The Existence of God

Part IIIA of *An Essay on Metaphysics*

R. G. Collingwood

1940

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Contents

Preface

R. G. Collingwood's *Essay on Metaphysics* (1940) consists of three parts: (I) Metaphysics, (II) Anti-Metaphysics, (III) Examples. The last part itself consists of three parts: (A) The Existence of God, (B) The Metaphysics of Kant, (C) Causation. The present document consists of the four chapters of Part A of Part III. I gave a similar treatment to Part C in 2014, and the present Preface is adapted from the Preface of that treatment.

All underlinings in Collingwood's text are my own; they are intended to extract a kind of summary. My own footnotes are of three kinds:

1) on the ideas, numbered consecutively throughout the document by Arabic numerals 1, 2, 3, 4, . . . ;
2) on typography, numbered consecutively by italic minuscule Latin letters *a, b, c, d,* . . . ;
3) on notes themselves, numbered by minuscule Roman numerals i, ii, iii, iv, . . . [a]

[a] For the multiple footnote sequences, I use the `bigfoot` package for LaTeX, which is based on the `manyfoot` package. The latter is documented as part of the bundle called `ncctools`. For reasons unknown to me, footnotes can be needlessly split across two pages.[i] Without `bigfoot`, the LaTeX default is to number footnotes by chapter. With

[i] There can be other difficulties, as when a footnote that *must* be broken between pages seems not to be broken in the best place. This may have to do with the normal page-breaking algorithm implemented by the `KOMA-script` document class that I use.

I have caused Collingwood's own footnotes to be marked now by a symbol (∗)—there are three in all, and originally they were marked by Arabic numerals, starting with 1 on each page (and no page had a second footnote). Collingwood had a fourth note at the end of the last chapter; I have made this into the footnote now on page 55.

A revised edition of the *Essay on Metaphysics*, "with an Introduction and additional material edited by Rex Martin," was published by Oxford with the following notice:

First edition © Clarendon Press 1940
Revised edition © Teresa Smith 1998; introduction and new annotation © Rex Martin 1998

Teresa Smith is Collingwood's daughter. I possess the revised edition of the *Essay* in the paperback version published in 2002 (namely [9] in the Bibliography). The editor's Preface reports, "the original text... has been left completely unchanged, including even the pagination." Those original page numbers are bracketed and bolded in the transcription below, which is of the original pages 185–227.[b] Any references made by me to passages of the present text use the present pagination.[c]

I have taken Collingwood's text from a `pdf` scan, found on the Web, of a reissuing [5] of the first edition. The colophon there includes:

`bigfoot`, this does not happen; if one wants it to happen, one can use the commands of the `chngcntr` package.[i]

[b]Each chapter of the original text begins on a new page, and a number is not printed on this page; neither then is its number given in the transcription.

[c]Collingwood himself refers once to a page of the *Essay* that is not in

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[i]I could not find these matters discussed in the `bigfoot` or `manyfoot`

FIRST EDITION 1940

Reprinted photographically in Great Britain
at the Oxford University Press, 1948
from sheets of the first edition

In particular, there is no assertion of copyright. Presumably this is because of Collingwood's express opposition to copyright in *The Principles of Art* [4]. Collingwood died in 1943.

I used the online optical character recognition (OCR) program at `www.ocrconvert.com` to convert the desired pages of the `pdf` file of the *Essay* into a `txt` file. I made the latter into the LaTeX file that produced the present document. Doing this involved the following.

- Removing page headings, while retaining page numbers as above.[d]
- Marking up footnotes, *italics,* and SMALL CAPITALS as

part IIIA.

