclidean character of Space ; for it is an argument relating to that outstanding theological conception, the Logos or Cross, which is the inner determinant of gravitation. Hence the reason that the argument becomes a question concerning the nature and constitution of matter. For the theory of the Logos is that of the *logos spermatikos*, and is, therefore, at once a theory about an underlying, supernatural world-design or inner determinant of gravitation (hence of the mainline of evolution), and a theory



of the genesis of the material units which are called into being in the wake of the Time-stream as it plies its course along this mainline. Essentially, therefore, the design argument is a theory of the constitution of matter, and on this account there is nothing forced but quite the contrary, in combining (as we here propose doing) the theological study of the *logos* or world-design with a study of the *origin of matter* as taught by Plato, all religion reducing, in the last resort, to a view concerning the genesis and constitution of matter (the latter comprehending, of course, the items of the created world in their entirety). That is to say, all religion is, radically, the contention that *matter* is not an ultimate form of being in that it does not constitute the elements: the latter consisting, rather, in supra-material entities who are the supernatural substrates, *noumena* and *numina*. Hence the reason that the rudiments of all religion equate with the belief in the cosmogonic trinity. Hence, too, the correctness of the contention made above (chapter xi) that every scientist who deals with the question of the structure of matter (also of radiations) is operating, whether he knows it or not, in the sphere of the religious: the theological. Hence (again), the naturalness of the fact that that view of the origin of matter which is known as the Platonic<sup>1</sup> is to be comprehended only in the light of the theological doctrine of the Logos; for what are familiarly known as the Platonic ideas are (we hold) nothing other than the supernatural prototypes of material things which, as the *logoi spermatikoi*, have their place in the Logos.

Our interpretation of the Platonic teaching relative to the origin of matter we will begin by shewing how that feature of it which seems the most obviously self-contradictory can be regarded as having achieved (in Plato's own mind, at least) complete coherence:—According to Plato (and also according to Aristotle and the pre-Platonists and primitives), the orb of Heaven houses (as being the cosmic cavity) the cosmos, this orb itself being bounded by and sealed by an outermost spherical frame which we can call the firmament. And this

<sup>1</sup>What we here call the Platonic view is the view put forward by Plato stated in terms of our own interpretation of this. Our interpretation has the merit that, whereas other interpretations leave the view unintelligible, our reading leaves it intelligible.

firmament serves to divide the Space under the firmament from the Space beyond it<sup>1</sup> as by a world-wall which itself is finitely-situated (*i.e.* calculating from the centre-point of the universe, the *earth*). Now, according to Plato, it is in the *outermost* of these two spatial regions (that is, it is in the spatial infinite situate beyond the firmament) that the prototypal, supernatural forms of nature dwell. Accordingly, Plato's perfect world-model exists in a spatial region which (by virtue of its very situation) would appear to be necessarily unknowable and unapproachable. Moreover, inasmuch as *no* matter can exist in Hyperourania (the latter being Time-free; motion-free; whereas motion is an indispensable constituent of matter), a difficulty emerges which, at first sight, seems calculated to overwhelm the Platonic theory of matter. However, long prior to Plato's time, a solution of this particular difficulty existed with which Plato himself seems to have been familiar; otherwise, he would have to be deemed guilty of advancing a theory of matter unashamedly incoherent and self-contradictory; and it is (we consider) largely due to the neglect of this solution that the Platonic theory of matter has become an acknowledged enigma. For this solution tells how the prototypal world-model which Plato declares to exist in remote Hyperourania comes into contact with the cosmos (nature) embedded in motion-harbours, Time-harbours Ourania. The solution consists in a certain religious dogma which many persons in Plato's time must have been familiar with as a consequence of their initiation into the deeper secrets of the mystery-religions, the dogma itself being the inner meaning (the *hieros logos*) attached to certain of the sacred objects (symbols) employed in the mystery-services. These objects were (1) the ball (crystal); (2) the mirror; while the piece of 'wisdom' (*hieros logos*) which formed the significance of these can be stated in the following terms:—The unknown, hyper-cosmic, transcendental, infinite, unfathomable Hyperourania (the gnostic Bythos; the Kabbalistic Ancient of Ancients: Ancient of Days) constituting the Space beyond the heavens ('beyond

<sup>1</sup>It is very probable that it was this distinction which gave rise to the Greek notion of the two Aphrodites, *i.e.* Aphrodite Urania and Aphrodite Pandemos. We, however, distinguish the two regions as Urania and Hyperourania respectively.

the bourne of Space and Time ') lies far away from all human ken. However, inasmuch as, for primitive man, the whole expanse of Heaven (Space) was a substance, and a substance to which, among many other names, he gave the name of water ('celestial water'; cp. Thales), it came about that early man conceived the sphere of the ouranian Heaven (the World-Egg; the Middle Space; Matter; Earth; Wood; Darkness; Night; Air; Love) as a globe of black water. And (so he argued), precisely as ordinary water has the power to act as a mirror, so has this celestial water. Accordingly, as this heavenly globe or watery sphere, this finite world-egg of which the firmament is the translucent shell, abuts on the divine substance Hyperourania (wherein the divine world-archetypes are), it forms a crystal orb to Hyperourania's hand, and, as such, is the latter's mirror; her looking-glass. Hence, Hyperourania needs only to exist (as she does) in immediate proximity to Ourania (the Platonic *chora* or *protohyle*), in order automatically to have her image cast within this orb<sup>1</sup>. Now, this reflected image it was which was conceived as giving to ouranian Space her character; and this character was the Logos (law of motion), eternally existing within Ourania and filled with the supernatural world-seeds (*logoi spermatikoi*: world-individuals: world-souls), its mainline having the shape of a cross. Hence the origin of that particular early form of the Cross which is known as the mirror of Venus, ♀. Thus, eternally, Hyperourania exists in immediate proximity to the Heavenly Orb; and eternally therefore (this orb being a mirror) she projects into, and sustains within, the orb an image of herself as concentrated into her essence which equates with the supramundane archetypal forms or world-model. That is, the *Logos*, the law of motion, the 'inner seat of gravitation' whose mainline forms a cross, was held to be the mirrored image or reflection of *the very essence* of the transcendental, hypercosmic part of God the Mother, while it was this reflected image of the transcendental divine essence which constituted what Plato called *nous* and *sophia* and *Lachesis*, but which primitive theology knew as the 'Daughter of God'; also as the will, the wisdom, the mind, the character

<sup>1</sup>Hence the origin of crystal-gazing.

and the lung of God, an entity whose brother and twin (the breath of the universe which traverses this world-lung or Logos) is the world-Father and world-Christ. Hence (as we have already indicated), the deep ritualistic significance of the crystal orb, symbolic as this was of Ourania, the looking-glass of the universe, the middle term between the transcendental Hyperourania and the Logos with her *logoi spermatikoi* which are the irreducible world-souls. Hence, too, the reason that the Platonic ideas could be regarded as being, at once, *within* the orb of Heaven and *out* of it, for upon these primitive imagistic notions the religious genius of Plato eagerly fastened, at once feeding on them and helping mightily to re-vitalise and perpetuate them. Thus, in the *Timæus*, Plato not only teaches the doctrine of Space (the *chora* : place : the orb of Heaven) as the substantial matrix and mother-constituent of created things, but he puts forward this very doctrine of the *soul of the world* (ouranian Space) as spanned by a figure which he likens to the Greek letter *chi*,  $\chi$ , hence, to the Cross; and tells of certain multitudinous and minute geometrical figures which, considering their setting, can only be interpreted as representing the world-seeds (the *logoi spermatikoi*) surrounded by inherent lines of yielding which lead on the Time-threads to the fulfilment of their function as seed-incarnators, the postulated difference in the sizes and shapes of these spatial figures representing Plato's attempt to take into his world-account the qualitative differences which exist between all incarnated world-individuals. Thus (as we should argue) what is enclosed by the geometrical spatial 'grainings' of that part of the orb of heaven which constitutes the Logos or *Chi* is the supernatural individualities (souls: protons) of things; while the grainings themselves represent the minor lines of yielding within the great major lines; which is to say, within the great spatial sluice constitutive of the Logos proper, the two together (major and minor) serving to account for the fact that a *plenum* will give, and, so, make possible the invasions of itself by the Time-stream. Indeed, these lines of yielding (major and minor) apart, no 'sufficient reason' (to use Leibnitz' term) would exist why the course of evolutionary manifestation should take one form rather than

another ; or, indeed, why *way should be made at all* for the passage of the Time-stream, and, so, for the effecting of the career of evolution under any shape whatever. But, as we know, the substance of the orb of Heaven, *plenum* though it is, *does* give, and, giving, allows Time to flow ; while Time, flowing, ushers 'souls' into materialised being, *i.e.* incarnates them as the compounded entities of nature, thereby causing the Orb, now grown big with her maturing offspring, to swell into the territory of the Space which is infinite, *i.e.* Hyperourania. Such (we contend) is the veritable Platonic world-picture or cosmogony, and it is, we submit, an entirely coherent picture which has been persistently libelled as incoherent only because it has not been comprehended. But it is (one must add) an exceedingly *ancient* world-picture, certainly not invented by Plato but merely fascinatingly presented—and so perpetuated—by him. And here let us point out that the Platonic theory of matter is a theory totally unlike that of the modern philosopher Descartes with which, however, it has grown very customary to identify it, and, consequently, to rate as being as incoherent as the Cartesian. To shew how unjustly the distinctions are over-looked which distinguish these two famous cosmogonic systems, let us quote Duhem<sup>1</sup> :

“ Against Leucippus and Democritus we have heard Plato declare that there is no void, that all movement is produced in an absolute *plenum* and takes a vortex-form. He has explained himself, in this regard, with a clearness which Descartes himself does not surpass. Did Plato believe that these figures could adjoin one another so as to form continuous masses without any empty interval between them ? Assuredly he was too much of a geometer to harbour any such opinion. What then have we to conclude ? The answer is that the various parts of the Platonic doctrine present irreducible contradictions in respect of one another. If one feels astonished and scandalised, one should compare the incoherence of Plato with that of Descartes. For Descartes also contends that no void exists. He also admits elementary material bodies, each of which is formed of minute bodies of definite shape ; yet, has he ever asked how the rigid spirals of his subtle matter could fill up, without leaving empty spaces in between the interstices of the spheres which constitute gross matter ? It seems indeed that Plato (and this is another of the analogies which exist between his thought and that of Descartes) has put into these geometrical figures of which the elements are composed no real and

<sup>1</sup>Duhem. *Système du Monde*. vol. i, p. 40.

permanent principle other than that of the extension (*chora*) which they occupy. That is why Aristotle makes the very just comment (*Physics* iv. 2.) that Plato, in his *Timæus*, identifies the space (*chora*) occupied by a body with the principle which subsists in all the changes of that body ; which is to say, with that principle which Aristotle calls *hyle* and his Latin commentators *materia prima*. Plato, then, in the *Timæus*, says that space and matter are one and the same thing, and to this identification of space with the principle of permanence which is matter Aristotle, very rightly, will [continues Duhem] offer opposition. 'Matter (he will say) is not separable from real things : place on the contrary can be separated from it. That is why indeed local movement is possible'."

But the *hyle* with which Plato identifies the *chora* (Space) is not the ordinary *compound* matter, but is *meter*, *mater*, Heaven, *materia prima* : *protohyle* : the *noumenon* or substrate underlying all compound matter, and it is only after the Platonic geometrical figures (which are the native spatial veins of yielding which lie about the spatial seeds or ultimate world-individuals) have been embroidered by the mobile principle that matter proper (matter in the *Cartesian* sense) is formed, and a modicum of *protohyle* (radical substance) is converted (compounded) into a particle of ordinary matter, *i.e.* the material atom. But totally different from this is the Cartesian notion of matter. For Descartes regards ordinary matter itself as the elemental stuff, the particles of which, therefore, need no origination by way of an embroidering-about by the stuff of the Time-stream. That is to say, Descartes most strenuously contended<sup>1</sup> that there is no Space as distinct from matter, little aware (one hopes) that, by such an argument, he was militating against the religious outlook in its entirety. Small wonder therefore that Cartesianism drew the opposition of the Platonists even in its author's own lifetime, finding an implacable opponent in the great Cambridge Platonist Henry More<sup>2</sup> : a fact very clearly indicated in the correspondence which went on between Descartes and More.

We ought not, perhaps, to leave the subject of the Platonic

<sup>1</sup>This is made clear in the *Symposium* attached as one of the appendices to this volume.

<sup>2</sup>Unfortunately, More did not put forward the complete Platonic dualism which we have indicated in our reading of the Platonic theory of matter. That is, More was what Plato was only nominally, *i.e.* a monotheist. He was not, however, an atheist like Descartes (actually, of course, not by express profession). That is to say, More did not identify matter with extension but pegged out a claim for a place in the universe for one God at least, *i.e.* Space.

theory of matter without showing how our interpretation bears upon the Platonic notion of the 'idea *ante rem*' which split the mediaeval philosophic world into two<sup>1</sup> fiercely opposed parties. For, as will be seen, our interpretation confers full scientific status upon Platonic realism as based on the notion of 'ideas *ante rem*.' For the idea which (as Plato held) existed *ante rem* (and which Aristotle taught existed only *in re*) was not an idea at all in our modern sense of the term. Rather, it was the spatial atomic nucleus (this, the supernatural 'form' of the material atom); hence, a specimen of the *logoi spermatikoi*: of the *souls* of material entities which only becomes the latter in consequence of being 'worked round' by the 'Time-thread' *i.e.* the sub-atomic electron. Thus the scholastics who opposed this great Platonic notion did so under the very mistaken view that the idea under consideration was an idea in the ordinary sense, *i.e.* a mental replica of a sense-experienced thing, quite in ignorance of the high cosmogonic (*scientific*) significance of the Platonic *idea*. This, however, is a subject which requires more detailed treatment than we can here give to it and we postpone its fuller consideration to that later volume iv where we treat of the constitution of mind and knowledge.

## II

Before leaving the subject of the 'design' argument, we will add a few additional details concerning the notion<sup>2</sup> of the Logos (the central design of which has the shape of a cross) which was primitively conceived of as the world-engine which steers and gives form to the evolutionary process:—In the first place, let us re-affirm a point already touched upon (chapter iv), *i.e.* that this doctrine, in virtue of its teaching that motion has an underlying law or bed, and that this latter is the universal seedbed containing the indestructible 'forms' of things, stands in opposition to the doctrine of *natural selection*. That is, the Logos-doctrine teaches that evolutionary development is

<sup>1</sup>The *pros* and *contras* in respect of Platonic realism divided the mediaeval scholars into four camps in that the realist divided into Platonic and Aristotelian realists, while the nominalists shaded off into conceptualists and nominalists proper.

<sup>2</sup>We devote a volume in its entirety, *The Immemorial Cross*, to the consideration of the evidence bearing on this subject which (happily) exists in lavish profession.

supernaturally guided, the lines of growth of the organism 'nature' being divinely predetermined by the spatial channels (the *world-design*) which constitute, at once, the everlasting bed of the incarnating agent, Time, and the character of Heaven. Hence the need to emphasise again and yet again the fact that the law (the *seminal* law) is a quite different entity from the mobile-stream which makes its world-creative way through it. But this is the same as saying that the Logos is not to be identified with the Christ. For the Logos is *the Law*. It is the Cross, not the Christ. It is the *Kore*, not the *Kouros*: not the *Kyrios* (*Kyrios Christos*). It is *Charis*, not *Christos*. Hence our knowledge that, with two of the best-known Logos-teachers (*i.e.* Philo of Alexandria and the author of the gospel of St. John) a most serious mal-comprehension of this notion obtained which reduces to a disregarding of one or other of the two World-Soters: a disregarding of the Christ-entity on the part of Philo and a disregarding of the Logos-entity (in that the Christ was identified with the Logos) on the part of the author of the fourth gospel. Hence, too, our knowledge of the perverseness of the Pauline opposition to the (Jewish) *law*, in that the Logos is the Cross, while the Cross is (the mainline of) the *law*. Accordingly, these thinkers were (precisely like our own modern 'Space-Time' philosophers, or like cosmogonist monists all down the ages), trying to envisage the cosmogonic situation with one cosmogonic entity absent. It is true, of course, that Christianity nominally separates the two entities of the Cross and her Christ, but, inasmuch as the Cross here ceased to be a 'Person,' the net benefit accruing from the distinction is *nil*. Hence, too, the light which is thrown by St. Paul's significant utterance upon the opposition which early Christianity encountered:

"We preach Christ crucified—unto the Jews a stumbling-block and unto the Greeks foolishness."

For, as regards the Jews, Christ the world-Father, as symbolised in the paschal lamb, was, every Easter, by the Jews themselves, ritualistically, ceremonially, crucified in commemoration of the fact that the world-Father must 'die' (*i.e.* go down into the depths: into Hades: into Tartaros:




withdraw wholly unto Alpha and Omega) in order that he may guarantee the resurrection (the incarnation) of all 'body' in a New World which is to be in this Old World's stead. And similarly as regards the Greeks, the entire gist of the teaching of the Greek mystery-cults was that the Cross (Kore: Persephone: Dike: Eurydike) and the Christ (Dionysos: Triptolemos: Orpheus) must both go down into the depths (descend into 'hell': 'die'), the mystery-dramas presenting a symbolic enactment of the sufferings which the two saviour-gods undergo in the fulfilment of their saving, healing, sacrificial cosmic function. Hence, if the teaching of 'Christ crucified' was to the Greeks foolishness, and to the Jews a stumbling-block, this could only be on account of some lack in the Pauline understanding and presentation of what was, in truth, an age-old and a world-wide gospel. Nor does the Pauline image (appearing in Philo as well as in Paul) of the 'two Adams' help the situation. For (as is evident) the two Adams are respectively the Logos clothed (clothed with the Christ-substance, that is) and the Logos unclothed. They are, that is to say, the *logos endiathetos* and the *logos prophorikos* respectively. They are the cosmos as pre-existent in its supernatural prototypal form (the Platonic *kosmos noetos*), and the materialised cosmos or world of creation which is built up by the Christ as on a scaffolding on its supernatural prototype. Thus (it is to be observed), the Christ is *neither* of the two Adams; for, in addition to the two Adams (the two states of being of the Logos), the Christ-entity also has a place in the world-scheme; or, rather (we ought to say), if the second Adam (the *logos prophorikos*) is to obtain a place in the world-scheme at all, the Christ must link himself up with the First Adam, *i.e.* with the pure Logos: the *logos endiathetos*; for it is only as a consequence of the manifesting action of the Christ that the first Adam (the pure cosmic law) evolves into the second Adam (*i.e.* into creation: *mundus*). Hence the truth of that Pauline piece of imagery which says that we have to 'put on' Christ as if he were a garment: the seamless garment of the continuous and eternal Time-stream whose cyclic journeyings round the eternal law heal the ravages of death in terms of the resurrection: the

re-incarnation. As to why, in the Pauline teaching, the first Adam (*i.e.* the Law, the Cross, the Logos proper) is called carnal and viewed disparagingly, this (we consider) is because what is here being taken account of is the erring, straying logos-content, those more powerful but erring *logoi* of human rank (the erring 'rulers of this world' constitutive of mankind, and, more especially, of the more gifted members of mankind), who, failing to understand the purpose of their power (and their freedom as to its use), use these great powers they needs must have (as *logoi* of high human rank), not to respond to the subtle commands emanating (as the voice of the moral sense: conscience) from the now over-arching (rather than underlying) arms of the law to the effect that they shall follow righteousness (the law), love mercy and walk humbly in the spirit of the sermon (word) on the mount, but to lord it over their fellow-members in creation, to strut and swagger and boast, to snatch at what they call pleasure, unminding of the rueful smile with which their self-inflation is regarded by the eternal 'geometer': the divine chess-player: that Absolute whose hand must check each move they make adverse to the ultimate destiny of creation-in-its-entirety: this latter, the dim, far-off, divine event which is the advent of 'man-made-perfect,' *i.e.* the Messiah, the Platonic 'God' Aio.