[d] In the original, the heading of each page that does not begin a chapter consists of the name of the chapter, in Chapters XVIII and XXI. In chapters XIX and XX, the name being too long for one page, it is divided across each two-page spread:

RELIGION AND NATURAL SCIENCE IN PRIMITIVE SOCIETY
POLYTHEISTIC AND MONOTHEISTIC SCIENCE

The last page of chapter XIX is headed like the other even pages of the chapter; of chapter XX, by the whole title, squeezed to fit. I use footers in the present document, and I do not have to divide chapter titles. But a LaTeX package might be desirable that provided a command with five arguments: (1) chapter title; (2) first half of title, for heading or footing even pages inside the chapter; (3) second half of title, for odd pages inside the chapter; (4) abbreviated title, for the last page of the chapter, if even; (5) abbreviated title for the table of contents. The existing `\chapter` command takes only two arguments: title and abbreviated title.

documentation.

such.[e]

- Replacing ligatures like *fi* and *fl* (often ill-scanned) with distinct letters `fi` and `fl` (which the TeX program then makes into ligatures again).
- Replacing line-breaking hyphens with "discretionary" hyphens (the OCR program had often read hyphens as en-dashes).
- Correcting the instances of Greek text (which the OCR program did not recognize at all).
- Following abbreviations `a.d.`, `b.c.`, `cf.`, `Chap.`, `i.e.`, `Mr.`, `p.`, `pp.`, `prop.`, `sc.`, `St.`, and `vol.` with `\␣` (backslash followed by space) so that TeX knows that they do not end a sentence;[f] likewise for colons, which TeX also treats as ending sentences, although they never do here.

I have made other corrections just by reading. Sometimes the scanner renders letters in the middle of a word as capital, or confuses ell with one (l with 1), or oh with zero (o with 0). Collingwood uses punctuation more sparingly than I might; I have noted some cases where I confirmed that the scanner missed nothing.

[e] Italics are often ill scanned. Small capitals are used for the first word of every chapter; for the abbreviations B.C. and A.D.; for the roman numerals I, II, III, and IV; for the abbreviation DEF. on page 41; and for the letter A designating the whole essay.

[f] To see what difference this makes, look at the spaces on either side of "John" on page 50.

Introduction

Collingwood's four chapters here might be summarized as follows.

1. That God exists is not a *proposition,* but an absolute *supposition*; it becomes an historical proposition when the "metaphysical rubric" is prefixed, yielding that *we believe* in God. It is *this* proposition that Anselm proves. Our concern will be what the implied supposition means for natural science.
2. Doing natural science requires supposing (1) that there *are* natural things, which are independent of our art; and (2) that we can classify them. Such suppositions cannot come from experience, and yet they had to arise somehow.
   - By themselves, they constitute a religion;
   - thinking about them is theology or metaphysics;
   - putting them to use is science.

   The earliest religion and science must have been "polymorphic," concerned with "totems" and realms of nature, with no clear relations among the totems or the realms.
3. Thales represents the first attempt to unify the sciences, to create a "monomorphic science"; this means creating a monotheistic religion. Philosophers called the one god just that, *theos,* since names such as Zeus and Aphrodite had poetical uses.
4. That there is but one god means (1) one world of nature, one system of laws, one science investigating it. That

> the one god has many "modes" of activity means (2) distinctions between "departmental" sciences are possible. Aristotle understood this, thus solving the problem of "the one and the many," though not in a way that lends itself to expression in art. Aristotle was mistaken to say that God (3) did not create the world and (4) did not set it in motion. Confusion on these points was why the Empire fell, not barbarian invasions. The Patristic writers cleared up the confusion, which is a confusion about the presuppositions of the science that we actually do.

A problem with such a summary is that Collingwood's essay is already a summary of what might well have been a book in itself. There are various controversial points, worthy of elaboration.

Collingwood's motto might as well be, A word to the wise is enough. He has no time for anybody else. He names philosophers who do not understand metaphysics, and thus presumably will not agree with his essay: logical positivists—Russell and Ayer—of his own time, and Kant.

I simply do not know how to take Collingwood's emphasis on the importance of religious institutions for maintaining the presuppositions that underly natural science. That which maintains these presuppositions is by *definition* a religious institution. The International Congress of Mathematicians and the Association for Symbolic Logic might be called religious in this sense, for working to uphold the unity of their subjects.

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[5] R. G. Collingwood. *An Essay on Metaphysics*. Clarendon Press, Oxford, 1940. Reprinted photographically 1948 from sheets of the first edition.

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R. G. Collingwood
"The Existence of God"
from *An Essay on Metaphysics*

XVIII
THE PROPOSITION 'GOD EXISTS'

In the last chapter but one I had occasion to comment on the way in which a 'logical positivist', wishing to recommend the doctrine that 'metaphysical propositions' not being verifiable by appeal to observed fact[g] are pseudo-propositions and meaningless, quoted as examples propositions about God, such as the proposition 'God exists'.[1] To him the proposition 'God exists' would seem to mean that there is a being more or less like human beings in respect of his mental powers and dispositions, but having the mental powers of a human being greatly, perhaps infinitely, magnified (cf. supra, p. 167).

In a sense any one is free to mean anything he likes by any words whatever; and if the writer whom I quoted had made it clear that this was only a private meaning of his own, the meaning he personally intends to convey when he says things about God, I should not have interfered. But he professed to be explaining what other people mean when they say the same things; and these other people, from what he says, I suppose

[1] Chapter XVI is "Suicide of Positivistic Metaphysics," where Collingwood describes logical positivism as deriving from "Earl Russell, who began his brilliant philosophical career in close association with Bradley," and having been "set forth with admirable conciseness and lucidity by Mr. A. J. Ayer in his book *Language Truth and Logic* (1936)."

[g] I would have set off the participial phrase, "not being verifiable by

to be Christians. In that case the question what the words mean is not one to be capriciously answered. It is a question of fact.

What Christians mean when they say that God exists is a complicated question. It is not to be answered except after a somewhat painstaking study of Christian theological literature. I do not profess **[186]** to be an expert in theology; but I have a certain acquaintance with various writers who are thought to have been experts in their time; and I have no fear of being contradicted when I say that the meaning I suppose to be attached by this author to the proposition 'God exists' is a meaning Christian theologians have never attached to it, and does not even remotely resemble the meaning which with some approach to unanimity they have expounded at considerable length. Having said that, I am obliged to explain what, according to my recollection of their works, that meaning is.

But I shall not try to explain the whole of it. For my present purpose a sample is quite enough. According to these writers (I am speaking of the so-called Patristic literature) the existence of God is a presupposition, and an absolute one, of all the thinking done by Christians; among other kinds of thinking, that belonging to natural science. The connexion between belief in God and the pursuit of natural science happens to be a subject with which they have dealt at some length. I shall confine myself to it.

For the Patristic writers the proposition 'God exists' is a metaphysical proposition in the sense in which I have defined that phrase. In following them here, I am joining issue with my 'logical positivist', who evidently does not think it is any-

appeal to observed fact," with commas, if not parentheses; but there is indeed no more punctuation in the original than here.

thing of the kind. In his opinion it has to do not with the presuppositions of science but with the existence of a quasi-human but superhuman person. And the **[187]** department of knowledge (or if you like pseudo-knowledge) to which a proposition concerning a matter of that kind would belong is, I suppose, psychical research; or what booksellers, brutally cynical as to whether these things are knowable or not, classify as 'occult'. There can be no conceivable excuse for classifying it under metaphysics.

If the proposition that God exists is a metaphysical proposition it must be understood as carrying with it the metaphysical rubric;[2] and as so understood what it asserts is that as a matter of historical fact a certain absolute presupposition, to be hereafter defined, is or has been made by natural science (the reader will bear in mind my limitation of the field) at a certain phase of its history. It further implies that owing to the presence of this presupposition that phase in the history of natural science has or had a unique character of its own, serving to the historical student as evidence that the presupposition is or was made. The question therefore arises: What difference does it make to the conduct of research in natural science whether scientists do or do not presuppose the existence of God?

The importance of the metaphysical rubric has been well understood by those responsible for establishing and maintaining the traditions of Christendom. The creeds in which Christians have been taught to confess their faith have never been couched in the formula: 'God exists and has the following attributes'; but always in the formula: 'I believe' or originally

[2]Collingwood defines the metaphysical rubric on his page 55 as the formula, "in such and such a phase of scientific thought it is (or was) absolutely presupposed that . . . "; as will be seen, this may be shortened to *credo,* "I believe."