In this connection some explanation should, perhaps, be given why the Logos has the title of the divine 'Word'; although, indeed, this explanation becomes self-evident when the fact is recalled that the world-Father (the Christ) was formerly regarded as the 'breath of the universe.' For, if we ally breath with a mouth (or, rather, with the whole area from lung to lips) we have (on the human level) the entire apparatus of speech. Hence, by analogy, the Logos was regarded as the divine 'mouth' (the *oracle* of God) complementary to the divine 'breath'; while the result of the combined action of the two was the world of creation: the divine word *uttered*: the *logos prophorikos*. Hence the clear-cut distinction made between the two types of the divine word [*i.e.* the *logos endiathetos* and the *logos prophorikos* (the two Adams)], the first being the *silent* word which was the Logos conceived as '*ratio*' or hidden world-

thought, and the second as this latter word *uttered*; hence, *oratio*: the world-thought (or world-plan) made audible: made visible: materialised in terms of incarnated nature (so far, at least, as man's erring use of his freedom allows of this). Accordingly, when the Scriptures say that *God spake and the world was*, what we are to understand is that, in speech, three things enter the account: the mouthpiece, the breath, and the actually achieved speech which involves the interplay of both of these. And (we repeat) these three it is who, by analogy, answer to the Cross, the Christ, and the world of nature respectively.

Yet another ancient mode of expressing this same truth was that in which the Logos-image (supposedly sustained by Hyperourania eternally in Urania) was regarded as High Heaven's *monogram*; that is, her seal: her signature: her name. And, inasmuch as the mainline of this signature is a Cross (a *Chi*) and a *cyclic* Cross (for reasons which will be explained in a later work) this signature, in the Greek, worked out as Chi-Rho, the Greek letter *rho* (a circle with a handle attached, ρ) being the ordinarily accepted symbol of cyclicity. Hence Cheiro, *i.e.* , that symbol so recurrent in Christian and pre-Christian art as the 'monogram of the saviour'; or, as we ought to say, the 'monogram of the saviours' as representative of Cross and Christ equally. For the former *is* the monogram, while the latter finds his eternal function in eternally spelling out, eternally tracing out, this monogram's outlines; hence, eternally re-writing and re-uttering it. Hence the reason that the Christ is the world-priest, the cosmic hierophant, in that it is he who discovers and spells out the invisible 'mystery': the hidden Logos: God's *holy writ*; spells out, that is to say, the contours of the divine *wraith*, the *holy ghost*, that supernatural daughter of God, Kore, who is the world's everlasting foundation, its scaffolding and rack (rukh: wrack: rock: the rock of ages). Hence, too, the reason that Time (Chronos: Kronos: Christ) was depicted as deep-eyed, knowing and calculating, *i.e.* as having, in his rôle of incarnator, to search out the hidden contours (the spatial veinings: the invisible hyper-sensitive 'lines of yielding') of the law and its semina content. Hence, too,

the reason that the law itself, the Logos, was deemed to be gifted with foreknowledge, *i.e.* as the pre-existent world-fate eternally stretched out in front of the feet of Time, luring his steps into the pre-ordained precincts. Hence the reason that the Logos is God's providence. That is, it is Pronoia, fate, fortune, the Goddess Tyche or Fortuna so widely worshipped throughout all classical times.

We will not here enter upon the explanations of how the *logos endiathetos* (God's rest) is the holy Crescent no less than the holy Cross; nor yet how this world-mystery is also the world-altar: God's board: which the world-hierophant tends. And we postpone also to a later work the important consideration of the ancient macrocosm-microcosm notion which explains in what sense the Logos is to be regarded as making the heart of man the dwelling of God and a divine being's throne, so that, in the individual heart of any man, God can lodge as a full and immediate presence, revealing to him his kinship with God and shewing him how it is possible for him, wittingly, to be the companion of God, and to participate consciously in a world-enterprise which becomes, thereby, the common enterprise, divine and human. For, to treat adequately of this matter would involve us in the whole theory of the 'mechanism' of divine revelation and the springs of scriptural wisdom. That is, it would involve us in an account of our *theory of knowledge* which we have reserved for a later work. Rather, we will bring this volume to a close in an examination of the familiar and much-commented passage which introduces the gospel of St. John:

In the beginning was the Word; and the Word was with God; and the Word was God. (*En arche en ho logos, kai ho logos en pros ton theon, kai theos en ho logos*).

Thus, what we need to know, here, is the nature of the relation which obtains between the three terms of this text which, principally, seize the attention, *i.e.* *arche*, *logos* and *theos*. Let us, therefore, inquire first into the first of these, the term *arche*, the term which, ordinarily, is translated as 'the beginning.' Now this word *arche* is a Greek word the use of which dates back

(according to the testimony of Theophrastus<sup>1</sup>) to the very beginning of Greek philosophy, being in currency with Anaximander himself. As to its meaning, this has always been recognised by commentators as admitting of a twofold acceptance in that the term, as here used, may be construed as signifying either 'beginning' in the ordinary temporal sense where what is implied is the inception of a thing (*e.g.* the cosmos) at some given point in Time; or, as meaning 'in the beginning' where the term beginning means first principle or element: hence, *either Time or Space*. Hence the explanation of the fact that certain of the Church Fathers (notably St. Augustine), following the practice of earlier Alexandrine exegetes, were led, in their reflections and comments upon the meaning of the phrase '*en arche*' (by which, it may be noted, the Septuagint translates the opening Hebrew words of the Book of Genesis: 'in the beginning'), to conceive it as implying rather 'in Space' than 'in Time'; as implying, that is, rather *where* than *when* the things and events in question had place. Now, in settling the question as to which of the two *archai* or *beginnings* is the one referred to in the Johannine text, there need be no great hesitation, the context of the term itself going all the way to supply the data needed for a decision. For, when the preposition *en* precedes the word *arche* in the cosmic sense (as it is here recognised as doing) we may be assured that the truth will be one of two things: *either*, that which is asserted to be '*en arche*' will *not* be a deity (*theos*); *or*, the *arche* in which the deity is asserted to exist will *not* be the *arche* Time. For, whereas the one deity (*i.e.* the *arche* Time), being linear (quasi-uni-dimensional), can be 'in' Space, Space the complementary deity, being truly three-dimensional, cannot be 'in' Time. That is, Time can be (and *is*) 'in' Space, being "our Father, who is in Heaven;" but Space cannot be 'in' Time, it being an impossibility for a greater extension to be contained within a less. Hence (we repeat), if something (*e.g.* the *logos*) is said to be *en arche*, and if at the same time this something is asserted to be a God, the containing *arche* referred to must, perforce, be

<sup>1</sup>Burnet questions this (the usual) construction put upon the words of the successor of Aristotle. Burnet claims that the word which Theophrastus credits Anaximander with putting into currency is not *arche* but *apeiron*.

the *arche* Space, not the *arche* Time. But, in the case under consideration, the writer John expressly asserts that what he is speaking of is an elemental, that is, a divine entity; for (as he says) this Logos which is itself 'in the beginning,' is itself *God*. Consequently (as we say), the Johannine *logos* which is *en arche* is (whatever it may prove to be) something which is asserted to be situated in Space, not in Time.

Further, if the foregoing contention needed support, it could secure it by calling into the train of reasoning the consideration that this Johannine *logos* which is said to *be God*, must, in virtue of the definition of the divine as a radical substance, be an eternal substance. But, as we know, nothing which is 'in' Time (*i.e.* in the mobile and linear first principle) can be eternal; for while Time itself is eternal, and eternally is 'in' Space, nothing which is in Time is eternal, the terms 'in Time' and 'eternal' constituting contraries the force of which our everyday speech even takes full cognisance of. Consequently, the fact of the divinity (*i.e.* the elementariness, and, hence, the eternality) of the Logos being laid down for us by the text itself, we have no choice but to say that the eternal Logos, like eternal Time itself, must have its lodgment not *en arche* where the *arche* is Time, but in that other *arche* which alone can, at once, *be a God and lodge a God*, *i.e.* the three-dimensional element, Space. We thus arrive at the definite conclusion that the meaning of the term *arche* in the Johannine text is Space, and it is a conclusion which enables us to interpret the passage in its entirety. We do this in two stages. In the first place, the passage may be interpreted as follows: *In Space, was the logos, and the logos was with God, and the logos was God*. But, inasmuch as the whole force of the text is directed towards the emphasising of the fact that the Logos is identical with the substance in which it is asserted to be [*i.e.* the substance (element) Space] it, itself, informs us that the Logos is *a spatial institution*, one in substance with the principle (divinity) it is lodged in. This being so, we emend our interpretation to stand: *In Space was the logos; but this logos not only was in (i.e. with) Space, but itself was Space*. Further, in that the *logos* is said to be 'in' Space, it cannot (what though it *is* Space)

be *the whole of Space*. It is, therefore (we say) a part of (a specific region of) Space the triadic matrix-God. It is one region of Heaven in her threefold entirety which extends from world-centre to infinity. It is, that is to say, one of the Three Women (Three Queens) who figure so conspicuously and so frequently in archaic art. Here, however, we propose to take leave of this great subject.

Profitably to go further with it, we must take up that labour which, in chapter vi of this work, we set aside, *i.e.* that of identifying Time with motion : a task which, to judge by the very many objections made against it during the last twenty-five centuries, is considered difficult, if not, indeed, impossible. Furthermore, in the process of meeting these traditional objections, we shall need to reject the dogma of the relativity of motion : a move which this philosophy (which identifies motion with Time and Time with one of the two members of the Godhead), finds compulsory to avoid the absurdity of allowing the relativity of a member of the Godhead : God the Father. Accordingly, part i of volume ii will be devoted to an answering of the historic difficulties which have been brought against the claim that Time is the stream of cosmic motion. This done, we shall be free to put forward the following :—The pale light which trembles on the ornate walls of our Christian temples is the ironical smile of the Sphinx, chagrined and amused, at once, that her secret is not torn from her. Or (to drop metaphor), Christian theology, art and ritual are possessed of meaning no less certainly than the hieroglyphics engraved on the Rosetta stone ; and, just as those hieroglyphics were compelled to yield up their meaning in terms of their demotic and Greek equivalents, so will Christian dogma, art and ritual yield up their meaning in terms of the findings of the science of the first principles conceived organically, and read in the light of the findings of the comparative study of religions and mythology. But this meaning itself constitutes the world-secret : the world-mystery : in that it is (we say) that of the *world-logos* : that profoundest of all the teachings of the science of the first principles which gave earlier human races their knowledge of a resurrection of the body : their knowledge of a life *in the flesh* still to come.

Thus, when St. Paul, expounding the *dogma of the resurrection* to the church at Corinth, wrote :

" Behold, I show you a mystery " ;

the mystery to which he was referring was this basic religious truth about the world-logos which the world-mythologies refer to under the image of a mystic world-sword fast welded in stone, or (again) plunged in the world-tree to the haft, and inscribed :

" For him who can take me." ;

take, that is, the meaning of the world-scheme as expressed in the teaching of an underlying world-design : in the teaching of an underlying inner seat of gravitation filled with the souls of things : in the teaching about the world-crab, the world-cancer, the world-grabber, the grabber and reaper of souls who forgets none ; grabber also of Time, leading him on to give to the world-souls their incarnate life ; leading him on also to give them their death and their doom. Also their incarnate resurrection. Hence the universal distribution of this doctrine, as, for instance, in the form of the world-lore about a ' magic sword.' Hence, for instance, the meaning of the magic spear of Achilles, the magic sword of Apollo Chrysaor, the magic sword of Theseus, the magic swords of Sigurd and of Uther ; also the magic Gram of Sigmund, the magic blade, Durandal, of Child Roland, the magic Macabuin of the Norwegian Olave, the magic Excalibur (Scarabaeus : Ankh) of the British Arthur. Hence, also, the reason that it was known that the mission of the Christ was *to bring a sword* : to bring, that is, the world-sword (*logos endiathetos*) into manifestation : to make manifest the will and wisdom (the daughter, Kore) of the mother-God, Demeter the *mater dolorosa*. Hence, again the meetness of the world-sword's equivalent in a *world-cup* : that world-cup which, as God's Rest, ' all souls ' inhabit in common ; hence the communion-cup : the common-cup : which the world-Christ must fill with his own substance if he is to effect the resurrection and the incarnation. The world-sword (the world-mystery : the *logos* and the *cross*) is thus that Holy Grail which Knights of the Cross (a Sir Galahad and a Sir Percivale) quested to discover, the Quest of the Grail being the age-old endeavour of the mind of man to discover anew the meaning (which man has lost)



which lies behind mankind's most ancient culture. Hence, the quest of the grail makes one with that attitude of Christian orthodoxy which Anselm expressed as *fides quacrens intellectum*, the tale of the grail being the tale of the *logos*: the tale which tells, that is, of a magic chalice through which gleams Time the Christ-substance. For *the logos* is this chalice through which gleams the wine of the life of the cosmos incarnate; in which palpitates the breath of the everliving universe; in which glows the red blood of the body of the Absolute.

*End of volume i.*

## APPENDICES

## APPENDIX I

### SYMPOSIUM OF MODERN VIEWS ON SPACE

#### NON-BEING EQUATED WITH SPACE

#### GASSENDI TO KANT

From among the opinions held on the subject of Space by the outstanding thinkers of the last three centuries, we distinguish (disregarding special permutations and combinations of the outstanding views) the seven following types :—

- (1) Space is non-being. It is nothing-at-all, and is to be defined not in terms of itself but of the contours of the material bodies plunged in it (as in complete nothingness), and in terms of the order which obtains between these. To this view subscribe Berkeley, Hume, Leibnitz, Mach and most of the distinctively modern school of philosophic scientists. It is the view according to which Space is referred to, very vaguely, as 'imaginary.'
- (2) Space is non-being : nothing-at-all : but is filled chock-full of aether. This aether is regarded as possessed of a quasi-material nature of some unique but undetermined kind. This is the aether of Young (reviving a view which had been advocated by certain of the continental critics of Newton *e.g.* Huygens) and the rest of the thinkers who advocated the undulatory theory of radiations<sup>1</sup>.
- (3) Space IS NOT. There is no Space ; the name is a redundancy. The universe is chock-full of matter proper. This is Descartes' view : the view which drew forth the criticisms of Henry More the Cambridge Platonist.
- (4) Space is a certain somewhat : a unique form of existence which is 'neither substance nor accident.' This is the view of Gassendi, the earliest modern exponent of the philosophy of 'atoms and the void' and a sharp critic of the views of Descartes.

<sup>1</sup>We shall not illustrate any of the very numerous theories of the aether. The history of the concept of the aether from Descartes to the end of the 19th century has been written by E. T. Whittaker.

- (5) Space (like Time) is a category of the apprehending mind : an internally generated form supplied by the mind of the percipient and imposed upon the sense-experiences flowing into the latter from without. That is, Space is what is called an *a priori* form. This is the most famous of the many views of Kant on Space.
- (6) Space is an absolute reality. It is either God, or, if not actually the divine entity, very nearly so *i.e.* some aspect or instrument of God. This is the view of More, Cudworth, Newton, Fénelon, Clarke, Colliber, and, in a sense, Locke. It is the 'Platonist' view as watered down in modern thought.
- (7) Space is an absolute reality. It is one of the two types of elemental being and, as such, is a deity. It is the world-matrix or mother. It is not material but supra-material in character. It is an energy : the magnetic ocean : natively characterised in certain specific parts (*i.e.* in the Logos or cosmic law of motion) by the magnetic (spatial : supernatural) seeds about which plies or has plied the current of Time, which latter, by thus plying about and encompassing the spatial seeds (protons), fructifies them (or has fructified them in the primary age of creation), into the world of compounded, material, natural, manifested being. This is our own view<sup>1</sup>.

It is the foregoing views which we propose to exemplify from the works of the makers of modern thought. First, however, a word on the subject of the 'aether' : a term (according to our theory) which is a pure redundance. We quote one view indicative of what the aether is supposed to be :

"It is<sup>2</sup> erroneous to regard the heavenly bodies as isolated in vacant space ; around and between them is an incessant conveyance and transformation of energy. To this vehicle the name *aether* has been given.

<sup>1</sup>As pointed out earlier (ch. xvi), we do not go into the subject of non-Euclidean Space here, but we might say we regard its advocacy as representing essentially a subconscious return to the 'Platonic' point of view but a return so unwittingly made as to have become enveloped in confusion, many of its advocates labouredly denying what is its essential feature, *i.e.* that Space is a reality, a substance, a receptacle, and the like. An account of what 'non-Euclidean Space' ought to mean is given in our following volume : *The Mystery of Time*.

<sup>2</sup>E. T. Whittaker, Astronomer Royal of Ireland, *Theories of Aether and Electricity*, pp. 1-2.

The aether is the solitary tenant<sup>1</sup> of the universe save for that infinitesimal fraction of space which is occupied by ordinary matter. Hence arises a problem which has long engaged attention and is not completely settled : what relation subsists between the medium which fills the interstellar void and the condensations of matter which are scattered through it ? "

We quote this particular passage in order to draw attention to a phrase which (as we hold) must be specially guarded against, *i.e.* that of the 'medium which fills the void.' What, rather, we must be prepared to recognise is that the 'void' and the medium are one. That is, the medium which conveys mobile energy is Space itself. Hence the redundancy of the aether-concept. This point made, let us now go on to indicate the views of the most outstanding of the modern thinkers on the subject of Space ('vacant' Space), beginning with Gassendi :—

GASSENDI  
(1592-1695)

"The<sup>2</sup> first thing a physicist ought to do when contemplating the Universe is to picture to himself a Space infinitely extended in all parts in length, breadth and depth ; and this Space he should consider as the general place of all created things, and as the tablet upon which all the other things which God may produce are to be inscribed. What constrains us to form this great idea is that we can never transport our imagination so far beyond the heavens that we could not carry it still further, and that even if we imagine, with Lucretius, a man coming to the extremity of space we should always conceive it possible that an arrow shot by this man would go further on, or else that whatever it was which stopped it would be beyond the bounds of space, which is absurd . . . Let us distinguish at the outset two kinds of extension or dimension, the one corporeal or material and impenetrable attributed to all bodies, the other incorporeal and penetrable, attributed uniquely to space, and which, for that reason, is called spatial or local. The corporeal will be the length, breadth and depth of water for example ; or of air, or of any other body contained in a vessel ; the spatial, the length, breadth and depth conceived by us as remaining always and necessarily between the sides of the vessel even when the water or other body has been excluded . . . Let us note, however, that when we speak of the incorporeal extension or dimension of space, we do not conceive of that extension as a substance or a positive nature having its own activities and particular faculties and which, so, would be similar to the substance of God, of intelligence, or of the human spirit ; for these terms incorporeal, infinite, etc., which have

<sup>1</sup>The author here ignores the existence of the Time-stream : the cosmic stream of motion : which (as we say) turns supernatural seeds into material atoms.

<sup>2</sup>*Abrégé de la philosophie de Gassendi* : par F. Bernier. Vol. i. bk. i, ch. i. (Edition of 1678).

been applied to space are employed here negatively rather than positively, in that they signify nothing positive as they do when they are attributed to the substance of God or some other spiritual substance ; that incorporeal extension being considered only as a pure immaterial extension and a mere capacity for receiving bodies which is neither substance nor accident nor anything capable of acting or suffering."