‘We believe in God’; and have gone on to **[188]** say what it is that I, or we, believe about him. A statement as to the beliefs of a certain person or body of persons is an historical statement; and since Christians are aware that in repeating their creeds they are summarizing their theology, one need only accept Aristotle’s identification of theology with metaphysics to conclude that the Christian Church has always taught that metaphysics is an historical science. I do not say that it has taught all the implications of this principle. For example, it has not consistently taught that there can be no proof of God’s existence. Inconsistency on this point is easy to understand. The words are ambiguous. That God exists is not a proposition, it is a presupposition (Chap. IV, prop. 5).[3] Because it is not a proposition it is neither true nor false. It can be neither proved nor disproved. But a person accustomed to metaphysical thinking, when confronted with the words ‘God exists’, will automatically put in the metaphysical rubric and read ‘we believe (i.e. presuppose in all our thinking) that God exists’. Here is something which is a proposition. It is either true or false. If true, it can be proved: if false, it can be disproved. Unless it is proved it cannot be known at all; for like all absolute presuppositions a man’s belief in God can never be discovered by introspection. If ‘God exists’ means ‘somebody believes that God exists’ (which it must mean if it is a metaphysical proposition) it is capable of proof. The proof must of course be an historical proof, and the evidence on which it is based will be certain ways in which this ‘somebody’ thinks.

[189] A famous example lies ready to hand. If Gaunilo

[3]The proposition referred to is, “Absolute presuppositions are not propositions.”

was right when he argued that Anselm's 'ontological* proof of the existence of God' proved the existence of God only to a person who already believed it, and if Anselm told the truth when he replied that he did not care, it follows that Anselm's proof, whatever else may be said either for it or against it, was sound on this point, and that Anselm was personally sound on it too. For it follows not only that Anselm's proof assumed the metaphysical rubric but that Anselm personally endorsed the assumption when it was pointed out to him, whether he had meant to make it from the first or no. Whatever may have been in Anselm's mind when he wrote the *Proslogion,* his exchange of correspondence with Gaunilo shows beyond a doubt that on reflection he regarded the fool who 'hath said in his heart, There is no God' as a fool not because he was blind to the actual existence of *un nommé Dieu,* but because he did not know that the presupposition 'God exists' was a presupposition he himself made.

Anselm's proof is strongest at the point where it is commonly thought weakest. People who cannot see that metaphysics is an historical science, and therefore habitually dock metaphysical propositions of their rubric, fancying that Anselm's proof stands or **[190]** falls by its success as a piece of pseudo-

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*The name is Kant's. Invented seven centuries later than the thing named, and by a man who did not understand that thing, it has no authority.[i] As a description it is not felicitous. Let us, or those of us who are not polysyllable-addicts, speak in future of 'Anselm's proof'.

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[i]In the earlier *Essay on Philosophical Method* [12, p. 123–7], after referring simply to "Anselm's argument," Collingwood uses the term "Ontological Proof" without apology, and he describes Kant's attempt to refute it as "perhaps the only occasion on which any one has rejected it who really understood what it meant." See also the last two sentences of the present chapter.

metaphysics, that is, by its success in proving the proposition that God exists, as distinct from the proposition that we believe in God, have allowed themselves to become facetious or indignant over the fact, as they think it, that this argument starts from 'our idea' of God and seems to proceed thence to 'God's existence'. People who hug this blunder are following Kant, I know. But it is a blunder all the same. When once it is realized that Anselm's proof is a metaphysical argument, and therefore an historical argument, it can no longer be regarded as a weakness that it should take its stand on historical evidence. What it proves is not that because our idea of God is an idea of *id quo maius cogitari nequit* therefore God exists, but that because our idea of God is an idea of *id quo maius cogitari nequit* we stand committed to belief in God's existence.

It is because Anselm's proof so explicitly takes its stand on history that it provides so valuable a test for a metaphysical turn of mind. A man who has a bent for metaphysics can hardly help seeing, even if he does not wholly understand it, that Anselm's proof is the work of a man who is on the right lines; for a man with a bent for metaphysics does not need to be told that metaphysics is an historical science, and at his first meeting with Anselm's proof he will realize that it is historical in character. I do not suggest that persons with a bent for metaphysics are the only ones who can do valuable work in metaphysics. Kant is an instance to the contrary.

XIX
RELIGION AND NATURAL SCIENCE IN PRIMITIVE SOCIETY

THE question I have undertaken to answer is primarily a question about the history of thought in the fourth century A.D., that being the time when the Christian world made up its mind by hook or by crook as to what it meant when it described itself as believing in God. Historical questions are questions in which one tries to understand what somebody was doing on a certain occasion. This can be done only if one understands what sort of an occasion it was; for every action arises out of the situation in which it is done, and there is no understanding the action unless one understands the situation. In metaphysics as in every other department of history the secret of success is to study the background.

It is through the historical background, therefore, that I shall approach the question what Christians mean by saying that they believe in God. Like an old-fashioned artist, I shall divide this background into two planes: an arbitrary simplification of what is in reality far more complex; but the best I can do. First I shall sketch in the 'distance', by saying something about the religion and science of primitive peoples; then the 'middle distance', by doing the same for the people of ancient Greece.[4]

[4]Evidently the distance is sketched in the present chapter; the middle distance, the next.

If there is to be anything at all which can in any sense be called natural science, the people in whose **[192]** minds it is to exist must take it absolutely for granted that there is such a thing as ‘nature’, the opposite (contradictory) of ‘art’: that there are things that happen quite irrespectively of anything these people themselves do, however intelligently or fortunately, and irrespectively also of anything any one else may do even with skill and luck greater than their own. They must take it absolutely for granted that somewhere in the world there is a dividing line between things that happen or can be made to happen or can be prevented by art (and art never succeeds without a certain support from luck), and things that happen of themselves, or by nature. This line will doubtless shift its position according to the degree of skill and luck possessed by different people; for an extremely powerful magician it will recede a long way; but unless even in this extreme case it is supposed still to exist somewhere, and to have beyond it a region in which things happen that no magic can control, there is not supposed to be any nature, and the ultimate and fundamental presupposition on which depends the very possibility of a natural science remains unmade.

There is no reason to think that this presupposition is native to man. Except that it lies farther down in the edifice of his intellectual habits, it is in principle very much like other presuppositions which we know that some groups of human beings have made while others have not. To animals which physiologically speaking are in either case human we can hardly doubt that it is an open question whether they shall **[193]** suppose that this line exists and that beyond it lies a world of nature, or whether they shall suppose that there is no such line and that whatever happens in the world happens by art; though certainly it is not a question that could be decided by an act of choice whereby a human animal actually in one of these two alternative states abandons that state and embraces the other.[h] Anthropologists tell us of peoples who believe that there is no such thing as natural death. They think, we are assured, that every instance of death is due to magic. If that is so there might be peoples who hold the same belief about everything whatever. No such people has been reported by anthropologists, and very likely none exists; but if it did it would afford an example of a society in which no possible science of nature could arise until that belief had disappeared; and it is at least conceivable that this was once the belief of some or even of all human beings.

It might be fancied that the mere course of experience would suffice to destroy it. Psychologists, or some of them, if they read these words, will remind me that according to themselves every child begins life with a conviction of its own omnipotence, and that this conviction is lost only by degrees, as its baselessness becomes evident in the light of experience. But if that happens, this infantile conviction of omnipotence is not at all like the absolute presuppositions which this book is about. An absolute presupposition cannot be undermined by the verdict of 'experience', because it is the yard-stick by which **[194]** 'experience' is judged. To suggest that 'experience' might teach my hypothetical savages that some events are not due to magic is like suggesting that experience might teach a civilized people that there are not twelve inches in a foot and thus cause them to adopt the metric system. As long as you measure in feet and inches, everything you measure has dimensions composed of those units. As long as you believe

[h] Again I have checked that the minimal punctuation in this complex sentence has been transcribed faithfully.