DESCARTES<sup>1</sup>

(1597-1650)

" Although<sup>2</sup> . . . some express themselves otherwise on this subject, I cannot think that they regard it otherwise than as I have just said ; for when they distinguish substance from extension or quantity, they either mean nothing by the word substance, or they merely form in their minds a confused idea of incorporeal substance . . . Space<sup>3</sup> . . . and the corporeal substance which is contained in it, are not different otherwise than in the mode in which they are conceived of by us. For, in truth, the same extension in length, breadth, and depth, which constitutes space, constitutes body . . . and<sup>4</sup> it will be easy for us to recognise that the same extension which constitutes the nature of body likewise constitutes the nature of space, nor do the two mutually differ, excepting as the nature of the genus or species differs from the nature of the individual, provided that, in order to discern the idea that we have of any body, such as stone, we reject from it all that is not essential to the nature of body. In the first place, then, we may reject hardness, because, if the stone were liquified or reduced to powder, it would no longer possess hardness, and yet would not cease to be a body ; let us in the next place reject colour, because we have often seen stones so transparent that they have no colour ; again we reject weight, because we see that fire, although very light, is yet body ; and, finally, we may reject cold, heat, and all the other qualities of the kind either because they are not considered as in the stone, or else because, with the change of their qualities, the stone is not for that reason considered to have lost its nature as body. After examination we shall find that there is nothing remaining in the idea of body excepting that it is extended in length, breadth, and depth ; and this is comprised in our idea of space, not only of that which is full of body, but also of that which is called a vacuum . . . The<sup>5</sup> words place and space signify nothing different from the body which is said to be in a place, and merely designate its magnitude, figure, and situation as regards other bodies."

<sup>1</sup>Descartes confounded his entire philosophic system by his identification of bare extension (being) with material body ; that is, the first term of the tetrarchy with the fourth.

<sup>2</sup>Descartes, *Principia* ii. 9.

<sup>3</sup>*Ibid.* ii. 10.

<sup>4</sup>*Ibid.* ii. 11.

<sup>5</sup>*Ibid.* ii. 13.

Matter, then, according to the Cartesian philosophy, is characterised not by impenetrability nor yet by compoundedness, but solely by extension. Extension is matter, matter is extension and includes Space. Three distinct *forms* of matter, however, are (according to Descartes) distinguishable, corresponding respectively to the luminous matter of the sun; the transparent matter of interplanetary Space; and the dense, opaque matter of the earth.

"The<sup>1</sup> first is constituted by what has been scraped off the other particles of matter when they were rounded; it moves with so much velocity that, when it meets other bodies, the force of its agitation causes it to be broken and divided by them into a heap of small particles that are of such a figure as to fill exactly all the holes and small interstices which they find around these bodies. The next type includes most of the rest of matter; its particles are spherical, and are very small compared with the bodies we see on the earth; but nevertheless they have a finite magnitude, so that they can be divided into others yet smaller. There exists in addition a third type exemplified by some kinds of matter—namely, those which, on account of their size and figure, cannot be so easily moved as the preceding. I will endeavour to show that all the bodies of the visible world are composed of these three forms of matter, as of three elements; in fact, that the sun and the fixed stars are formed of the first of these elements, *the interplanetary spaces of the second*, and the earth, with the planets and comets, of the third. For, seeing that the sun and the fixed stars emit light, the heavens transmit it, and the earth, the planets, and the comets reflect it, it appears to me that there is ground for using these three qualities of luminosity, transparency, and opacity, in order to distinguish the three elements of the visible world."

It is this view of matter which Henry More the Platonist opposes:—

HENRY MORE  
(1614-1687)

"You<sup>2</sup> define matter or body in too general a way, for it seems that not only God, but even angels and everything that exists by itself is an extended thing: so that extension appears to be as comprehensive as the absolute essence of things, though nevertheless capable of being diversified according to the variety of these same essences. But the reason why I believe that God is extended in his fashion is that he is omnipresent and that he fills intimately the whole universe and each of its parts: for how could he communicate motion to matter, as he formerly

<sup>1</sup>*Ibid.* iii. 52.

<sup>2</sup>*Correspondence between Descartes and Henry More. Henry More's first letter: December, 1648.*—Descartes, *Oeuvres* (Cousin ed.), vol. x, p. 181 ff.

did, and as in your view he does still, if he were not, so to say, in actual contact with matter or if he had not formerly been in contact with it? Which certainly could never have been the case if he were not omnipresent and if he did not fill every place and every region. God is then extended and expanded after his fashion; consequently God is an extended being.

It does not, however, follow that he is that body or that matter which your mind, like a clever artificer, has figured so ably in globules and cylindrical parts; that is why extended substance is a more general thing than body. The ambiguous proof, or rather the kind of sophism, made use of by you to confirm your definition gives me courage to oppose you on this head. Body, you say, can be without softness, without hardness, without weight, without lightness, etc., and matter [can] subsist in its entirety without these qualities and the others which the senses perceive in them; which is as much as to say that a book of wax could be what it is although neither round nor cubiform nor pyramidal, that in fact it could remain a book of wax without having any shape at all: which is impossible; for although such or such shape is not permanently inherent in the wax, yet the wax must of necessity have *some* shape. Similarly, although matter is not necessarily either soft or hard or hot or cold, it yet must absolutely necessarily be sensible or, if you like, tangible, as Lucretius has very well defined it:

“To touch, to be touched, belongs only to body.”

. . . . I pass by several other more remarkable qualities of the divine extension, which there is no need to explain here. Enough has been said to demonstrate that it would have been better to have defined body as a tangible substance, or, as I said above, as an impenetrable substance than as an extended thing; for touch or impenetrability is proper to bodies; while your definition sins against the rules and is unsuitable as the only definition . . . . What<sup>1</sup> I have so far said appears to me extremely clear and even much more certain than your view. Finally, from all the other opinions in which I differ from you I do not feel so great a revolt in my mind, whether from softness or sweetness of temperament, as from that murderous and barbarous sentiment you advance in your *Method* and by which you pluck out the life and feeling of animals.”<sup>2</sup>

#### DESCARTES' REPLY TO MORE

. . . . Your<sup>3</sup> first difficulty is as to the definition of body, which I call an extended substance but which you prefer to designate a sensible, tangible or impenetrable substance; but take care, if you please, that, in calling a substance sensible you do not define it by its relation to our

<sup>1</sup>*Ibid.* p. 187.

<sup>2</sup>It should be noted that More had not, in his own definition, fixed upon the truly essential characteristic of 'body' i.e. *compositeness*, and Descartes, instead of answering the main charge that there is some distinction between Space and created being, presses More hardly on the demerits of his definition of 'body.'

<sup>3</sup>*Descartes's First Reply.* (Feb. 5, 1649.) *Op. cit.* p. 193 ff.



senses alone, which explains only one of its properties, instead of comprehending the entire essence of bodies which, inasmuch as they could exist if there were no men, consequently do not depend on our senses. I do not see why you say that it is absolutely necessary for all matter to be sensible; on the contrary, there is no matter which would not be quite insensible if divided into parts much smaller than those of our nerves and if each of these parts had a sufficiently rapid movement.

With regard to my proof which you call ambiguous and almost sophistical, I have employed it only to refute the proposition of persons who, like you, believe that all body is sensible, and I have employed it, to my thinking, clearly and demonstratively; for a body can conserve its whole corporeal nature even though the senses can perceive in it neither softness nor hardness, nor cold, nor heat nor any other sensible quality, whatever . . . .

But God, you say, and an angel, and everthing which subsists by itself is extended: thus your definition is more extended than what is defined. I am not accustomed to dispute over words; so, if it is said that God is in a manner extended because he is everywhere, I will agree: but I deny that in God, in the angels, in our souls, or in any other substance which is not body, there is true extension such as is commonly understood [by the word]; for, by an extended being is commonly understood something which can be imagined; whether this be an imaginary being or a real being is of no importance. In this being one can distinguish many parts of a determinate size and shape, and distinct from one another; so that the imagination can transfer one to the place of the other without being able to imagine two at the same time in the same place. One could not say this either of God or of the soul, for neither the one nor the other springs from the imagination but simply from intellection, and they cannot be separated into parts, especially not into parts of determinate size and shape. Finally, we easily understand that the soul, God and several angels together can be at the same time in the same place; whence the obvious conclusion, that no incorporeal substances can be properly understood to be extended or conceived by us otherwise than as a certain virtue or force, which, although applied to extended things, is not on that account extended . . . . I have dared to state that there is no space absolutely empty and that all extended being is veritably body: and in this I have not hesitated to hold an opinion contrary to that of the great men of whom you speak namely, Epicurus, Democritus, and Lucretius; for I have seen that, far from having a solid reason, they have given themselves up to the common prejudices of childhood; for although our senses do not always represent bodies outside of us such as they absolutely are according to the relation they have with us . . . we have nevertheless made the judgment in our infancy that there is, in the world, nothing except what the senses represent to us; that thus there are no bodies which are not sensible and that all place in which we perceive

nothing is empty. Since Epicurus, Democritus and Lucretius have yielded to this prejudice like the others, I do not subscribe to their authority.

But I am surprised that, with all your penetration, and seeing besides that you do not deny that all space is filled with some substance, since it really has all the properties of extension, you prefer rather to assert that divine extension fills space than to avow that there cannot absolutely be space without body ; for, as I have said above, this pretended extension of God cannot be understood to be in any way the subject of the veritable properties which we perceive in all space ; for God cannot be imagined, one cannot distinguish in him parts which have form and can be measured. You have no difficulty, you say, in believing that there is not naturally emptiness ; but you want to save the divine power which, while removing all that is in a vessel, can, according to you, prevent the sides from joining together. I know that my intelligence is finite and that the power of God is infinite ; thus I do not pretend to put limits to it, but I am content to examine what I can or cannot conceive and am careful not to make any judgment contrary to my perception . . . Thus, seeing that it is repugnant to my mode of thought that, in a vessel from which all body had been removed, there should still remain extension—which I do not conceive otherwise than I formerly conceived the body which was contained there—I say that it would imply contradiction that such extension should remain after all body had been removed, and that, consequently, the sides of the vessel ought to approach each other, which accords with my other opinions.”

Appropriately with the passage from the Platonist More goes a passage from an equally distinguished member of the Cambridge Platonist group, Cudworth :—

RALPH CUDWORTH  
(1617-1688)

“ The Democritics<sup>1</sup> and Epicureans, though consenting with all other atheists in this, that, whatsoever was unextended and devoid of magnitude, was therefore nothing (so that there could neither be any substance, nor accident, nor mode of any substance, unextended), did, notwithstanding, distinguish concerning a double nature. First, that which is so extended as to be impenetrable, and tangible, or resist the touch, which is body ; and, secondly, that which is extended also, but penetrably and intangibly ; which is space or vacuum : a nature, according to them, really distinct from body, and the only incorporeal thing that is. Now since this space, which is the only incorporeal, can neither do nor suffer anything, but only give place or room to bodies to subsist

<sup>1</sup>Ralph Cudworth D.D. *Intellectual System of the Universe*, vol. iii. p. 231. London 1845.

in, or pass through; therefore can there not be any active, understanding, incorporeal Deity. This is the argument of the Democritic atheists.

To which we reply that, if space be indeed a nature distinct from body, and a thing really incorporeal, as they pretend, then will it undeniably follow from this very principle of theirs, that there must be an incorporeal substance, and (this space being supposed by them also to be infinite) an infinite, incorporeal Deity. Because, if space be not the extension of body, nor an affection thereof, then must it, of necessity, be either an accident existing alone by itself without a substance, which is impossible: or else the extension, or affection, of some other incorporeal substance that is infinite. But here will Gassendi step in, to help out his good friends the Democritics and Epicureans at a dead lift; and undertake to maintain, that though space be indeed an incorporeal thing, yet it would neither follow of necessity from thence that it is an incorporeal substance or affection thereof; nor yet that it is an accident existing alone by itself, without a substance; because this space is really neither accident, nor substance, but a certain middle nature or essence betwixt both. To which subterfuge of his, that we may not quarrel about words, we shall make this reply: that, unquestionably, whatsoever is, or hath any kind of entity, doth either subsist by itself or else is an attribute, affection, or mode of something that doth subsist by itself. For it is certain that there can be no mode, accident, or affection of nothing; and, consequently, that nothing cannot be extended, nor measurable. But, if space be neither the extension of body, nor yet of substance incorporeal, then it must of necessity be the extension of nothing, and the affection of nothing; and nothing must be measurable by yards and poles. We conclude, therefore, that, from this very hypothesis of the Democritic and Epicurean atheists, [*i.e.*] that space is a nature distinct from body, and positively infinite, it follows undeniably that there must be some incorporeal substance whose affection its extension is; and because there can be nothing infinite but only the Deity, that it is the infinite extension of an incorporeal Deity; just as some learned theists and incorporealists have asserted. And thus is the argument of these Democritic and Epicurean atheists against an incorporeal Deity, abundantly confuted, we having made it manifest, that from that very principle of their own by which they would disprove the same, it is against themselves demonstrable . . . ."

With More and Cudworth can very well be grouped Locke. Locke was an Oxford man, but his opinions on the subject of Space were of the 'Cambridge' cast, and some of his strongest friendships were with the Cambridge group. It was, for instance, with Cudworth's daughter that, for a great many years, Locke made his home.

JOHN LOCKE  
(1632-1704)

" If<sup>1</sup> therefore they mean by body and extension, the same that other people do, viz. by body, something that is solid and extended, whose parts are separate and movable different ways; and, by extension, only the space that lies between the extremities of those solid coherent parts, and which is possessed by them, they confound very different ideas one with another. For I appeal to every man's own thoughts whether the idea of space be not as distinct from that of solidity, as it is from the idea of scarlet colour? It is true, solidity cannot exist without extension; but this hinders not but that they are distinct ideas. Many ideas require others as necessary to their existence or conception, which are yet very distinct ideas. Motion can neither be nor be conceived, without space; and yet motion is not space, nor space motion: space can exist without it, and they are very distinct ideas; and so, I think, are those of space and solidity. Solidity is so inseparable an idea from body that, upon that, depends its filling of space, its contact, impulse and communication of motion upon impulse. And if it be a reason to prove, that spirit is different from body, because thinking includes not the idea of extension in it, the same reason will be as valid, I suppose, to prove that space is not body, because it includes not the idea of solidity in it; space and solidity being as distinct ideas, as thinking and extension, and as wholly separable in the mind one from another . . . . The truth<sup>2</sup> is, these men must either own that they think body infinite, though they are loth to speak it out; or else affirm, that space is not body. For I would fain meet with that thinking man, that can in his thoughts, set any bounds to space, more than he can to duration; or, by thinking, hope to arrive at the end of either: and, therefore, if his idea of eternity be infinite, so is his idea of immensity; they are both finite or infinite alike . . . .

. . . <sup>3</sup>To conclude: whatever men shall think concerning the existence of vacuum, this is plain to me, that we have as clear an idea of space, distinct from solidity, as we have of solidity distinct from motion, or motion from space. We have not any two more distinct ideas; and we can as easily conceive space without solidity, as we can conceive body or space without motion, though it be never so certain, that neither body nor motion can exist without space . . . . <sup>4</sup>It is true we can easily in our thoughts come to the end of solid extension; the extremity and bounds of all body we have no difficulty to arrive at; but when the mind is there, it finds nothing to hinder its progress into this endless expansion; of that, it can neither find nor conceive any end. Nor let anyone say, that beyond the bounds of body there is nothing at all, unless he confine God within the limits of matter . . . . He, I think, very much magnifies

<sup>1</sup>Locke, *Essay on the Human Understanding* II. xiii. 11.

<sup>2</sup>*Ibid.* § 21.

<sup>3</sup>*Ibid.* § 27.

<sup>4</sup>*Ibid.* II. xv. 2 ff.

to himself the capacity of his own understanding who persuades himself that he can extend his thoughts farther than God exists, or imagine any expansion where he is not. Just so in duration; the mind having got the idea of any length of duration, can double, multiply, and enlarge it, not only beyond its own, but beyond the existence of all corporeal beings, and all the measures of time taken from the great bodies of the world, and their motions. But yet everyone easily admits, that though we make duration boundless, as certainly it is, we cannot yet extend it beyond all being. God, everyone easily allows, fills eternity; and it is hard to find a reason why any should doubt that he likewise fills immensity. His infinite being is certainly as boundless one way as another; and methinks it ascribes a little too much to say, where there is no body there is nothing. Hence, I think, we may learn the reason why everyone familiarly, and without the least hesitation, speaks of, and supposes, eternity, and sticks not to ascribe infinity to duration; but it is with more doubting and reserve, that they admit, or suppose, the infinity of space. The reason whereof seems to me to be this; that duration and extension being used as names of affections belonging to other beings, we easily conceive in God infinite duration, and we cannot avoid doing so; but not attributing to him extension, but only to matter, which is finite, we are apter to doubt of the existence of expansion without matter, of which alone we commonly suppose it an attribute. And, therefore, when men pursue their thoughts of space, they are apt to stop at the confines of body, as if space were there at an end too, and reached no farther. Or, if their ideas, upon consideration, carry them farther, yet they term what is beyond the limits of the universe, imaginary space; as if it were nothing, because there is no body existing in it . . . . He that<sup>1</sup>, with Descartes, shall frame in his mind an idea of what he calls body, to be nothing but extension, may easily demonstrate, that there is no *vacuum*, i.e. no space void of body, by this maxim, 'What is, is': for the idea to which he annexes the name body, being bare extension, his knowledge that space cannot be without body is certain . . . .

But if another shall come and make to himself another idea, different from Descartes', of the thing, which yet, with Descartes, he calls by the same name body; and makes his idea, which he expresses by the word body, to be of a thing that hath extension and solidity together; he will as easily demonstrate that there may be a *vacuum*, or space, without a body as Descartes demonstrated the contrary."

The Platonic type of metaphysical opinion we have just given instances of in the words of More, Cudworth and Locke is that under which Newton's cosmogony (metaphysics) falls, and, by reason of kinship of thought as well as chronological order, Newton's views could very well be given here. In view

<sup>1</sup>*Ibid.* IV. vii. §§ 12, 13.

of their importance, however, we omit these from their chronological place and attach them at the end of this collection where space can more suitably be allotted to them. We proceed, however, to give an indication of the opposition which Newton's view roused immediately it saw daylight. This opposition came largely from continental critics, but by no means entirely so, one of the most curious oppositions in modern thought being that of the philosopher Berkeley to the Newtonian philosophy, curious<sup>1</sup> in that Berkeley himself was an ardent Platonist. However, prior to the passages we give illustrative of the thought of Berkeley about Space, we give samples of the continental opposition as exemplified in its two outstanding spokesmen, Huygens the atomist and Leibnitz the Cartesian, two authors who very unjustly accused Newton of teaching a doctrine of 'occult causes' and the dogma of 'action at a distance.' Thus, although Huygens was an atomist and Leibnitz a Cartesian, the one regarding Space as nothing at all<sup>2</sup> and the other regarding all extension as synonymous with matter, they were of one mind in this, *i.e.* that Space was not a genuine existence, at once substantial and immaterial. Hence we find Huygens writing to Leibnitz as follows :

"As regards what M. Newton gives out to be the cause of reflection, I can make nothing of it at all ; nor of any of his other theories, which he builds up on his principle of attraction, which to me appears absurd."<sup>3</sup>

And that Leibnitz, as a Cartesian, must necessarily be in agreement with his correspondent, we may gather from the opinion expressed (in 1646) by Descartes with reference to the 'attraction' theory put forward by the mathematician Roberval.

"There<sup>4</sup> is nothing more absurd than the supposition which is added to the preceding ; the author supposes that a certain property is inherent in every particle of matter<sup>5</sup> in the world, and that, in consequence of this

<sup>1</sup>One can sympathise of course with Berkeley in his irritation in connection with Newton's (supposedly) extensionless infinitesimals (although, indeed, it was Leibnitz rather than Newton who deserved censure here), but his almost systematic hostility to the Newtonian philosophy amounts to a psychological curiosity.

<sup>2</sup>It was Huygens who 'invented' the notion of the luminiferous aether to fill Space. This notion, disregarded during the eighteenth century, was revived by Young and Fresnel at the beginning of the nineteenth.

<sup>3</sup>Huygens to Leibnitz, 18 Novembre, 1690. *Oeuvres Complètes de Huygens*. t. ix. p. 52.

<sup>4</sup>Descartes, *Correspondence*. Edition of P. Tannery et Ch : Adam. p. 396.

<sup>5</sup>The attraction theory of gravitation is very ancient, being as old, in its essentials, as astrology.

property, they are carried towards one another and are mutually attracted ; he also supposes that a similar property is inherent in all terrestrial parts considered in their relations towards other such parts, and that this property does not interfere with the other. But, for that to be so, it would be necessary to suppose that each of these material particles was living, and indeed, that it was animated by a great number of diverse souls."

It is, accordingly, as a good Cartesian that Leibnitz puts forward the views<sup>1</sup> on Space below quoted. It is a view which can, very appropriately, be associated with the views of Berkeley and Hume :-

LEIBNITZ  
(1646-1716)

" He<sup>2</sup> makes use of an instance which exactly falls in with one of my demonstrations against real, absolute Space which is an idol of some modern Englishmen. I call it an idol not in a theological sense but in a philosophical one ; as chancellor Bacon says, that there are *idola tribus, idola specus*. These gentlemen maintain that Space is a real, absolute being. But this involves them in great difficulties, for such a being must needs be eternal and infinite. Hence, some have believed it to be God himself, or one of his attributes *i.e.* his immensity. But since Space consists in parts, it is not a thing which can belong to God. As for my own opinion, I have said more than once that I hold Space to be something merely relative, as Time is ; that I hold it to be an order of co-existences as Time is an order of succession. For Space denotes, in terms of possibility, an order of things which exist at the same time considered as existing together—and when many things are seen together one perceives that order of things among themselves.

I have many demonstrations to confute the fancy of those who take Space to be a substance, or, at least, an absolute being. But I shall only use, at the present, one demonstration which the author [Clarke] here gives me occasion to insist upon. I say then that if Space were an absolute being, then would something happen for which it would be impossible there should be a sufficient reason. Which is against my axiom. And I prove it thus :-Space is something absolutely uniform ; and, without the things placed in it, one point of Space does not absolutely differ in any respect whatsoever from another point of Space. Now, from hence it follows, supposing Space to be something in itself besides the *order of bodies among themselves*, that 'tis impossible there should be a reason why God, preserving the same situation of bodies among themselves, should have placed them in Space after one certain particular manner and not otherwise : why everything was not placed the quite

<sup>1</sup>Leibnitz, *Third Paper* : being his answer to Clarke's second reply. Date, 1715-1716.

<sup>2</sup>That is, Dr. Samuel Clarke, Newton's spokesman in the Newton-Leibnitz controversy.

contrary way : for instance, by changing east into west. But, if Space is nothing else but that order of relation and is nothing at all without bodies but the possibility of placing them, then those two states : the one such as it now is, the other supposed to be the quite contrary way : would not at all differ from one another. Their difference is only to be found in our chimerical suppositions of the reality of Space in itself."

BERKELEY

(1685-1753)

Berkeley, like Leibnitz, ridicules the Newtonian conception of Space :

"Absolute<sup>1</sup> Space," he says sarcastically, "is infinite, immobile, indivisible . . . unrelated to anything. Its attributes are thus negative ; it is a mere nothing."

As to the Berkeleyan conception of Space itself, it is as follows :

"From<sup>2</sup> what has been said, it follows that the philosophic consideration of motion doth not imply the being of an *absolute space* . . . And, perhaps, if we inquire narrowly, we shall find we cannot even frame an idea of pure space exclusive of all body. This I must confess seems impossible, as being a most abstract idea. When I excite a motion in some part of my body, if it be free or without resistance, I say there is *space*. But if I find a resistance, then I say there is *body* ; and, in proportion as the resistance to motion is lesser or greater, I say the space is more or less *pure*. So that when I speak of pure or empty space, it is not to be supposed that the word *space* stands for an idea distinct from, or conceivable without, body or motion ; though indeed we are apt to think every noun substantive stands for a distinct idea that may be separated from all others ; which hath occasioned infinite mistakes. When, therefore, supposing all the world to be annihilated besides my own body, I say there still remains pure space, thereby nothing else is meant but only that I conceive it possible for the limbs of my body to be moved on all sides without the least resistance ; but if that too were annihilated, there could be no motion, and, consequently, no space.<sup>3</sup> Some, perhaps, may think the sense of seeing doth furnish them with the idea of pure space ; but it is plain from what we have elsewhere shewn, that the ideas of space and distance are not obtained by that sense.

What is here laid down seems to put an end to all those disputes and difficulties that have sprung up amongst the learned concerning the nature of *pure space*. But the chief advantage arising from it is that we are freed from that dangerous dilemma, to which several who have employed

<sup>1</sup>Berkeley, *De Motu*, § 53.

<sup>2</sup>George Berkeley, *Principles of Human Knowledge*, §§ 116, 117.

<sup>3</sup>The *correct* inference here would be not Berkeley's that there would exist no space, but that there would exist no immediate *sense of space* : a quite different matter, as Descartes pointed out to More.



their thoughts on that subject imagine themselves reduced, viz., of thinking either that real space is God, or else that there is something beside God which is eternal, uncreated, infinite, indivisible, immutable. Both which may be justly thought pernicious and absurd notions. It is certain that not a few divines, as well as philosophers of great note, have, from the difficulty they found in conceiving either limits or annihilation of space, concluded it must be divine. And some of late have set themselves particularly to shew that the incommunicable attributes of God agree to it.<sup>1</sup> I must confess I do not see how we can get clear of it, so long as we adhere to the received opinions."

Now let us consider Hume's view of Space. Hume, like Leibnitz, associates with Space only the idea of the simultaneous order which exists between the material objects which occupy Space. This view he expresses as follows:—

DAVID HUME  
(1711-1776)

"The<sup>2</sup> idea of space is conveyed to the mind by two senses, the sight and touch, nor does anything ever appear as extended that is not either visible or tangible. That compound impression, which represents extension, consists of several lesser impressions, that are indivisible to the eye or feeling, and may be called impressions of atoms or corpuscles endowed with colour and solidity. But this is not all. 'Tis not only requisite that these atoms should be coloured or tangible in order to discover themselves to our senses; 'tis also necessary we should preserve the idea of their colour or tangibility in order to comprehend them by our imagination. There is nothing but the idea of their colour or tangibility, which can render them conceivable by the mind. Upon the removal of the ideas of these qualities, they are utterly annihilated to the thought or imagination.

Now such as the parts are, such is the whole. If a point be not considered as coloured or tangible, it can convey to us no idea; and consequently the idea of extension, which is composed of the ideas of these points, can never possibly exist. But if the idea of extension really can exist, as we are conscious it does, its parts must also exist; and in order to that, must be considered as coloured or tangible. We have therefore no idea of space or extension, but when we regard it as an object of our sight or feeling.

... The idea<sup>3</sup> of space or extension is nothing but the idea of visible or tangible points distributed in a certain order."

The following shows how much weight ought to be assigned

<sup>1</sup>The reference here is to Clarke's *Demonstration of the Being and Attributes of God*. London, 1706.

<sup>2</sup>D. Hume, *Treatise of Human Nature*. Bk I. pt ii. sect. iii.

<sup>3</sup>*Ibid.* Section v.

to those charges about dealing in 'occult causes' and offering supernatural explanations which the continental critics (and particularly Leibnitz) brought against Newton's conception of gravitation. The passages quoted are from the letters of Leibnitz to Clarke (the fourth and fifth) :-

### LEIBNITZ AND CLARKE CORRESPONDENCE

#### Leibnitz to Clarke

" 'Tis<sup>1</sup> also a supernatural thing, that bodies should attract one another at a distance, without any intermediate means, and that a body should move round without receding in the tangent, though nothing hinder it from so receding. For these effects cannot be explained by the nature of things . . . . For<sup>2</sup> it is a strange imagination to make all matter gravitate, and that towards all other matter, as if each body did equally attract every other body according to their masses and distances ; and this by an attraction properly so called, which is not derived from an occult impulse of bodies ; whereas the gravity of sensible bodies towards the centre of the earth, ought to be produced by the motion of some fluid. And the case must be the same with other gravities, such as is that of the planets towards the sun, or towards each other . . . .

<sup>3</sup>I objected, that an attraction properly so called, or in the scholastic sense, would be an operation at a distance, without any means intervening. The author (Clarke) answers here, that an attraction without any means intervening would be indeed a contradiction. Very well ! But then what does he mean, when he will have the sun to attract the globe of the earth through an empty space ? Is it God himself that performs it ? But this would be a miracle, if ever there was any. This would surely exceed the powers of creatures.

Or, are perhaps some immaterial substances, or some spiritual rays or some accident without a substance, or some kind of *species intentionalis* or some other I-know-not-what, the means by which this is pretended to be performed ? Of which sort of things the author seems to have still a good stock in his head, without explaining himself sufficiently . . . . If the means which cause an attraction properly so called, be constant, and at the same time inexplicable by the powers of creatures, and yet be true, it must be a perpetual miracle. And if it is not miraculous, it is false. 'Tis a chimerical thing, a scholastic occult quality. The case would be the same as in a body going round without receding in the tangent, though nothing that can be explained hindered it from receding ; which is an instance I have already alleged ; and the author has not thought fit to answer it, because it shews too clearly the difference between

<sup>1</sup>Correspondence of Leibnitz and Clarke. From Leibnitz to Clarke. 4th Letter, § 45.

<sup>2</sup>Ibid. 5th Letter.

<sup>3</sup>Ibid. §§ 118, 119.

what is truly natural on the one side, and the chimerical occult quality of the schools on the other."

SAMUEL CLARKE

(1675-1729)

To Leibnitz's objections, Clarke, speaking for Newton, replies as follows :

"That<sup>1</sup> one body should attract another without any intermediate means is indeed not a *miracle*, but a *contradiction*; for, 'tis supposing something to act where it is not. But the means by which two bodies attract each other may be invisible and intangible and of a different nature from mechanism; and yet, acting regularly and constantly, may very well be called natural, being much less wonderful than animal motion, which yet is never called a miracle. . . .

That<sup>2</sup> the sun attracts the earth, through the intermediate void space; that is, that the earth and sun gravitate towards each other, or tend (whatever be the cause of that tendency) towards each other, with a force which is in direct proportion to their masses, or magnitudes or densities together, and in an inverse duplicate proportion of their distances, and that the space between them is void, that is, hath nothing in it which sensibly resists the motion of bodies passing transversely through: all this is nothing but a phenomenon or actual matter of fact found by experience. That this phenomenon is not produced *sans moyen*, that is, without *some* cause capable of producing such an effect, is undoubtedly true. Philosophers therefore may search after and discover that cause, if they can, be it mechanical or not mechanical. But, if they cannot discover the cause, is therefore the effect itself, the phenomenon, or the matter of fact discovered by experience (which is all that is meant by the words attraction and gravitation) ever the less true? Or is a manifest quality to be called occult because the immediate efficient cause of it is . . . not yet discovered? When a body moves in a circle, without flying off in the tangent, 'tis certain there is something that hinders it; but if in some cases it be not . . . yet discovered what that something is, does it therefore follow that the phenomenon itself is false? This is very singular arguing indeed."

We prelude our extracts from Kant with the observation that the most noteworthy thing in connection with Kant's views about Space is not his notion of Space according to which this entity is conceived as a category of the apprehending mind which, from within its own resources, itself supplies the spatial frame imposed on all sense-experiences coming from without. Rather, it is the amazing degree of uncertainty from which the

<sup>1</sup>*Correspondence of Leibnitz and Clarke. Clarke's 4th Reply, §15.*

<sup>2</sup>*Ibid. Clarke's 5th Reply, §§ 118-123.*

thought of Kant suffered in relation to the question of the nature and status of this primary entity of the universe. Thus, Kant changed again and again and yet again his views on Space: a fact which throws a most significant light on the history of post-Kantian thought, based as the latter has so very largely been on the Kantian. For no fact could better reveal how remote modern philosophy is from achieving solid foundations than the unconquerable uncertainty of this great modern philosopher as to the character and status of the universe's primary energy, Space. An account of this Kantian uncertainty is given below in a footnote.<sup>1</sup> The following passage is taken

<sup>1</sup> Kant in his youth attacked the solution of this problem [of space], and his reflections on it occupied him till his old age. At first he was under the influence of Leibniz and Wolff, but after that, as he himself says in the Preface of the *Prolegomena*, he was awakened from his dogmatic slumber by the philosophy of Hume, which closely resembles that of Berkeley. He speaks of his relation to Berkeley's ideas in the Appendix to the *Prolegomena*, contrasting his critical idealism to the dogmatic idealism of Berkeley. On the other hand, from his youth up, he was under the powerful influence of Newton whom he took as his authority on questions of space, mechanics and cosmology. In his first work, *Gedanken über die wahre Schätzung der lebendigen Kräfte* (1746), written when he was twenty-two, he, with the daring of youth, attacks the problem why space has three dimensions and finds the reason to be that the soul receives impressions in accordance with Newton's law of gravitation, inversely as the square of the distance. In 1755 he published his *Allgemeine Naturgeschichte und Theorie des Himmels*, in which he suggested that the planets were formed out of a rotating mass. This hypothesis was afterwards developed by Laplace, and is therefore known as the Kant-Laplace theory. In this book he defends Newton's view that space is prior to all things contained in it which have an objective existence. Nevertheless, in spite of being carried away by the Newtonian philosophy, in the first of the works in which he specially deals with the question whether motion is absolute or relative (*Neuer Lehrbegriff der Bewegung und der Ruhe* (1755), he decidedly adopts relativism, takes up the definite position that all motion is relative, and, from this point of view, hits upon an inaccurate statement of the law of inertia . . . But afterwards he again yields to the authority of Newton and Euler, and in his *Versuch, den Begriff der negativen Grossen in die Weltweisheit einzuführen* (1763), he defends Newton's views on space and time, making considerable use of Euler's arguments. About this time Kant finally got free from the influence of the philosophy of Leibniz and Wolff and, in opposition to their school, took the view that space had an objective existence. In his interesting memoir (1769), *Von dem ersten Grunde des Unterschiedes der Gegenen im Raume*, he makes use of symmetrical bodies to show that absolute space has its own reality not merely independent of the existence of matter, but as furnishing an indispensable condition of its existence. But within two years Kant renounces the idea of an objective space. Our well-known [Russian] philosopher, Vladimir Sergeivitch Soloviev, in his article on Kant (in Brockhaus and Ephron's encyclopaedic dictionary), attributes this change in Kant's view to the influence of the Swedish mystic Swedenborg (1668-1772). Kant's *Träume eines Geistersehers* (1766) is devoted to an analysis of the mystical philosophy of Swedenborg. Kant, who was then under the influence of the English empirical philosophy, was extremely sceptical as to

from the *Critique of Pure Reason*, vol. ii. pp. 20-36 (Max Müller's translation):

IMMANUEL KANT

(1724-1804)

"By means of our external sense, a property of our mind (*Gemüth*) we represent to ourselves objects as external or outside ourselves, and all of these in space. It is within space that their form, size, and relative position are fixed or can be fixed. The internal sense by means of which the mind perceives itself or its internal state, does not give an intuition (*Anschauung*) of the soul itself, as an object, but it is nevertheless a fixed form under which alone an intuition of its internal state is possible, so that whatever belongs to its internal determinations (*Bestimmungen*) must be represented in relation of time. Time cannot be perceived

Swedenborg's theories and visions, but one of the fundamental ideas of the Swedish mystic—the doctrine of the ideality of space and time—became, in 1770, one of the fundamental ideas of the philosophy of the sage of Königsberg. Schopenhauer, and Cassirer in his *Erkenntnisproblem*, shewed that the doctrine of the ideality of the world had already been expounded by Maupertuis in the year 1752. By this or some other means, in his Latin dissertation *De mundi sensibilis et intelligibilis forma atque principis* (1770) Kant first, says Soloviev, appears as an original thinker, with a new and profound view on the subjective character of space and time. This doctrine of space as *a priori*, preceding all experience, a subjective form of our contemplation, constitutes one of the most important doctrines of the *Critique of Pure Reason* which have put their stamp on the whole gnosiology of Kant . . . .

Neither in his *Critique of Pure Reason* (the first edition appeared in 1781, the second in 1787) nor in his *Prolegomena zu einer jeden künftigen Metaphysik* (1783) does Kant deal specially with . . . the problems of absolute space, time and motion due to Newton's doctrines. But these questions continued to occupy Kant, and in 1786 he published his *Metaphysische Anfangsgründe der Naturwissenschaften*. This comparatively small work is, on the one hand, an apology for the mechanical view of the universe ('natural science is throughout either a pure or an applied teaching about motion'—Bax's translation, 1883, p. 147) and, in particular, action at a distance; on the other hand, it is a commentary on the foundations of Newtonian mechanics. In the *Preface* we find the well-known phrase 'a doctrine of nature can only contain so much science proper as there is in it of applied mathematics' (*Ibid.* p. 141) and two inaccurate prophesies of the impossibility of mathematical chemistry and mathematical psychology. In accordance with the four categories (quantity, quality, relation and modality), the work is divided into four parts in which motion is regarded either as a quantity or as a quality of matter, or in its relation to matter, or from the point of view of modality (possibility, reality, necessity). In the first part Kant brings forward strong arguments in favour of the view that motion can only be relative. But, in the concluding part, by speculative arguments which recall Aristotle's *Physics*, Kant came to the conclusion that 'absolute space is, then, necessary not as a conception of a real object but as a mere idea which is to serve as a rule for considering all motion therein as merely relative.' (*Ibid.* p. 239). With this obscure syllogism, Kant, at the end of his life, thought he could reconcile the defence of Newton's position in regard to absolute space and motion with his own doctrine of space which involves a fundamental denial of those metaphysical views of Newton on which the *Principia* is based."—Vasiliev, *Space, Time, Motion*, pp. 72-8.

(angeschaut) externally, as little as space can be perceived as something within us. What then are space and time? Are they real beings? Or, if not that, are they determinations or relations of things, but such as would belong to them even if they were not perceived? Or, lastly, are they determinations and relations which are inherent in the form of intuition only, and therefore in the subjective nature of our mind, without which such predicates as space and time would never be ascribed to anything? In order to understand this more clearly, let us first consider space.

1. Space is not an empirical concept which has been derived from external experience. For in order that certain sensations should be referred to something outside myself, *i.e.* to something in a different part of space from that where I am; again, in order that I may be able to represent them (*vorstellen*) as side by side, that is, not only as different, but as in different places, the representation (*Vorstellung*) of space must already be there. Therefore the representation of space cannot be borrowed through experience from relations of external phenomena, but, on the contrary, those external phenomena become possible only by means of the representation of space.

2. Space is a necessary representation *a priori*, forming the very foundation of all external intuitions. It is impossible to imagine that there should be no space, though one might very well imagine that there should be space without objects to fill it. Space is therefore regarded as a condition of the possibility of phenomena, not as a determination produced by them; it is a representation *a priori* which necessarily precedes all external phenomena.

3. On this necessity of an *a priori* representation of space rests the apodictic certainty of all geometrical principles, and the possibility of their construction *a priori*. For, if the intuition of space were a concept gained *a posteriori*, borrowed from general external experience, the first principles of mathematical definition would be nothing but perceptions. They would be exposed to all the accidents of perception, and there being but one straight line between two points would not be a necessity, but only something taught in each case by experience. Whatever is derived from experience possesses a relative generality only, based on induction. We should therefore not be able to say more than that, so far as hitherto observed, no space has yet been found having more than three dimensions.

4. Space is not a discursive or so-called general concept of the relations of things in general, but a pure intuition. For, first of all, we can imagine one space only, and if we speak of many spaces, we mean parts only of one and the same space. Nor can these parts be considered as antecedent to the one and all-embracing space, and, as it were, its component parts out of which an aggregate is formed, but they can be thought of as existing within it only. Space is essentially one; its multiplicity, and therefore the general concept of spaces in general, arises entirely from limitations. Hence it follows that, with respect to

space, an intuition *a priori*, which is not empirical, must form the foundation of all conceptions of space. In the same manner all geometrical principles, *e.g.* that in every triangle two sides together are greater than the third, are never to be derived from the general concepts of side and triangle, but from an intuition, and that *a priori*, with apodictic certainty.