in a world of magic, that is the kind of world in which you live. If any group or community of human beings ever held a pan-magical belief about the world, it is certainly not 'experience' that could shake it. Yet certainly it might be shaken. It might be shaken through the influence of a very powerful tribesman who found himself taking a different view; or by the prestige of some other community, accepted and revered in the first instance as extremely powerful magicians, and later found to reject and despise it.[5]

The second step towards a science of nature is to organize your thoughts about this world of nature, where nature means the things that happen of themselves and not owing to any-

[5]One might wonder how "the influence of a very powerful tribesman" or "the prestige of some other community" is to be distinguished from "mere course of experience" mentioned at the beginning of the paragraph. The point is that, as the world does not tell us whether to measure lengths in feet and inches, so generally it does not tell us how we must think about it. Eugene Wigner provides a deeper example in "The Unreasonable Effectiveness of Mathematics in the Natural Sciences" [23]:

> Every empirical law has the disquieting quality that one does not know its limitations . . . It is even possible that some of the laws of nature will be in conflict with each other in their implications, but each convincing enough in its own domain so that we may not be willing to abandon any of them. We may resign ourselves to such a state of affairs or our interest in clearing up the conflict between the various theories may fade out. We may lose interest in the "ultimate truth," that is, in a picture which is a consistent fusion into a single unit of the little pictures, formed on the various aspects of nature.

We *may* lose interest in the big picture; but this is not inevitable. In an article called "All Ye Need to Know" [22], Daniel Sarewitz describes Sabine Hossenfelder, a physicist, as having learned at a scientific conference that, in her words,

> Popper's idea that scientific theories must be falsifiable has long been an outdated philosophy. I am glad to hear this, as it's a philosophy that nobody in science ever could have used . . . since ideas can always be modified or extended to match incoming evidence.

Again, incoming evidence alone will never stop anybody from looking for the big picture.

body's art, by discriminating within it various realms or departments.[6] Each of these realms will be a class of things or events resembling one another in certain recognizable ways and all agreeing to differ in these same ways from the things or events that make up the other realms. This step, once more, is a step in the development of absolute presuppositions; it is not a step which can be dictated, or even prompted, by any acquisition of 'experience'. For people like ourselves the habit of **[195]** classifying things according to their resemblances and differences is so ingrained that we can hardly believe we are doing it. We can hardly believe that things do not present themselves to us whether we will or no ready labelled with reference-numbers to the classes in which we habitually put them.[7]

It may help us to realize the arbitrary character of our own

[6] I think here of university departments, such as chemistry and biology; but we are not at the stage where these would be conceived as departments of a *single* university.

[7] In his own textbook of metaphysics, Michael J. Loux explicitly declines to consider his subject as Collingwood does. Loux believes things *do* just come to us classified [19, p. 21]:

> few will deny that many of our ways of sorting things are fixed by the objects themselves. It is not as if we just arbitrarily choose to call some things triangular, others circular, and still others square; they *are* triangular, circular, and square. Likewise, it is not a mere consequence of human thought or language that there are elephants, oak trees, and paramecia. They come that way, and our language and thought reflect these antecently given facts about them.

Loux is right that we do not "arbitrarily choose" to call things as we do. What we call things depends, however, *not* on the things themselves, but on *our* absolute presuppositions about them. That there are elephants is not a consequence of our thought; that we recognize them *as* elephants—that we can even speak of "them" at all—this *is* a consequence of our thought. Disagreement with Loux here is not just a word-game: this is shown by ongoing public controversies about race, nationality, and gender. See also Collingwood's ensuing discussion.

classifications if we study the very different classifications of the same material which other peoples have practised in the past or indeed still practise in the present; for example, the way in which the ancient Greeks and Romans classified colours not as we classify them, by the qualitative differences they show according to the places they occupy in the spectrum, but by reference to something quite different from this, something connected with dazzlingness or glintingness or gleamingness or their opposites, so that a Greek will find it as natural to call the sea 'wine-looking' as we to call it blue, and a Roman will find it as natural to call a swan 'scarlet'—or the word we conventionally translate scarlet—as we to call it white. It has been suggested that this is because the Greeks and Romans were colour-blind. But no sort of colour-blindness known to physiology would account for the facts. In both languages there are the rudiments of what we should call a true colour-nomenclature; and in both languages it happens that there are words for red and green, the colours that colour-blind persons cannot distinguish.

The problem I am suggesting for consideration is similar in principle to this, but it goes far deeper. **[196]** Instead of merely asking whether our conventional modern European way of classifying colours is the only possible way, a question which need only be asked to be answered in the negative, since records of other ways are actually in our possession, I am asking whether the age-old habit of considering the natural world (or world of things which happen of themselves) as a world consisting of various natural realms is the only possible way of considering that world. The answer is that any system of classification or division, whether the things classified or divided are colours or things that happen of themselves, is a system not 'discovered' but 'devised' by thought. The act of thought by which it is laid down is not proposition but supposition. The act of supposing the natural world to be divided into various natural realms is an act which for all human societies known to us has been habitual time out of mind; but it must have had a beginning. I do not see how we can ever hope to find out when or where so distant an event in human history took place; but I think we can be sure that it did take place; and I think we can describe with reasonable probability the kind of way in which human institutions are likely to have been affected by it.

The result of thinking systematically according to any given set of presuppositions is the creation of science; and this, like everything else that the human mind creates, grows for itself a body of institutions to keep it alive. In the case of science these are institutions for the pursuit of scientific research and for the education of young people in its methods and its **[197]** fruits. The result of thinking systematically about what presuppositions are actually in use is the creation of metaphysics or theology, and this too has its own institutions, which in modern Europe (where 'theological colleges' are more concerned with vocational training for the clerical profession than with theological or metaphysical instruction and research) have been almost squeezed out of existence between scientific institutions on the one hand and religious institutions on the other, but flourished once in Europe as they still flourish in the East, though even there the influence of European example threatens them. It is because they hardly exist in Europe that pseudo-metaphysics of various kinds is so rife there. The result of simply presupposing our presuppositions, clinging to them by a sheer act of faith, whether or not we know what they are, whether or not we work out their consequences, is the creation of a religion; and the institutions of a religion have this as their object, to consolidate in believers and perpetuate in their posterity the absolute presuppositions which lie at the root of their thought.

It is because absolute presuppositions are not 'derived from experience', but are catalytic agents which the mind must bring out of its own resources to the manipulation of what is called 'experience' and the conversion of it into science and civilization, that there must be institutions for perpetuating them. If they were once lost, they could never be recovered except by repeating the same kind of process by which they were originally created. As to the nature of this **[198]** process very little is known. That is one of the questions on which light will be thrown by the reformed metaphysics described in Chapter VII. At present there is little we can say about it except that it must have been extremely slow. Granted the preservation of what may be called the 'scientific frame of mind' characteristic of European civilization, the whole of modern European science could be reinvented in a very few thousand years, or even in a matter of hundreds, if all record of its achievements should be lost. But if the 'scientific frame of mind' were lost it would be a question of perhaps tens or hundreds of thousands before any tolerable substitute for it could be invented.

The guardianship of the European 'scientific frame of mind' is vested in the religious institutions of European civilization.[8] In any civilization it is man's religious institutions that refresh in him from time to time the will (for it is a matter of will, though not a matter of choice) to retain the presuppositions by whose aid he reduces such experience as he enjoys to such science as he can compass; and it is by dint of these same reli-

[8] Is Collingwood actually referring here to churches (such as the Roman Catholic Church or the Anglican Church), rather than to universities or, say, the institutional practices of research journals?

gious institutions that he transmits these same presuppositions to his children. For if science is 'experience' interpreted in the light of our general convictions as to the nature of the world, religion is what expresses these convictions in themselves and for their own sake and hands them on from generation to generation. And it does this irrespectively of whether we know by means of metaphysical analysis what these convictions are.[9]