5. Space is represented as an infinite quantity. Now a general concept of space, which is found in a foot as well as in an ell, could tell us nothing in respect to its quantity. If there were not infinity in the progression of intuition, space, as a concept of relations, could never contain the principle of infinity . . . .

*Conclusions from the foregoing Concepts.*

a. Space does not represent any quality of objects by themselves, or objects in their relation to one another *i.e.* space does not represent any determination which is inherent in the objects themselves, and would remain, even if all subjective conditions of intuition were removed. For no determinations of objects, whether belonging to them absolutely or in relation to others, can enter into our intuition before the actual existence of the objects themselves, that is to say, they can never be intuitions *a priori*.

b. Space is nothing but the form of the phenomena of all external senses; it is a subjective condition of our sensibility, without which no external intuition is possible for us. If then we consider that the receptivity of the subject, its capacity of being affected by objects, must necessarily precede all intuition of objects, we shall understand how the form of all phenomena may be given before all real perceptions, may be, in fact, *a priori* in the soul, and may, as a pure intuition by which all objects must be determined, contain, prior to all experience, principles regulating their relations.

It is therefore from the human standpoint only that we can speak of space, extended objects, etc. If we drop the subjective condition under which alone we can gain external intuition, according as we ourselves may be affected by objects, the representation of space means nothing. For this predicate is applied to objects only in so far as they appear to us, and are objects of our senses. The constant form of this receptivity, which we call sensibility, is a necessary condition of all relations in which objects, as without us, can be perceived; and, when abstraction is made of these objects, what remains is that pure intuition which we call space. As the peculiar conditions of our sensibility cannot be looked upon as conditions of the possibility of the objects themselves, but only of their appearance as phenomena to us, we may say indeed that space comprehends all things which may appear to us externally, but not all things by themselves, whether perceived by us or not, or any subject whatsoever. We cannot judge whether the intuitions of other thinking beings are subject to the same conditions which determine our intuition, and which for us are generally binding. If we add the limitation of a judgment

to a subjective concept, the judgment gains absolute validity. The proposition 'all things are beside each other in space,' is valid only under the limitation that things are taken as objects of our sensuous intuition (*Anschauung*). If I add that limitation to the concept and say 'all things, as external phenomena, are beside each other in space,' the rule obtains universal and unlimited validity. Our discussions teach therefore the reality, *i.e.* the objective validity, of space with regard to all that can come to us externally as an object, but likewise the ideality of space with regard to things, when they are considered in themselves by our reason, and independent of the nature of our senses. We maintain the empirical reality of space, so far as every possible external experience is concerned, but at the same time its transcendental ideality; that is to say, we maintain that space is nothing, if we leave out of consideration the condition of a possible experience. . . . The transcendental conception . . . of all phenomena in space, is a critical warning that nothing which is seen in space is a thing by itself, nor space a form of things supposed to belong to them by themselves but that objects by themselves are not known to us at all, and that what we call external objects are nothing but representations of our senses, the form of which is space, and the true correlative of which, that is the thing by itself, is not known, nor can be known by these representations, nor do we care to know anything about it in our daily experience."

The Kantian view of the non-objectivity of Space led quickly to consequences which can be described either under the assertion that the 'Platonic' view of the world gave way to the 'Democritean,' or under the claim that religion gave way to irreligion. For, in that religion in its fundamentals reduces to a view about the non-ultimacy of *matter* (and events), postulating as it does, the trinitarian view that, underneath and within material particles, exist the dual first principles: the dual first causes: the two uncaused, metaphysical, supra-material, supernatural, elemental causes; and these latter being Space and Time, the denial of the objective existence of Space and Time equates with atheism which, itself, stands precisely for the doctrine of *the ultimacy of matter*. Hence the meaning of the emergence of the 'positivist' philosophy of the French thinker Auguste Comte; for positivism is a scientific creed which, taking matter as ultimate, reduces science to an affair of the description of the behaviour of material entities. Hence the unity of viewpoint which, *via* Comtism, exists between Kant's familiar dictum: "a doctrine of nature can only contain as much science proper



as there is in it of applied mathematics," and that claim with which Kirchhoff (1874) opens his treatise on *Mechanics* according to which mechanics consists in "the simplest complete description of motion," motion being conceived (needless, perhaps, to add) as the attribute of matter. Hence, too, the reason that Comte refused to use the word 'cause' in science, recognising only the term 'law' in the sense of a descriptive mathematical formula, his expressed intention being to dismiss completely any lingering 'spookish' notion that, behind phenomena, there exist supra-material realities which have intrinsic power to create and eventuate in specific effects.

Now the positivist tradition has been rendered very formidable in modern times by reason of the adhesion to it of thinkers of the very highest scientific prestige: thinkers such as, for instance, Helmholtz, Mach, Stallo, Clifford, Karl Pearson, Poincaré and Einstein, the most zealous among these being Mach; and the most influential—though least direct—being Einstein:

"In<sup>1</sup> 1904, in the sixth edition of his *Mechanics*, Mach announced that 'the number of decided relativists who deny the barely intelligible hypothesis of absolute space and time is growing rapidly and soon there will not be one prominent partisan of the contrary opinion' . . . [and] Einstein's general theory of relativity is based on epistemological premisses which coincide with the ideas of Mach. But, in order that it might be constructed and accepted with . . . sympathy . . . it required two things [should be changed]; *first*, that the evolution of ideas about space should change the prevailing view about the relation between . . . Space and the phenomena in it (the view, to use Weyl's clever expression, of space as a hired barracks); *second*, instead of a three-dimensional space and a one-dimensional time, there should be worked out a general idea of the world [as] an aggregate of events in a manifold of four dimensions."

Now, on the subject of Space we do not propose to quote Professor Einstein himself in that the latter's pronouncements thereon are of so varied a character that they urgently call for—and can only be adequately treated in—a minute examination based on a chronologically-arranged table of his various declarations. So much is this so that one cannot escape being put in mind of the fact that the positivist tradition, under the influence of Helmholtz, had become a strong 'back to Kant' movement, while what diversity and contradiction reigns in

<sup>1</sup>A. V. Vasiliev, *Space, Time and Motion*. p. 91ff.

Kant's views about Space (and Time) we have just now had an opportunity of judging. Thus, in one place, the great mathematician Einstein subscribes to the doctrine of Space-Time and to the quasi-idea of a fourth dimension. In another, he declares Space to be divested of 'the last vestige of physical reality.' In another, he suggests the propriety of identifying Space with the aether, while the conception of the aether itself is, he says, one of the absolutely indispensable instruments of science. Elsewhere, however, he has so expressed himself that very prominent Einsteinians make their leading scientific line take the form of the bluntest denial of an aether. This being the situation, we find it preferable here to quote not Einstein but an Einsteinian; this for this reason if for no other, *i.e.* that the Einsteinian has not appreciated as Professor Einstein himself seems to have, the value of reserve.

"The most fundamental conceptions in physics are those of Space and Time.<sup>1</sup> The unrivalled achievements in research, which, in past centuries, have enriched our knowledge of physical nature, left these underlying conceptions untouched until 1905. The efforts of physicists had always been directed solely to the *substratum* which occupied space and time; they had taught us to know, more and more accurately, the constitution of matter and the law of events which occurred *in vacuo*, or as it had, till recently, been expressed, in the 'aether.' Space and time were regarded, so to speak, as vessels, containing this substratum and furnishing fixed systems of reference, with the help of which the mutual relations between bodies and events had to be determined; in short, they actually played the part which Newton had set down in the well-known words: 'Absolute, true and mathematical time flows in virtue of its own nature uniformly and without reference to any external object'; and 'Absolute space by virtue of its own nature and without reference to any external object, always remains the same and is immovable' . . . [But] space,<sup>2</sup> time and gravitation play, in Einstein's physics, a part fundamentally different from that assigned to them by Newton. The importance of these results, in their bearing upon the underlying principles of natural philosophy, is so stupendous that even those who have only a modest interest in physics or the theory of knowledge cannot afford to pass them by. One has to delve deep into the history of science to discover theoretical achievements worthy to rank with them. The discovery of Copernicus might suggest itself to the mind; and, if Einstein's results do not exert as great an influence on the world-wide view of people

<sup>1</sup>Moritz Schlick, *Space and Time in Contemporary Physics*, p. 2. (English translation, 1920.)

<sup>2</sup>*Ibid.* pp. 4-5.

in general as the Copernican revolution, their importance, as affecting the purely theoretical picture of the world, is correspondingly greater, inasmuch as the deepest foundations of our knowledge concerning physical nature have to be remodelled much more radically than after the discovery of Copernicus . . . .

The<sup>1</sup> most fundamental question which may be asked concerning Space and Time is . . . are Space and Time actually real? From the earliest times an inconclusive controversy was waged by the philosophers as to whether empty space, the *kenon*, were real or merely identical with nothingness. But even at the present day not everyone . . . would straightway answer this question by a simple negative or affirmative. No one, indeed, regards Space and Time as real in quite the same sense as the chair on which I sit, or the air which I breathe. I cannot deal with space as with material objects or with energy, which I can transport from one place to another, manipulate at will, buy and sell. Everyone feels that there is some difference between them; Space and Time are, in some sense or other, less independent than the things which exist in them; and philosophers have often emphasised this lack of independence by stating that neither exists *in itself*. We could not speak of Space if there were no material bodies; and the conception of Time would likewise be devoid of meaning if no events or changes took place in the world. But, even for the popular mind, Space and Time are not merely *nothing*; for are there not great departments of engineering which are wholly devoted to overcoming them?

Of course the decision . . . depends upon what is understood by 'reality.' Now, though this conception be difficult, perhaps even impossible, to define, yet the physicist is in the happy position of being able to satisfy himself with a definition which allows him to fix the limits of his realm with absolute certainty. 'Whatever can be measured is real.' The physicist may use this sentence of Planck's as a general criterion, and say that only that which is measurable possesses indisputable reality; or, to define it more carefully, physical objectivity.

Are Space and Time measurable? The answer seems obvious. What would indeed be measurable if it were not Space and Time? Do not our clocks and measuring-scales serve just this purpose? Is there not even a special science which is concerned with nothing else than with the measurement of space, without reference to any bodies, *viz.* metrical geometry?

But let us be cautious . . . As long as we suppose that all measuring instruments, including our own bodies with their sense-organs, share in the local deformation for each place, the whole transformation immediately becomes unascertainable; it does not 'really' exist for the physicist . . . . The<sup>2</sup> world of science pays homage to the triumphant power with which the correctness of the physical content of the theory of relativity

<sup>1</sup>*Ibid.* p. 22ff.

<sup>2</sup>*Ibid.* p. 66ff.

and the truth of its philosophic foundations are confirmed by experience. The assertion that *all* motions and accelerations are relative is equivalent to the assertion that space and time have no physical objectivity. One statement comprehends the other. Space and time are not measurable in themselves : they only form a framework into which we arrange physical events. As a matter of principle, we can choose this framework at pleasure ; but actually we do so in such a way that it conforms most closely to observed events . . . we thus arrive at the simplest formulation of physical laws. An order has no independent existence, but manifests itself only in ordered things. Minkowski had, as a result of the special theory of relativity, enunciated the proposition in terse language (perhaps not wholly free from criticism) that space and time *in themselves* are reduced to the status of mere shadows, and only an indissoluble synthesis of both has an independent existence. So, on the basis of the general theory of relativity, we may now say that this synthesis itself has become a mere shadow : and abstraction : and that only the oneness of space, time and things has an independent existence.

In Newton's mechanics, and, indeed, in pre-Einsteinian physics altogether, space played a part which was altogether independent of any considerations about matter. Just as a vessel can exist free of content and preserve its form, space was to preserve its properties, whether 'occupied' by matter or not. The general theory of relativity has taught us that this view is groundless and misleading. Space, according to *it*, is possible only when matter is present, which then determines its physical properties.

This standpoint, which arises out of the general theory of relativity, is proved to be the only justifiable one, when we approach the cosmological question of the structure of the universe as a whole. Certain difficulties had already been encountered earlier, which clearly showed that Newton's cosmology was untenable ; but it never suggested itself to anyone that Newton's doctrine of space might be partly responsible for these difficulties. The relativity theory yields an unexpected and wondrous solution of the discrepancies, which is of exceeding importance for our picture of the world.

It was generally believed by the ancients that the cosmos was bounded by a mighty sphere, to the inner surface of which the fixed stars were thought to be attached in some way. Even Copernicus did not succeed in destroying this belief . . . . In comparison with this *naïve* view, the picture of the world must have seemed to become both enriched and exalted when Giordano Bruno propounded the doctrine of the infinity of the worlds in space. It was alluring to the imagination to think of the innumerable stars as being also suns similar to our own, and poised in space, and of space as extending to infinity, not limited by any rigid sphere, nor enclosed by any 'crystal dome' . . . . From the point of view of natural philosophy, such a picture of the world would be highly

satisfactory. It would have neither beginning nor end, neither a centre nor boundaries, and space would nowhere be empty.

But the celestial mechanics of Newton is incompatible with this view . . . . On Newton's theory . . . the cosmos must present the picture of an island of finite extent surrounded on all sides by infinite 'empty space' . . . . But such a picture of the universe would be unsatisfactory in the highest degree. The energy of the cosmos would constantly decrease, as radiation would disappear into infinite space; and matter, too, would gradually disperse. After a certain time the world would have died an inglorious death . . . . Great interest thus circles round the question whether it is not possible to solve the cosmological problem by some new theory which is entirely satisfactory in every way. The suggestion forces itself upon us that the general theory of relativity might be able to do this; for, in the first place, it gives us information about the nature of gravitation towards which the Newtonian law represents only an approximation; secondly, it sheds an entirely new light on the problem of space. We have therefore reason for hoping that it will give us important disclosures about the question of the finitude of the world in space . . . .

As we know, the space of the new theory of gravitation is not Euclidean in structure, but departs somewhat from this shape, conforming in its measure-relations to the distribution of matter. Now if it were possible that, corresponding to the world-picture of Giordano Bruno, a uniform distribution of stars on the average existed for infinite space, then, in spite of deviations in particular places, space could still roughly be called Euclidean as a whole: just as I might call the ceiling of my room plane, by forming an abstraction which neglects the little roughnesses of its surface. Calculation, however, shows that such a structure of space—Einstein calls it quasi-Euclidean—is *not* possible in the general theory of relativity. On the contrary, according to this theory, the mean density of matter must necessarily be zero in infinite non-Euclidean space, *i.e.* we are again driven to the world-system which was discussed above, **which** would consist of a finite aggregation of matter in otherwise empty space of infinite dimensions.

This view, which was unsatisfactory of Newton's theory, is still more so for the general theory of relativity. Not only do the objections which were pointed out above apply to this case also, but new ones arise in addition . . . . We thus find that the second method likewise does not lead to the goal. The inference is that, according to the relativity theory, the universe cannot be a finite complex of stars existing in infinite space; this, after the above remarks, means that we cannot regard space as quasi-Euclidean. What possibility now remains? At first it seemed as if no reply was forthcoming from the theory; but Einstein soon discovered that it was still possible to generalise his original gravitational equations slightly further. After this small extension of the formulæ, the general

theory of relativity has the inestimable advantage of giving us an unmistakable answer, whereas the previous Newtonian theory left us in total uncertainty, and could only rescue us from forming a highly undesirable picture of the universe by making new and unconfirmed hypotheses.

If we again suppose the matter of the universe to be distributed with absolutely uniform density and to be at rest, the calculation leaves no doubt that space is *spherical* in structure . . . [But] since matter does not actually occupy space uniformly and is not at rest, but only shows the same density of distribution as a *mean*, we must regard space as quasi-spherical (*i.e.* on the whole, it is spherical, but departs from this form in its smaller parts, just as the earth is only an ellipsoid as a whole, but is, when considered in smaller portions, possessed of an irregularly formed surface).

What the term 'spherical space' is intended to convey is probably known to the reader through Helmholtz's popular essays. He, as we know, describes the three-dimensional analogy to a spherical surface; the former has, like the latter, the property of being circumscribed, *i.e.* it is unlimited and yet finite. The comparison with the surface of a sphere must not mislead one to confuse in one's mind 'spherical' with sphere-shaped. A sphere is bounded by its surface, the latter cutting it out of space as a part of it; spherical space, however, is not a part of infinite space, but has simply no limits. If I start out from a point of our spherical world, and continually proceed along a 'straight line,' I shall never reach a limiting surface. The 'crystal dome' which, according to the ancients, was supposed to encompass the universe, exists just as little for Einstein as it did for Giordano Bruno. There is no space outside the world. Space exists only in so far as matter exists, for space, in itself, is merely a product of abstraction. If, from any point, we draw straight lines in all directions, these at first, of course, diverge from one another, but then approach again, in order finally to meet at one point as before. The totality of such lines fills the world-space entirely, and the volume of the latter is finite . . . The structure of the universe, which the general theory of relativity unveils to us, is astounding in its logical consistency, imposing in its grandeur, and equally satisfying for the physicist as for the philosopher. All the difficulties which arose from Newton's theory are overcome; yet all the advantages which the modern picture of the world presents, and which elevate it above the view of the ancients, shine with a clearer lustre than before. The world is not confined by any boundaries, and is yet harmoniously complete in itself. It is saved from the danger of becoming desolate, for no energy or matter can wander off to infinity, because space is *not* infinite. The infinite space of the cosmos has certainly had to be rejected; but this does not signify such sacrifice as to reduce the sublimity of the picture of the world. For that which causes the idea of the infinite to inspire sublime feelings is, beyond doubt, the idea of the endlessness of space (actual infinity could

not in any case be imagined); and this absence of any barrier, which excited Giordano Bruno to such ecstasy, is not infringed in any way.

By a combination of physical, mathematical and philosophic thought, genius has made it possible to answer, by means of exact methods, questions concerning the universe which seemed doomed for ever to remain the objects of vague speculation. Once again we recognise the power of the theory of relativity in emancipating human thought, which it endows with a freedom and a sense of power such as has been scarcely attained through any other feat of science."

NEWTON  
(1642-1729)

Brought into relation with the criterion of what constitutes the religious (cosmogony), the Newtonian philosophy can be argued about as follows:—Religion means, basically, a certain theory of the status and constitution of matter. Again, religion means the apprehension of the meaning of the cosmogonic trinity. The apprehension of the trinity (religion) reduces therefore to a view about the constitution of matter. Now, construing the objectives of the religious consciousness after this manner, Newton shews himself to be, conspicuously, a God-impressed man. That is, he is a supernaturalist and not at all a naturalist. He is a metaphysician, not a (pure) physicist: not a materialist: not an atheist. He does not regard matter as an ultimate element, eternally existent, high above all need of creators and causes. For, notwithstanding his lip-service to the Democritean doctrine of *atoms and the void* (inspired, perhaps, by Bacon's very unfortunate praise of 'Democritus') and his complimentary remarks about Gassendi's philosophy, Newton's Democriteanism will not stand the test of scrutiny, material atoms being, for him, *not* the eternal elements. It is true, certainly, that he regarded them as 'first creations,' and as being incapable of being broken down by any power save that which gave birth to them, but the atom never rose higher in his esteem than a mere creation. This limited extent to which Newton regards atoms as the 'bricks' of the world of nature can be gathered from a passage in the *Optics*, where, after allowing for the fact of the unique resistance which atoms offer to processes of disintegration, Newton asserts, unmistakably, their created character:

"All these things being considered, it seems probable to me that

God, in the beginning, formed matter in solid, massy, hard, impenetrable, movable particles, of such size and figures, and with such other properties, and in such proportion to Space as most conduced to the end for which he formed them; and these particles, being solids, are incomparably harder than any porous bodies compounded of them, even so very hard as never to wear out or break in pieces, no ordinary power being able to divide what God himself made one in the first creation."

Hence the great permanence of the entity, *nature* :

"While the particles (atoms) continue entire, they may compose bodies of one and the same nature and texture in all ages; but should they wear away or break in pieces, the nature of things depending on them would be changed . . . Therefore, that nature may be lasting, the changes of corporeal things are to be placed only in the various separations and new associations and motions of these permanent particles."

And just as, for Newton, the material atom was no element, so, for him, the void was no nonent. For Newton, Space was an absolute: a fundamental reality quite different from matter. It was the orb of heaven and part of the immaterial 'body' of God. It was God's '*sensorium*,' as Newton terms it: the divine capital orb with the 'brain' ('inner seat of gravitation': world-mind) inside. Thus, at the close of his questions in the *Optics*, we find Newton persuasively asking:

"Do not these phenomena of nature make it clear, that there is a being, incorporeal, living, omnipresent, who, in infinite Space as in his sensorium, sees, discerns and understands everything most intimately and with absolute perfection?"

Consonantly with this, the world-entity which transmits the attractions or pulls whereby bodies of matter are drawn together across distances, great or small, is (or, rather, ought *frankly* to have been) for Newton, God; and Newton very hotly repudiated the suggestion that he taught (as his continental critics declared) that gravitational forces ('attractions') act 'at a distance':

"The growth of new systems out of old ones, without the mediation of a Divine Power, seems to me absurd . . . It is inconceivable that brute matter should, without the mediation of something else which is not material, operate upon and affect other matter, without mutual contact; as it must do, if gravitation, in the sense of Epicurus, be essential and inherent in it. And this is one reason why I desired you would not ascribe innate gravity to me. That gravity should be innate, inherent and essential to matter, so that one body may act upon another at a distance through a vacuum, without the mediation of anything else, by



and through which their action and force may be conveyed from one to another, is to me so great an absurdity that I believe no man who has, in philosophical matters, a competent faculty of thinking can ever fall into it. Gravity must be caused by an agent acting constantly according to certain laws; but whether this agent be material or immaterial I have left to the considerations of my readers." (*Letter iii to Bentley.*)

But here, in this matter of whether the connecting medium which conveys the pulls of gravity be material or 'immaterial' we have a question of first importance [and one on which Newton himself held (as we have just seen) a very decided opinion] left open, as it were, for others to deem important or not as they chose; and, most unfortunately, the immediate disciples of Newton, mathematicians primarily rather than philosophers (*e.g.* Roger Cotes who edited for Newton the second edition of the *Principia*), took up the position that the entire question of the character of the spatial matrix (if any) which linked material bodies together and transmitted gravitational influences *could be ignored*. That is, they held that, when they had described the mutual gravitation of heavenly bodies in terms of Newton's law, they had given a complete quantitative account of the situation. They accordingly limited their efforts to the investigating and measuring of the attractions and repulsions of bodies without attempting to account for the fact of *how these could be*: that is, without going into the question of the character of the underlying material entity which, as the attractions' vehicle (and, indeed, their very source) made them possible. The consequence was that Newton found himself belaboured in the matter on account of two directly contrary views, and by the self-same opponents. Thus he was accused, for instance, of teaching the nonsense that action could take place 'at a distance,' (Space itself being regarded as 'nothing'). On the other hand, he was accused of regarding Space as, at once, God, and as a corporeal entity: this latter wholly in spite of the fact that Newton distinguished between substances and matter, and, accordingly, distinguished the categories of incorporeal substance (Space: God) and corporeal substance (the matter enmeshed and cradled *in* Space the omnipresent God). Of the charges brought by Leibnitz about 'action at a distance' ('occult forces') we have already given specimens of, the Leibnitzian

charges in this connection being the origin of the valuable Leibnitz-Clarke correspondence. Thus, in the year 1715, Leibnitz wrote to the Princess of Wales (afterwards Queen Caroline) a letter in which occurs the following :

" It seems that, even in England, natural religion has grown very weak. There are many who hold that souls are corporeal and others who even hold that God himself is corporeal. Newton says that space is the organ which God uses in order to be conscious of things. But, if God is in need of means in order to be conscious of things, it follows that these things cannot wholly depend on God. They cannot be his production. Newton and his followers have a still odder notion of God's work, for, according to them, God has, every now and again, to wind up his work as we wind up a watch which would otherwise stop. God has not, it seems, had enough foresight to give his work perpetual motion. Indeed, the machine which God has made is so imperfect, according to them, that it requires polishing up every now and again by a special effort, and even needs regulating. Like a watchmaker, he reveals the defects of his watch by the number of times he has to correct and retouch it. In my view, the same force and vigour is everywhere in evidence, passing from one thing to another according to laws of nature and the perfect order pre-established. If God performs miracles it is not because nature requires them ; it is on account of grace. To judge otherwise is to entertain a very low idea of God's wisdom and power."

The Princess asked Newton to reply to this letter, but as Newton felt he had, on quite other grounds, reasons to distrust Leibnitz, he put forward the theologian Dr. Samuel Clarke to speak for him.

Nevertheless, although Newton did not regard the atoms as the elements ; nor yet Space as nothing-at-all ; nor yet God as a material entity ; nor yet was guilty of the denial of *the continuity* of the universe which the action-at-a-distance charge reduces to, his philosophy cannot be accepted as satisfactory theologically ; that is to say, from the point of view of the science of the first principles ; *this*, for the reason that Newton could not rise above the usual theological claims made in the name of Christian *monotheism*. Accordingly, in that only *the trinity* can give a valid science of the first principles, Newton was left to struggle with the difficulties and inescapable incoherence of a monotheistic theology. Hence the ' too much ' and ' too little,' at once, of Newtonian high science. As to the ' too much ' : the *excess* of cosmogonic entities : one misses in

Newton the clear statement of the truth that *there is no aether* if by the latter is meant something 'in' Space distinguishable from Space the world-receptacle (Weyl's 'hired barracks') itself. It is true that Newton asserted that no aether could possibly be 'in' Space in the vast interplanetary regions; if, that is, he was to trust to his own interpretations of the mathematical data, but he does not anywhere satisfyingly cut straight across this cosmogonical argument with the unqualified statement that what is called the aether must be the substance Space itself, while to style the latter *aether* is only to make a duplication of terms which is not only needless but very misleading. On this account, Newton does not do away with the need for Occam's razor in his philosophy, and to this extent exhibits a lack of strength and assurance which made Newton's opponents very bold. Yet, even here, he saved himself by the very characteristic Newtonian intellectual integrity; for, while he himself actually canvassed the explanatory power of the postulate of an aether 'in' Space (which his great Dutch contemporary, Huygens, was making great use of), and endeavoured to account for gravitation by differences of pressure in an aether, he did not publish his theory in his lifetime in that, as he said, he:

"was not able, from experiment and observation, to give a satisfactory account of this medium, and the manner of its operation in producing the chief phenomena of nature."

Now, if the notion of an aether proved Newton's philosophic handicap on the excess side, his notion of Time proved his handicap on the side of deficiency. For, as we have seen, the task of formulating an accurate divine philosophy requires a knowledge of the divinity of Time as well as of Space. But Newton laboured under the handicap of having no adequate philosophy of Time, allowing himself to remain, in this exceedingly important matter, a follower of Barrow. Newton thus appears never to have suspected the fact that Time is a divinity complementary to Space. Accordingly, when we seek to summarise Newton's essential contribution to the science of the first principles (theology), we find ourselves made aware of a certain unremedied complexity and perplexity. By natural endowment, by native instinct and taste, Newton was undoubtedly a

theologian, a supernaturalist, a philosopher; but, his lifetime synchronising with the emergence of an essentially *naturalistic* philosophy, he allowed the intellectual fashion of the age to determine the character of all his maturer public utterances. Hence, while Newton continued privately to follow his own native bent as essentially a theologian or student of the divine elements,<sup>1</sup> he made all his maturer public pronouncements conform to the level of that secondary grade of intellectual understanding which constitutes the naturalistic viewpoint. This seems, of course, very reprehensible; but Newton's horror of the rancorous disputes in which his contemporaries involved the impersonal questions of science appears to have settled this side of his life's work for him, the horror itself, no doubt, having its roots in his knowledge of the inordinate physical waste (as so many purely mischievous bodily conflagrations) in which such disputes involved his brain tissues. Perhaps, by this cautious procedure, he did for his age what it had not the sense to do for itself, *i.e.* saved it from killing its goose. On the other hand, the procedure caused him to leave men destitute of that philosophy of gravitation on the large scale with which, in a more favourable atmosphere, one feels he could have provided them. And that he had *not* thus provided them was a fact no one was more aware of than Newton himself. That is, Newton fully comprehended that his formula of the inverse squares did not *explain* gravitation: not even, indeed, gravitations of things of a secondary order [*i.e.* the weights (gravitations) of inert, material bodies], while the fact that he was not relying upon any mere 'gravity-inherent-in-the-material particles themselves' position is made clear as one could wish by his letter to Bentley:

"You sometimes speak of gravity as essential and inherent to matter. Pray do not ascribe that notion to me; for the cause of gravity I do not pretend to know, and therefore would take more time to consider of it." (Letter ii.)

That is, Newton, quite unlike the mathematicians of his own day and later, refused to allow that the mathematical formula under which he had described the rate of approach under

<sup>1</sup>Ironically enough, in the year of the second centenary of his death (1927) Newton was reproached, almost, with the fact that he did so.

which material particles gravitate towards one another was an explanation of *why* they thus gravitated, and it is indeed, ironically enough, just the force of his own objections in this regard that the anti-Newtonian mathematicians of the twentieth century, are beginning to appreciate. We might even claim that Newton was familiar with that notion of the Cosmic Law which we call the 'inner seat of gravitation,' and which is, at once, the cause of the causal nexus and the inner determinant of evolution; a claim which we should base on his own significant reference to the 'copy of the great protoplast,' *i.e.* the great spatial sluice representing the *underlying design* of the scheme of evolution which gives character to space. This occurs in a passage of a letter written quite early in his career (1675, ten years prior to the publication of the *Principia*) by Newton to Oldenburg, the then secretary of the Royal Society. It is, indeed, the letter in which appears Newton's account of an aether: an account put forward, however, expressly as a mere postulate:

"I have . . . found that some, when I could not make them take my meaning when I spake of the nature of light and colours abstractedly, have readily apprehended it when I illustrated my discourses by an hypothesis; for this reason I have here thought fit to send you a description of the circumstances of this hypothesis, as much tending to the illustration of the papers I herewith send you."

Then follows the hypothesis:

"It is to be supposed therein that there is an ethereal medium much of the same constitution with air<sup>1</sup> but far rarer, subtler and more strongly elastic . . . . But it is not to be supposed that this medium is of one uniform matter but composed partly of the main phlegmatic body of ether and partly of other various ethereal spirits . . . for the electric and magnetic efluvia and the gravitational principle seem to argue such variety. Perhaps the whole frame of nature may be nothing but various textures of some certain ethereal spirits or vapours condensed, as it were, by precipitation . . . and, after condensation, *wrought into various forms*, at first, by the *immediate hand of the Creator*, and ever since by the powers of nature which, by virtue of obeying the Creator's command to increase and multiply, *became a complete imitator of the copy set her by the protoplast*. Thus, perhaps, may all things be originated from ether."

<sup>1</sup>We might here point out that, when a substance is postulated as existing in Space and distinct from Space, one naturally construes it as material. Hence the general conception of the aether as a *corporeal* substance rather than an incorporeal.

Is not, we would ask, this prime 'protoplasmic copy' just the supernatural law of motion, prototypal man, 'manna,' the model of the world-man, *i.e.* of the cosmos, which Newton as a Platonist (even though an incomplete one) must have been familiar with? That is, Newton knew enough of the deeper truths of theology to be very well aware that his description of the amounts of the gravitative pulls was no theory of gravitation, but the fact that the seventeenth and eighteenth century mathematicians had not Newton's depth of scientific insight gave rise to a post-Newtonian situation such that we find our nineteenth and twentieth century physicists stating surprisedly that the problem of gravitation was not settled or explained by Newton and as though Newton himself had supposed the contrary. And similarly as regards the matter of non-Euclidean Space which, as we have pointed out elsewhere, is, actually, a question of the Logos: the 'copy set by the protoplast': Newton is far in advance not only of his own times but of our own. Hence, when we find, in the middle of the last century, the young German mathematician Riemann, pupil of Gauss, very briefly and none too clearly, raising the question of an 'inner seat of gravitation,' we need to remind ourselves that he is (without apparently knowing it), raising the question of the protoplasmic copy and the 'Divine arm' which Newton had referred to as determining the primary gravitations and, thereafter, as determining the whole style, matter and behaviour of the fabric of nature. Newton's own sense of the exceedingly limited scope of his published labours in the sphere of the philosophy of gravitation (cosmogony), is expressed in the familiar words with which he brings to a close the *Principia*:

"So far I have expounded the force of gravitation by celestial phenomena and by those of the sea, but I have in no way attempted to assign the cause. That force comes from a power which penetrates to the centre of the sun and of the planets, without any diminution of activity; and it acts not in proportion to the quantity of the surfaces of the particles of matter (as mechanical causes do), but according to the quantity of *solid* matter; and its action extends on all sides to immense distances, diminishing always in exact ratio according to the square of the distances. I have not tried to deduce the cause of these properties of gravitation from the phenomena and I make no hypotheses. For

whatever is not deduced from phenomena is a hypothesis ; and hypotheses, whether they are metaphysical or whether they are physical, whether they presuppose occult qualities or mechanical qualities, have no place in *experimental philosophy*. In this philosophy, propositions are deduced from phenomena and general propositions are obtained by inference. Thus the impenetrability, the mobility and the impetus of bodies and the laws of their movements of gravity have been set down. And it is shown that gravity really exists, and that it acts according to the laws I have expounded and that it applies to all movements of the celestial bodies and of our sea. It is not now possible to add anything concerning the very subtle spirit pervading heavy bodies . . . by whose force and actions the particles of bodies are mutually drawn together at minimal distances, and the contiguous cohere ; and concerning electrical bodies acting at great distances, now attracting now repelling neighbouring bodies ; and how light is emitted, reflected, refracted, inflected, and also how it warms bodies ; and how all sensation is excited and how, in animals, the limbs are moved by volition, to wit, by the vibration of this spirit propagated through the solid threads of the nerves from the external organs of sense to the brain and from the brain to the muscles. These cannot be expounded in a few words, and at present there are not sufficient experiments by which to determine accurately and demonstrate the laws of action of this spirit."

We bring this section to a close with passages which illustrate how deliberate was Newton's supernaturalism : how deliberate his rejection of naturalism. Thus, in a letter to Bentley he writes :

" When I wrote my Treatise about our system, I had an eye upon such principles as might work, with considering men, for the belief of a Deity ; and nothing can rejoice me more than to find it useful for that purpose. But, if I have done the public any service this way, it is due to nothing but industry and patient thought." (*Letter i, 1692*)

And again :

" Sir : The hypothesis of deriving the frame of the world, by mechanical principles, from matter evenly spréad through the heavens, being inconsistent with my system, I had considered it very little before your letters put me upon it, and therefore trouble you with a line or two more about it, if this come not too late for your use : In my former I represented that the diurnal rotations of the planets could not be derived from gravity, but required a Divine Arm to impress them. And though gravity might give the planets a motion of descent towards the sun, either directly or with some little obliquity, yet the transverse motion, by which they revolve in their several orbs, required the Divine Arm to impress them according to the tangents of their orbs. I would now add, that the hypothesis of matter's being at first evenly spread through the heavens, is, in my

opinion, inconsistent with the hypothesis of innate gravity, without a supernatural power to reconcile them; and therefore it infers a Deity. For if there be innate gravity, it is impossible now for the matter of the earth and all the planets and stars to fly up from them, and become evenly spread throughout all the heavens, without a supernatural power; and, certainly, that which can never be hereafter without a supernatural power, could never be heretofore without the same power. You queried whether matter, evenly spread throughout a finite space, of some other figure than spherical, would not, in falling down towards a central body, cause that body to be of the same figure with the whole space; and I answered, yes. But, in my answer, it is to be supposed that the matter descends directly downwards to that body, and that that body has no diurnal rotation. This, Sir, is all I would add to my former letter. (*Letter iv.*, Feb. 11th, 1695.)

Finally, there is the passage from one of the scholia to the *Principia*:

"This<sup>1</sup> most beautiful system of the sun, planets and comets could only proceed from the counsel and dominion of an intelligent and powerful Being. And if the fixed stars and centres of other like systems, these being formed by the like wise counsel, must be all subject to the dominion of One: especially since the light of the fixed stars is of the same nature with the light of the sun, and from every system light passes into all the other systems; and lest the systems of the fixed stars should, by their gravity, fall on each other mutually, he hath placed those systems at immense distances one from another. This Being governs all things, not as the soul of the world, but as Lord over all; and on account of his dominion he is wont to be called Lord God or Universal Ruler; for God is a relative word, and has a respect to servants; and Deity is the dominion of God not over his own body, as those imagine who fancy God to be the soul of the world, but over servants. The Supreme God is a Being eternal, infinite, absolutely-perfect; but a being, however perfect, without dominion, cannot be said, to be Lord God; for we say, my God, your God, the God of Israel, the God of Gods, and Lord of Lords; but we do not say, My Eternal, Your Eternal, the Eternal of Israel, the Eternal of Gods; we do not say my Infinite, or my Perfect; these are titles which have no respect to servants. The word of God usually signifies Lord; but every Lord is not a God. It is the dominion of a spiritual being which constitutes a God; a true supreme, or imaginary dominion makes a true, supreme, or imaginary God. And from his true dominion it follows that the true God is a living, intelligent, and powerful Being, and, from his other perfections, that he is supreme, or most perfect. He is eternal and infinite, omnipotent and omniscient; that is, his duration reaches from eternity to eternity; his presence from infinity to infinity; he governs all things, and knows all things that are or can be done. He is not

<sup>1</sup>*Principia*. General Scholium to Book iii.



eternity or infinity, but eternal and infinite ; he is not duration or space, but he endures and is present. He endures for ever, and is everywhere present ; and by existing always and everywhere, he constitutes duration and space. Since every particle of space is always, and every indivisible moment of duration is everywhere, certainly the Maker and Lord of all things cannot be never and nowhere. Every soul that has perception is, though in different times and in different organs of sense and motion, still the same indivisible person. There are given successive parts in duration, co-existent parts in space, but neither the one nor the other in the person of a man or his thinking principle ; and much less can they be found in the thinking substance of God. Every man, so far as he is a thing that has perception is one and the same man during his whole life, in all and each of his organs of sense. God is the same God, always and everywhere. He is omnipresent not virtually only, but also substantially ; for virtues cannot subsist without substance. In him are all things contained and moved ; yet neither affects the other : God suffers nothing from the motion of bodies ; bodies find no resistance from the omnipresence of God. It is allowed by all that the Supreme God exists necessarily ; and by the same necessity he exists always and everywhere. Whence also he is all similar, all eye, all ear, all brain, all arm, all power to perceive, to understand and to act : but in a manner not at all human, in a manner not at all corporeal, in a manner utterly unknown to us. As a blind man has no idea of colours, so have we no idea of the manner by which the all-wise God perceives and understands all things. He is utterly void of all body and bodily figure ; and can therefore neither be seen, nor heard, nor touched, nor ought he to be worshipped under the representation of any corporeal thing. We have ideas of his attributes, but what the real substance of any thing is we know not. In bodies, we see only their figures and colours, we hear only the sounds, we touch only their outward surfaces, we smell only the smells, and taste the flavours ; but their inward substances are not to be known either by our senses, or by any reflex act of our minds : much less, then, have we any idea of the substance of God. We know him only by his most wise and excellent contrivances of things, and final causes ; we admire him for his perfections ; but we reverence and adore him on account of his dominion : for we adore him as his servants and a god without dominion, providence and final causes, is nothing else but Fate and Nature. Blind metaphysical necessity, which is certainly the same always and everywhere, could produce no variety of things. All that diversity of natural things which we find suited to different times and places could arise from nothing but the ideas and will of a Being necessarily existing. But, by way of allegory, God is said to see, to speak, to laugh, to love, to hate, to desire, to give, to receive, to rejoice, to be angry, to fight, to frame, to work, to build ; for all our notions of God are taken from the ways of mankind by a certain similitude which, though not perfect, has some likeness, however. And thus much

concerning God, to discourse of whom from the appearances of things does certainly belong to Natural Philosophy."

Newton's formal definition of Space (and of Time) is given in the scholium which precedes his *axioms* or *laws of motion* :

" Absolute true mathematical Time, of itself and from its nature without relation to anything external, flows equally ; and its other name is duration.

Absolute Space, by its nature without relation to anything external, always remains similar and motionless.

Relative Space is a measure of this [absolute] space, or a certain movable dimension of it, which is defined by our senses by its position in regard to bodies, and is usually taken for motionless space.

Absolute Motion is the translation of a body from an absolute place to another absolute place.

Relative Motion is the translation from one relative place to another.

Place is the part of space which a body occupies and is, according to the space, either absolute or relative."

## APPENDIX II

### HUME ON CAUSATION

Viewed in the light of the philosophy put forward in this present work, the Humian doctrine of causation appears as one living entirely on past credit, the latter gained by purely stylistic qualities in Hume's writing which caused it to be taken, wrongly, as eminently frank and unambiguous. Our brief study of this doctrine accordingly takes something of the form of an impugning of Hume's right to be regarded as a clear thinker and of proving his air of frankness (in this particular regard) mere seeming:—Hume sets his doctrine of causation at the level which is usual where the meaning of the causal nexus is vaguely groped after rather than seen as precipitated by forces of a more comprehensive character than itself. Accordingly, arguing the case on his own chosen level, we have to say that Hume confounds together in his argument no fewer than three quite different issues relative to causation. These are :

- (1) The question of the *definition* (or true synonym) of the term *cause* ;
- (2) The question of the *character* of the causal bond, *e.g.* whether this is something apprehensible by our sub-mental senses or is merely something nominal and imputed : something which our imaginations read into facts and impose on them ;
- (3) The question of *what features* those are in the basic elements of things which cause the causal bond to obtain within the scheme of nature : the question, that is, of the cause of the phenomenon of causation in its entirety.

Any study of causation must seek answers to these three quite distinct questions of : the definition of the term cause ; the sensory character (or other) of the causal aspect ; the cause of the causal nexus. Obviously, these answers will be very different from one another.

Now, let us say at once, Hume was not acquainted with the correct answer to these questions. This, however, is not the cause of one's grumble. Rather, Hume's shortcomings

equate with the fact that while, on the one hand, he fails to distinguish between these questions, on the other, he shews a most remarkable agility in skipping from the one issue to the other whenever a commonsense answer seems to be imminent in respect of one of them. We mean, Hume baffled men's commonsense not merely by jumbling these three issues together but by lightly switching the issue on to another whenever light seemed to be about to dawn concerning any : a procedure rendered easy by his original failure to discriminate clearly between them. By a constant agile altering of the question at issue, then, Hume succeeded in making men believe they ought to reject every commonsense answer to his questions. By these means he contrived to involve, finally, the entire theory of causation in mystery. Let us, however, consider separately the three aspects of causation above indicated to learn Hume's position relative to them.

The first question is that of the definition of the term *cause*. But it will not suffice for us to begin with this question itself, in that Hume appears, most unfortunately, to be quite unaware of the meaning of the activity of definition. This meaning is (as we saw in chapter ii above) to substitute for an unfamiliar and dubious term, another *and synonymous* term, which is, at once, both familiar and non-dubious. It is thus of the very essence of definition to muster synonyms. Hume, however, not apprehending this, opens his chapter on causality in the *Inquiry* in this way :—

“ There is no question which, on account of its importance as well as difficulty, has caus'd more disputes, both among antient and modern philosophers, than this concerning the efficacy of causes, or that quality which makes them be followed by their effects. But, before they enter'd upon these disputes, methinks it would not have been improper to have examin'd what idea we have of that efficacy which is the subject of the controversy. This is what I find principally wanting in their reasonings, and what I shall here endeavour to supply.”

Here, Hume is inquiring about the *efficacy* of causes, and is, therefore, asking not so much for a definition of the meaning of the term *cause* as for a description of the character of the causal bond. That is, he is concerning himself with the second question in our list, not the first. However, the fact that, in his own

mind, he is confusing the two issues is shewn by his going on immediately to cite definitions of the term causation, and to quote (with disapproval) the definition of his predecessor Locke, the definition which (in our opinion) is the correct one of causation in that it asserts that causation means *genesis*: *productive quality*. Thus Hume goes on:—

“ I begin with observing that the terms efficacy, agency, power, force, energy, necessity, connexion, and productive quality, are all nearly synonymous; and therefore 'tis an absurdity to employ any of them in defining the rest. By this observation we reject, at once, all the vulgar definitions which philosophers have given of power and efficacy; and, instead of searching for the idea in these definitions, must look for it in the impressions from which it is originally deriv'd. If it be a compound idea, it must arise from compound impressions. If simple, from simple impressions.”

Hume then runs on:

“ Most writers on the subject either employ unintelligible terms or such as are synonymous to the term which they endeavour to define. Thus, if a cause be defined as *that which produces anything*, it is easy to observe that *producing* is synonymous to *causing*. In like manner, if a cause be defined as *that by which anything exists*, this is liable to the same objection. For what is meant by these words *by which*? Had it been said that a cause is *that after which anything constantly exists*, we should have understood the terms. For . . . this constancy forms the very essence of necessity, nor have we any other idea of it.”

Hume thus makes us acquainted with the fact that he is unaware of the truth that all definitions are, by their very essence and function, *synonyms*, and that *to define* is *to coin a synonym* (or, possibly, just to re-affirm one). Not that Hume had come to this conclusion as a result of a direct study of the question of definition. The circumstance which caused Hume thus to reveal his mind in this matter was that, on all hands, he found himself confronted with definitions of the term 'cause' which (as he realised) had the peculiarity that they truly represented what men mean when they speak of causes, and, for this very reason, were synonyms of the term cause. But Hume himself was proposing to offer a quite different definition of the term, and, therefore, one implying something quite different from what men mean by causation. Hence his unconscious betrayal into giving this handsome testimonial concerning the quality of the definitions he was seeking to oust, *i.e.* that they con-

stituted veritable synonyms: true definitions, therefore, as Hume ought to have known but did not.

Now this matter of Hume's definition of the term 'cause' carries us forward to the second strained element in the Humian doctrine of causation. This has to do with the question whether the causal aspect of things is a *real* (i.e. sensorily apprehensible) aspect of things or merely imputed. Unfortunately, on this head, Hume's statement of what is in his mind is extremely confused but it can be straightened out to something like what follows:—When Hume sought to brush aside the definition of a *cause* as 'that which produces something,' he was seeking to brush aside the notion of a cause as a constitutive factor of its effect. This was his express intention. For (he urged) we have no 'impression' (no sensorily-apprehended experience) of bodies or forces as constituents of others, but merely of certain things (effects) existing 'adjacent in Space' and 'immediately sequent in Time' to certain others which are their causes; and it is (he urged) merely in virtue of this spatial and temporal contiguity that the term causation is applied in a given set of circumstances. This, therefore, *not* some supposed 'constitutiveness' of causes in respect of their consequences, is (says Hume) the *reality* involved in causation. The asserted constitutiveness is sheer assertion, destitute of any reality. Now, to explain how Hume arrives at this conclusion, we must take note of the fact that Hume is the great advocate of a position which is known as *psychological atomism*, the import of which is that the stream of perceptions obtaining in any given organism's experience is of a cinematographic character in that all items of experience (called by Hume 'distinct perceptions') appear as discrete, not as forming a continuous stream. A point of view thus obtains in psychological atomism similar to that which obtains in the sphere of high science where, in respect of 'atoms and the void,' only the material atoms are held to exist, the circumambient matrix in which they are embedded and which links them together being regarded not merely as non-sensorily-apprehensible but as a non-existence. Thus, for Hume, only the 'high lights' of the flux of experience are 'there,' the unobtrusive mesh which interconnects and sustains these

prominent features is *not* there; hence, not sensorily-apprehended; hence, not a reality. What Hume calls 'distinct perceptions,' are thus for him the sole parts of experience which are real, their linkings-together [sensorily apprehensible enough though (as we say) these are] being totally disregarded by Hume—very much to his own bewilderment: a fact he reveals very clearly in a well-known pronouncement in his *Appendix* to the *Treatise*:

" If<sup>1</sup> perceptions are distinct existences, they form a whole only by being connected together. But no connexions among distinct existencies are ever discoverable by human understanding. We only feel a connexion or determination of the thought to pass from one object to another. It follows, therefore, that the thought alone feels personal identity, when, reflecting on the train of past perceptions that compose a mind, the ideas of them are felt to be connected together and naturally introduce each other.

However extraordinary this conclusion may seem, it need not surprise us. Modern philosophers seem inclined to think that personal identity arises from consciousness, and consciousness is nothing but a reflected thought or perception. The present philosophy, therefore, has a promising aspect. But all my hopes vanish when I come to explain the principles that unite our successive perceptions in our thoughts or consciousness. I cannot discover any theory which gives me satisfaction on this head . . . .

In short, there are two principles which I cannot render consistent, nor is it in my power to renounce either of them; *viz.* that all our distinct perceptions are distinct existences, and that the mind never perceives any real connexion among distinct existences. Did our perceptions either inhere in something simple or individual, or did the mind perceive some real connexion among them, there would be no difficulty in the case."

But the obvious comment here is that our experience does not present 'distinct perceptions' in Hume's sense of the word, the perceptual activity being unintermittent like the flow of a stream proper, not cut up into separate units like the 'flow' of a cinematograph. That is, that aspect of *continuity* which obtains so unmistakably in the universe at large (the macrocosm) as unmistakably translates itself into the field of consciousness: 'experience' (the microcosm). But Hume's point of view does not allow this, and, hence, can, not unjustly, be caricatured as follows:—If, let us say, we were spectators at a show of marionettes, our 'distinct perceptions' would be Punch and his

<sup>1</sup>D. Hume, *Treatise of Human Nature*, ii. 551.

Judy standing stock still as distinct and separate existences. Or if, again, we were spectators at the making of a piece of confectionery, our 'distinct perceptions' would be the ingredients in their respective receptacles. Or if, again, we were members of the audience at a musical recital, they would be the single notes of the musical scale given (or, more probably, *not* given) by the various instruments. *These*, Hume would say (or ought to, according to his theory) are the realities, being the 'distinct' parts of our experience, and, as such, the sole parts which are sensorily-apprehensible. The two other parts (1) the relational or causal activity of *blending*; (2) the results *accruing from* this blending, would be (or ought to be) refused recognition by him. Hence his arrival at his strange description of the entities connected together by the causal nexus. For the stream of these is, he declares, *not* a stream, but a series of isolated perceptions, spatially and temporarily adjacent to one another but not integrally connected or even absolutely contiguous. To substitute Hume's own image, the body of causally-connected entities is thus like a structure *without any cement in it*. The entire matter accordingly resolves itself into an appeal to the character of our experience, and our opinion is that Hume would not be able to find anywhere, in any person's experience, conditions obtaining such as he describes—not even in his own; and not even, indeed, in that of the lowliest of living organisms. For sensory experience amounts not to an alternation of perceptions *with blanks*, but to a veritable stream the flow of which is continuous in spite of its heights and flatnesses. And the flux<sup>1</sup> itself is truly sensorily apprehensible: as much so as the spatially separate entities which show up prominently within it; and so, too, are the blended results which accrue from the flowing. And so, also, is the fact that these results *are* blends. Otherwise, where would be that power which is possessed by the organic world in its entirety, *i.e.* the power of *learning from experience* in terms of things conceived as causes or constitutive factors of *complex products*? Hume would say, of course, that this last-named power was all due

<sup>1</sup>Our sense-apprehensions in this regard form one sphere of the findings of our general *sense of relationship*: the sense, that is, which (as we claimed in chapter vi above) forms one of the *four* senses involved in the basic sense-potency which is common to living organisms in their entirety.



to habit of mind ; but the objection is that, though habit comes greatly to the fore here, such habit is, merely, a consequence built up upon causally connected sense-experiences which are prior to the formation of the habit, these experiences being, indeed, the sole cause of the habit's formation, and giving to it, at once, its justification and its meaning and its means of existence.

And this brings us to a certain matter having to do with Hume's use of the notion of 'experience' which (we think) exhibits Hume's unfairness (unconscious, no doubt, in great part) in handling this issue about 'cause.' For where, let us ask, do we get those parts of our experience which constitute our 'distinct perceptions'? Where, but from *our experience*? But, if so, why should Hume deny (as he does) the validity of men's *causal* findings on the ground, forsooth, that they only arrive at these as a result of *experience* and of a consulting of the latter? Because (to answer our own question), he chooses to remain stubbornly blind to the fact that organic sense-potency includes and covers a *sense of relationship* which latter covers, among many other relationships, that of the causal. Hence the inconsistency above indicated. Thus Hume says :

"According to the precedent doctrine, there are no objects which, by the mere survey, without consulting experience, we can determine to be the causes of any other ; and no objects, which we can certainly determine in the same manner, *not* to be the causes. Anything may produce anything ; creation, annihilation, motion, reason, volition, all these may arise from one another, or from any other object we can imagine. Nor will this appear strange, if we compare the . . . principle(s) explain'd above, *viz.* that the constant conjunction of objects determines their causation."

Hume would thus have us believe that, because :

"There are no objects which, by the mere survey, *without consulting experience, we can determine to be the cause of any other,*"

the reality of the causal bond is to be supposed negated : a patently false deduction. Thus, for instance, at a family gathering : the meeting (say) of a clan : a stranger might quite well find it impossible 'by a mere survey' of the members to determine the exact genetic relation obtaining between the clan members. But this would not lead the stranger to consider that

any one of them might be the producer of any other, any more than it would lead him to call in doubt the genuineness and reality of the genetic relationship. That is, all men except to consult experience in order to discover causal relationships, but these are not any the less real for requiring to be hunted out. Hence the fact that men hunt them out wholly without prejudice to their belief in the reality of the causal relation ; while, in the case of scientists highly versed in the characters of the more basic constituents of things, a very justifiable pride is taken in the power possessed to judge of causal sequences long in advance of actualised experience. For, knowing the character of the materials they are working with, and passing judgment upon these, they can, very largely, predict the on-coming generation of events. Is not, indeed, European science said to open with just such a prediction, *i.e.* Thales' prediction (confirmed by the event) of a solar eclipse ? But, leaving the argument derived from this scientific power of *anticipating* the character of experience wholly aside, it has to be said that the question Hume had before him was not that of deciding whether we need 'to consult experience' before we can learn the precise causal relations existing between things ; for only by 'consulting experience' are we aware that things ('distinct perceptions') themselves exist. It was that of the correct statement of what this relation declared by experience as existing *consisted in* ; for, where common opinion says that it consists in the providing of the stuff of the effect's being (a provision which, itself, can, in many cases, be proved both synthetically and analytically), Hume insists that it consists in 'the constant conjunction of objects' ; and what Hume means us to understand by this is that, if objects persistently occur together in Space, and the advent of the one in a given locality invariably occurs just prior to that of some other in that locality, *that* constitutes their causal connection, and constitutes all there is to such connection. But what the commonsense of mankind says is, that these conjunctions in Space and Time (which would be so mysterious were they actually what Hume asserts them to be) are wholly explicable and simple matters consisting in the production, by the mutual fertilisation of the substance of one set of objects

existing in a certain Space with the substance of another set, of a *third set*. Thus, the constant conjunction of rust and iron, when the latter is left exposed in a damp atmosphere, is such a conjunction, and whereas this is wholly mysterious on Hume's account of the matter, the ordinary view very readily accounts for it. Thus, definite quantities of the iron-matter (Fe) intimately combine with definite quantities of the oxygen-matter (O) present in the atmosphere, and the result (the offspring or effect) of the mixture is  $\text{Fe}_3\text{O}_4$ , i.e. iron-rust. That is, the *immediate* causes of iron-rust exist *within* the rust in the shape of the latter's constituent factors. *That* is no mystery. Nor is there mystery in the fact that iron has one specific form, oxygen another, and iron-rust a third. Or rather (we ought perhaps to say) it is merely a matter of our momentary ignorance (we may term it momentary in view of the rapid strides which are being made with the subject of *atomology*) which causes this resultant third form to appear 'quite' different from either of its parents. For (one may venture to prophesy) when more is discovered concerning atomic and molecular structure and the character of protonic and electronic substances, the form  $\text{Fe}_3\text{O}_4$  (or any other chemical combination) will become predictable all in advance of actual experience upon the mere strength of the scientists' knowledge of the combining ingredients and the specific mode of the combinations to be effected. Whence it is that, wherever these 'constant conjunctions' of events in Space and Time persistently occur, men automatically find themselves forming the conclusion that, in such cases, it will be well for them to suspect, and to try to discover in that place, a *causal* connection, that is, acts of fertilisation (blendings) which are, no doubt, going on (or have been) in the shape of intimately close combinations effected between the substances assembled together in the one locality: acts which alone are capable of furnishing the explanation of the 'conjunctions' spatial and temporal, which Hume alone takes note of, and which are, indeed, merely the symptoms, so to say, which warn us of those combinations of substances which actually do constitute causation. So much is this so, that we all, habitually, regard as dunces and dullards those persons who,

brought continually face to face with these 'constant conjunctions,' do not suspect causation, and, by a careful sifting of all the agencies congregated in the one spatio-temporal situation, succeed in discovering those which, by entering into intimate union with one another, are generating (or have generated) compounded forms which, as regards their emergence in time, must needs *be later than* the parent-forms which have formed them, and which, at the moment of their conception, must needs be spatially contiguous with them. Hence, where the question of the significance of causation is concerned, we say that Hume has been most amazingly successful in misleading his fellow-kind in that his assertions are so patently non-conformable with the observations made by men's senses. Here, however, let us give, in Hume's own terms, his idea of what constitutes a cause :

" I turn my eye to two objects suppos'd to be plac'd in this (the causal) relation and examine them in all the situations of which they are susceptible. I immediately perceive that they are contiguous in time and place, and that the object we call *cause* precedes the other we call *effect*. In no one instance can I go any farther, nor is it possible for me to discover any third relation betwixt these objects. I therefore enlarge my view to comprehend several instances, where I find like objects always existing in like relations of contiguity and succession. At first sight this seems to serve but little to my purpose. The reflection on several instances only repeats the same objects ; and therefore can never give rise to a new idea."

And again :

" When any natural object or event is presented, it is impossible for us, by any sagacity or penetration, to discover or even conjecture, without experience, what event will result from it, or to carry our foresight beyond that object which is immediately present to the memory and senses. Even after one instance or experiment, where we have observed a particular event to follow upon another, we are not entitled to form a general rule or foretell which will happen in like cases, it being justly esteemed an unpardonable temerity to judge of the whole course of nature from one single experiment, however accurate or certain. But when one particular species of event has always, in all instances, been conjoined with another, we make no longer any scruple of foretelling one upon the appearance of the other, and of employing that reasoning which can alone assure us of any matter of fact, or existence. We then call the one object, *cause*, the other, *effect*. We suppose that there is some connection between them ; some power in the one by which it infallibly

produces the other, and operates with the greatest certainty and strongest necessity."

But this is an error. What has happened is merely that men have acquired :

"By long habit, such a turn of mind that, upon the appearance of the cause they immediately expect, with assurance, its usual attendant, and hardly conceive it possible that any other event could result from it."

Hence Hume's formal definition :-

"'Tis now time to collect all the different parts of this reasoning, and, by joining them together, form an exact definition of the relation of cause and effect, which makes the subject of the present inquiry . . . . There may two definitions be given of this relation, which are only different by their presenting a different view of the same object, and making us consider it either as a philosophical or as a natural relation, either as a comparison of two ideas or as an association betwixt them. We may define a Cause to be 'an object precedent and contiguous to another and where all the objects resembling the former are plac'd in like relations of precedency and contiguity to those objects that resemble the latter.' If this definition be esteem'd defective, because drawn from objects foreign to the cause, we may substitute this other definition in its place, *viz.*, 'a cause is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other.' Should this definition also be rejected for the same reason, I know no other remedy than that the persons who express their delicacy should substitute a juster definition in its place. But for my part, I must own my incapacity for such an undertaking. When I examine with the utmost accuracy those objects which are commonly denominat'd causes and effects, I find, in considering a single instance, that the one object is precedent and contiguous to the other; and, in enlarging my view to consider several instances, I find only that like objects are constantly plac'd in like relations of succession and contiguity. Again, when I consider the influence of this constant conjunction, I perceive that such a relation can never be an object of reasoning, and can never operate upon the mind but by means of custom, which determines the imagination to make a transition from the idea of one object to that of its usual attendant, and from the impression of one to a more lively idea of the other. However extraordinary these sentiments may appear, I think it fruitless to trouble myself with any further enquiry or reasoning upon the subject but shall repose myself on them as upon establish'd maxims."

Here, then, we have the disastrous decision which has been so potent a force for ill in post-Humian thought. How different the course of the latter would have been had Hume had the

diffidence to turn again to answer his own elementary question about the meaning of causes :

" Most writers . . . either employ unintelligible terms or such as are synonymous to the term they endeavour to define. Thus, if a cause be defined as ' that which produces anything,' it is easy to observe that *producing* is synonymous to *causing*. In like manner, if a cause be defined as ' that by which anything exists,' this is liable to the same objection. For what is meant by these words *by which* ? Had it been said that a cause is that *after which* anything constantly exists, we should have understood the terms. For . . . this constancy forms the very essence of necessity, nor have we any other idea of it."

Thus this question :

" what is meant by these words *by which* "

is fundamental. But Hume, putting this question, did so like Bacon's Pilate who, asking : ' what is truth ? ' stay'd not for the answer. Not that there *was* no answer. The answer was indeed none other than that suggested by the ' vulgar ' definitions (synonyms) which Hume was so eager to discard in favour of his own false (non-synonymous) substitute. For the meaning of the ' by which ' phrase is ' *out of which* ' the substance of the thing which comes into existence as effect is created. That is, the phrase *by which* here means ' by contribution of the substance of which.' It certainly does not mean *after which* in Hume's sense. As instance, consider the cook and her confectionery. Thus, the fruit, the flour, the spices and the rest, brought together after the manner prescribed in the recipe (the *bringing-together* itself being one of the causal substances, *to wit*, kinetic substance) are the causes<sup>1</sup> of the confection. They are the things ' by which ' the confection exists. They are the things ' out of which ' it exists. They are the things ' by the mingling together of which ' it exists. Very certainly, they are *not* merely the things *after which* it exists, in the sense of ' after which ' which Hume's argument suggests, *i.e.* that of units lining up serially like the units of a regimental file so as to be :

- (1) *immediately contiguous to one another as to Space ;*
- (2) *immediately successive to one another as to Time.*

<sup>1</sup>This specimen of causation is, needless to say, of the simplest conceivable type. Hence, the reason for its present selection. What we would here point out, however, is that, while an almost unlimited measure of complexity can be imported into the causal relationship, *the type* of this relationship will not be thereby altered. That is, in the last resort, the definition of a *cause* will remain as above given, *i.e.* a constituent factor of a mixture.

For, when the confection *is*, its ingredients, as distinct from it, *are not*. They have gone into it, as the constituents of its being, and an effective analysis could, indeed, get them out of it (with due allowance made, of course, for the fact of the 'degradation of energy'). Hume, however, not lingering for his answer, hastened on to obscure the trail of the intelligibility of the feature of causality by crossing it with the misleading strong scents he made a speciality of, to the end that he could, with a better conscience, repose on his definition of a cause as above stated.

Coming now to the question of the Humian treatment of the third issue involved in the doctrine of causation, *i.e.* the question of the cause of the causal nexus, the tenor of the entire Humian philosophy warns us not to expect anything here that is helpful. Indeed, if Hume can make one outstanding difficulty for a theory of causation out of a small matter like the meaning of the process of definition, and another out of a (patently false) description of the character of the stream of experience, it would be very strange if he failed to discover difficulty where what is at issue is the great question of the eternal foundations (elements) of the cosmos. Nevertheless, Hume's difficulty in this regard is particularly ironical in that, just here, the occasion emerges where he could have made most excellent use of his own basic observation that, *somehow*, the ultimates of the causal problem do consist in spatio-temporal contiguities. For, as we have seen, Space and Time being the cosmogonic ultimates (all, therefore, that the world is at bottom), it follows that spatio-temporal contiguities will necessarily exhaust the meaning of, at once, the causal nexus and the forms which are linked up by it into a unit. Hence our power *to explain* this great Humian generalisation which Hume insists on but yet leaves hopelessly enigmatical, *i.e.* that, in all causal connection, spatio-temporal co-incidences are, most conspicuously, in evidence. For, although we reject entirely the view that causal connection equates with spatial and temporal contiguities in the non-constitutive sense taught by Hume, we urge that, in the last resort, all that appertains to, and is involved in, the causal nexus reduces solely to spatio-temporal connections. But

the reason for this is that all causes are constituent factors, while Space and Time are the causes *par excellence*: are, that is, the *constituent factors* of things *par excellence*. But neither of these points will Hume concede, the special characteristic of the Humian doctrine of causation being the emphatic warmth with which he denies them. For not only does Hume reject the very definition of a cause as a constituent factor but he belongs to a school which regards Space as nothing-at-all; or, what is, practically, the same thing, he regards Space as something which receives its existence *from matter* as the negative side of the positive fact that the boundaries of matter are such and such (cf. his conception of Space in terms of 'coloured points').

Moreover, just as far as Hume is from recognising Space as a substance in its own right (and a prime substance; and a causal substance; and a supremely causal substance), so far is he from realising that spatial substance has a character, *i.e.* is inherently endowed with feature. That is, Hume has no knowledge at all of that staple dogma of the religious (scientific) understanding known as the *logos spermatikos*: the dogma which, itself, is the answer to Hume's claim that "*anything may produce anything.*" For (this dogma exists to say), before ever a blow was struck in the work of building up any given world of creation on its eternal, seed-filled stocks, these stocks *were there*; that is, the central design and backbone of creation was there; while, in the fact that, in this backbone and design slumbered the eternal seeds (eternally self-characterised) of things (the seeds which are the determining *forms* of things), the possibility was, from all eternity, negated that 'anything might produce anything.' Hence, the case against the Humian doctrine of causality can be put in a nutshell by saying that Hume's outlook on the world was fundamentally irreligious in that it ignored, completely, the existence of a cosmogonic *elements*. That is, Hume grounds the cosmogonic triangle on its apex and ignores its bases. The Humian view thus presents the universe with its dual bottoms knocked out of it; presents it, to use Hume's own simile, as a world which has had all the cement taken out of it. It is an atomic world without indeed *the void*, *i.e. unsupported by any underlying matrix*. His world-theory.



is thus one which neglects the whole and sole business of a world-theory, *i.e.* the provision of a theory of the *origins of matter*: of the cosmos in its entirety: of the third member of the cosmogonic trinity. For Hume's view (like the 'Democritean') presents matter as the universal ultimate; destitute, therefore, of constituent factors in terms of which its existence receives explanation. Hence the reason that Hume (almost gleefully) presses the point that it is altogether hopeless for us to try to conceive *either* why the causal bond exists at all *or* why some one unit (the effect) of the causal file should 'trail' certain particular experimental units (its cause) rather than others.

On these grounds, then, we submit that the Humian philosophy of causation which, for a couple of centuries, has been such a potent influence in European philosophy, has been a power for ill, and, is, therefore, a philosophy requiring *deliberately* to be abandoned. But this means that the reigning world-viewpoint, *i.e.* that which is known as *the positivist*, requires to be abandoned. For positivism, the reigning scientific attitude of mind, which boasts adherents among the greatest of living scientists, although deriving nominally (and *via* Comte) from Kant, goes back to, and is founded on, *Hume*. For Kant himself founded on Hume, whose doctrine of causality it was (Kant confessed) which first aroused him from his erstwhile 'dogmatic slumber.' Hence the emphatic rejection by the members of this school of the conception of supra-material forces as 'metaphysical entities,' these being, among positivists, *anathema*. Hence, also, the rejection, by certain of them, of the use of the term *cause*. Hence, too, the reason that the modern positivist leader, the late Ernst Mach could declare (as he did as late as 1910) that Hume was their true author and model, declaring, indeed, that "Kant's philosophy was a marked step backwards in comparison with (Berkeley and) Hume." Very clearly indicated, therefore, is one of the steps to be taken by the movement which would restore to scientific theory its lost intellectual steadiness. It is the intellectual deposition of David Hume.

APPENDIX III  
(APPENDIX TO CHAPTER XVI)  
HEGEL, ON NON-BEING

“ In<sup>1</sup> this paper . . . I shall follow the exposition in the Greater Logic, from which, in this division, the Smaller Logic does not materially differ, except in being less minutely subdivided.

*Quality* is the first division of the *Doctrine of Being*, and consequently of the whole *Logic*. It is divided as follows :—

I.—BEING.

- A.—Being.
- B.—Nothing.
- C.—Becoming.

II.—BEING DETERMINATE.

- A.—Being Determinate as Such.
  - (a) Being Determinate in General.
  - (b) Quality.
  - (c) Something.
- B.—Finitude.
  - (a) Something and an Other.
  - (b) Determination, Modification and Limit.
  - (c) Finitude.
- C.—INFINITY.
  - (a) Infinity in general.
  - (b) Reciprocal Determination of the Finite and Infinite.
  - (c) Affirmative Infinity.

III.—BEING-FOR-SELF.

- A.—Being-For-Self as Such.
  - (a) Being Determinate and Being-for-self.
  - (b) Being-for-One.
  - (c) One.
- B.—THE ONE AND THE MANY.
  - (a) The One in Itself.
  - (b) The One and the Void.
  - (c) Many Ones.
- C.—REPULSION AND ATTRACTION.
  - (a) Exclusion of the One.
  - (b) The One One of Attraction.
  - (c) The Relation of Repulsion and Attraction.

<sup>1</sup>J. Ellis McTaggart. *Hegel's Treatment of the Categories of Quality*. (*MIND*, N.S. vol. ii. pp. 503-511.)

In Hegel's use of the word *Being* [says Prof. McTaggart] there is an ambiguity which may be dangerous unless carefully noticed. He uses it, as will be seen (i) for one of the three primary divisions into which the whole Logic is divided ; (ii) for one of the three divisions of the third order into which Quality is divided ; and (iii) for one of the three divisions of the fourth order into which Being in the second sense is divided. In the same way Quality, besides being used for the division of the second order which forms the subject of this paper, is also used for a division of the fifth order, which falls within Being Determinate as Such.

### I.—BEING.

#### A.—Being.

I do not propose [says Professor McTaggart] to discuss here the validity of the category of Pure Being as the commencement of the Logic. This is rather a general question affecting the whole nature of the process than a detail of the earlier stages, and I have already discussed it in my *Studies in the Hegelian Dialectic* (cf. sections 17, 18 and 79). If, then, we begin with the category of Being, what follows ?

Pure Being, says Hegel (Greater Logic, 78 ; Encyclopaedia. 87\*) has no determination of any sort. Any determination would give it some particular nature, as against some other particular nature—would make it X rather than not-X. It has therefore no determination whatever. But to be completely free of any determination is just what we mean by Nothing. Accordingly, when we predicate Being as an adequate expression of reality, we find that in doing so we are also predicating Nothing as an adequate expression of reality. And thus we pass over to the second category.

#### B.—Nothing.

This transition, which has been the object of so much wit, and of so many indignant denials, is really a very plain and simple matter. Wit and indignation both depend, as Hegel remarks (G.L., 82 ; Enc., 88) on the mistaken view that the Logic asserts the identity of a concrete object which has a certain quality with another concrete object which has not that quality—of a white table with a black table, or of a table and courage. This is a mere parody of Hegel's meaning. Whiteness is not Pure Being. When we speak of a thing as white, we apply to it many categories besides Pure Being—Being Determinate, for example. Thus the fact that the presence of whiteness is not equivalent to its absence is quite consistent with the identity of Pure Being and Nothing.

When the dialectic process moves from an idea to its antithesis, that antithesis is never the mere logical contradictory of the first, but is some

\*My references in this paper to the Greater Logic are to the pages of vol. III of Hegel's *Works* (ed. 1833) ; my references to the Encyclopaedia are to sections. [McTaggart's own note.]

new idea which stands to the first in the relation of a contrary. No reconciling synthesis could possibly spring from two contradictory ideas—that is, from the simple affirmation and denial of the same idea. In most parts of the dialectic, the relation is too clear to be doubted. But at first sight it might be supposed that Nothing was the contradictory of Being. This, however, is not the case. Being here means Pure Being, and the contradictory of this is Not-Pure-Being. This is a much wider term than Nothing, for it includes both Nothing and all determinate being. Nothing is the direct opposite of Pure Being and not its mere denial.

Hegel says, indeed (G.L., 79), that we could as well say Not-Being as Nothing. But it is clear that he does not take the affirmation of Not-Being to be identical with the denial of Pure Being.

If the identity of Being and Nothing were all that could be said about them, the dialectic process would stop with its second term. There would be no contradiction, and therefore no ground for a further advance. But this is not the whole truth (G.L., 89; Enc., 88). For the two terms, to begin with, meant different things. By Being was intended a pure positive—reality without unreality. By Nothing was intended a pure negative—unreality without reality. If each of these is now found to be equivalent to the other, a contradiction has arisen. Two terms which were defined as incompatible have become equivalent. Nor have we got rid of the original meaning. For it is that same quality which made the completeness of their opposition which determines their equivalence. A reconciliation must be found for this contradiction, and Hegel finds it in :

#### C.—Becoming.

The reconciliation which this category affords appears to consist in the recognition of the intrinsic connexion of Being and Nothing (G.L., 79; Enc., 88). When we had these two as separate categories, each of them asserted itself to be an independent and stable expression of the nature of reality. By the affirmation of either its identity with the other was denied, and when it was found, nevertheless, to be the same as the other, there was a contradiction. But Becoming, according to Hegel, while it recognises Being and Nothing, recognises them only as united, and not as claiming to be independent of one another. It recognises them, for becoming is always the passage of Being into Nothing, or of Nothing into Being. . . . But, since they only exist in Becoming in so far as they are passing away into their contraries, they are only affirmed as connected, not as separate, and therefore there is no longer any opposition between their connexion and their separation.

But, Hegel continues, this is not the end of the matter. Being and Nothing only exist in Becoming as disappearing moments. But Becoming only exists in so far as they are separate; for if they are not separate, how can they pass into one another? As they vanish, therefore, Becoming ceases to be Becoming, and collapses into a state of rest which Hegel calls Being Determinate (G.L., 109; Enc., 89).

I confess that I regret the choice of *Becoming* as a name for this category. What Hegel meant seems to me to be quite valid. But the name of the category suggests something else which is not valid at all.

All that Hegel means by this category is, as I have maintained above, that *Being* is dependent on *Nothing* in order to enable it to be *Being*, and that *Nothing* is dependent on *Being* in order to enable it to be *Nothing*. In other words, a category of *Being* without *Nothing*, or of *Nothing* without *Being* is inadequate and leads to contradictions which prove its falsity. The only truth of the two is a category which expresses the relation of the two. And this removes the contradiction. For there is no contradiction in the union of *Being* and *Nothing*. The contradiction was between their union and the previous assertion of the unsynthesised categories as independent and adequate expressions of reality.

Hegel seems to have thought it desirable to name the new category after a concrete fact. But this use of the names of concrete facts to designate abstract categories is always dangerous. It is, as I have maintained in previous papers, the cause of the confusion to be found in Hegel's treatment of the categories of *Chemism* and *Life*. In the present case, the state of *becoming* involves, no doubt, the union of *Being* and *Nothing*, as everything must, except abstract *Being* and *Nothing*. But *becoming* involves a great deal more—a great deal which Hegel had not yet deduced, and had no right to include in this category. I do not believe that he meant to include it, but his language almost inevitably gives a false impression. . . .

## II.—BEING DETERMINATE.

### A.—Being Determinate as Such.

#### (a) Being Determinate in General.

This, as the first subdivision of the first division of *Being Determinate*, has, as its name implies, no other meaning except the general meaning of *Being Determinate*, namely, that in which all reality, *Being* and *Nothing* are united.

Then, for the first time, we get the possibility of differentiation and plurality. *Being* and *Nothing* did not admit of this. Whatever simply *Is* is exactly the same. And this is also true of whatever simply *Is Not*. But under the category of *Being Determinate*, it is possible for  $x$  to be blue and not red, and so distinguished from  $y$ , which is red and not blue. And not only the possibility of such differentiation, but also its necessity is now established. For whatever *is* must also not be, and cannot be what it is not. It must therefore not be something else than what it is. And thus the reality of anything implies the reality of something else. This will become more evident later on. Meanwhile Hegel calls the various differentiations by the name of *Qualities*, and so we reach the second subdivision of *Being Determinate as Such*, namely,

## (b) Quality.

We must not be misled by the ordinary use of the phrase "a Quality." As a rule, when we speak of a Quality, or of Qualities, we mean characteristics which inhere in a Thing, and of which one Thing may possess many. . . . We have not yet reached any idea so advanced as this. It is not till Essence has been reached that we shall be able to make a distinction between a Thing and its characteristics. And, although we have now attained a plurality, we have not yet acquired the idea of plurality in unity, which would be necessary before we could conceive one Thing as having many characteristics. . . .

## (c) Something.

At this point, says Hegel, we first get the Real (G.L., 120; Enc., 91). It does not seem very clear why it should be at this precise point. Reality is a matter of degree, and Something is a very unreal category as compared with those later on in the dialectic. Of course Something is more real than the categories which precede it, but I cannot see on what ground Hegel refuses them *all* right to the title of reality. At the least, I should have supposed, reality would begin with the first Synthesis—*i.e.*, with Becoming. . . ."

### ERRATA

Page 75, line 23. *For* (and Platonic) *read* (or Platonic).

Page 249, footnote. It is the construction which this philosophy sets on Newton's gravitational theory which has been omitted from appendix i; not, as stated, his views on Space.

ADDITIONAL ERRATA.

- Page 20, line 20. *For need read was*
- Page 46, line 37. *For outselves read ourselves*
- Page 61, line 32. *For divisions read dimensions*
- Page 69, line 31. *For Tau read theta*
- Page 74, line 11. *For its read a*
- Page 116, line 12. *For essense read essence*
- Page 121, line 31. *For of read on*
- Page 126, line 8. *For is read is*
- Page 133, line 8. Delete half-bracket
- Page 147, line 1. *For their read its*
- Page 149, line 26. *For Heracleitan read Heracleitean*
- Page 153, line 11. *For is read gives*
- Page 153, note 1. *For Eusebus read Eusebius*
- Page 160, line 4. *For movement; read movement.*
- Page 164, line 11. *For such read the most*
- Page 209, line 8. *For Parmendides read Parmenides*
- Page 223, line 40. Delete comma after being,
- Page 227, line 28. Insert reference number <sup>2</sup> after dismissed
- Page 240, line 18. *For which, adopted by Philo, read adopted by Philo.  
which*
- Page 263, line 25. *For fragment read fragments*
- Page 272, line 12. *For that read as*
- Page 318, line 40. *For profession read profusion.*
- Page 320, line 1. *For unto read into*
- Page 360, line 29. *For frankly read frankly*
- Page 378, line 3. *For except read expect*



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