[199] Whenever and wherever men first acquired the habit of dividing the natural world into realms according to resemblances and differences among the things and events which they regarded as composing that world, we may be sure that this new habit of mind had its expression in their religious practices. We may assume with a certain degree of confidence that its effect was to split these up into a plurality of different cults practised, perhaps, by different sections of society, where each section regarded the others not as practising a rival religion to their own but rather as combining with themselves to maintain a single complex of religious institutions each one of which was necessary to the total welfare of society. It is a mark of ignorance in anthropology to speak as if there were

[9] Collingwood's thought resembles that of Alexandre Kojève, who, in "The Christian Origin of Modern Science" in the *St. John's Review* [17], argues that mathematical physics is due to the Christian doctrine of the Incarnation; for, this doctrine showed that the perfect mathematical regularity of the heavens must also be found on earth. St.-John's tutor Curtis Wilson objects to this kind of argument, which he perceives as "doctrinairely Hegelian" [24]. One may raise a similar objection to the seeming suggestion that successful science depends on going to church (or perhaps synagogue or mosque). We may however understand Collingwood as providing a framework for anthropological research. If science *is* being successfully carried out, then its absolute presuppositions *are* being transmitted. However that is, it *is* religion. What then can we find out about the religion of the scientists?

one single institution or set of institutions called ‘totemism’, or one single stage of human history or civilization to which the name ‘totemistic’ can be applied; but it is certainly true that in many different parts of the world, where peoples have been studied in what seems a very low and primitive grade of civilization, a single society has been found to regard itself as divided into a number of lesser units each having its own special religious institutions and each thus co-operating with all the rest in the collective maintenance of a religion which is not perhaps exactly polytheistic, for the idea of a god has hardly at this stage taken a definite shape, but is certainly polymorphic in respect of its ritual activities.

In a society of this kind there would be a sort of natural science; but in certain ways it would be very **[200]** much unlike what we call natural science. In each ‘totemic clan’, or whatever name we like to use for a single one of the various religious groups within a society thus organized, there would be persons who achieved at least a quasi-scientific point of view towards their ‘totem’. One such group, taking a special interest in one class of natural things or events, would become the repository of information about it; and in this way there would grow up a kind of departmentalized science of nature whose polymorphism would repeat the polymorphism of ritual activities.

What would make this extremely unlike the specialization of modern science is that modern specialization arises and runs its course within a unity logically prior to it which it never attempts to break up. The mutual independence of departmental specialists in modern science depends for its very existence on the presupposition that one and the same set of laws hold good throughout the entire world of nature. Unless it were thought an absolute certainty that in this sense nature is one, and therefore that natural science is one also, relations between the various departmental sciences would be as chaotic as the relations between various communities whose frontiers had never been agreed upon, which had never made any treaties, and whose respective positions had never been marked on any map. In the polymorphic science which I am trying to envisage there would be chaotic interrelations of this kind between any one set of inquirers and any other.[10]

[10] In trying to "envisage" polymorphic science, Collingwood engages in what he understands history to be. In *An Autobiography* [7, pp. 110–4], he summarizes his findings about history in three propositions: (1) "all history is the history of thought"; (2) "historical knowledge is the re-enactment in the historian's mind of the thought whose history he is studying"; (3) "Historical knowledge is the re-enactment of a past thought incapsulated in a context of present thoughts which, by contradicting it, confine it to a plane different from theirs."

XX
POLYTHEISTIC AND MONOTHEISTIC SCIENCE

When first our evidence enables us to discern the thing we call Greek science it already shows marks of maturity. We have no direct evidence as to what it was doing before the lifetime of the Ionian 'philosophers' in the late seventh and early sixth centuries B.C.; but what we know about their work gives us plenty of indirect evidence both as to the existence and as to the character of the science which they set out to reform. There is also, as I shall point out towards the end of this chapter, evidence of another kind.[11]

Greek religion was polytheistic; the Greek 'philosophers' from Thales onwards almost uniformly preached a monotheistic religion, and in many cases did so in conscious opposition to the current beliefs and institutions of their time. It would hardly be an exaggeration if one should describe the Greek 'philosophers' as a dissenting and sometimes persecuted sect of monotheists in a polytheistic society. Nor would it be much of an exaggeration if one should describe them in their scientific capacity as a succession of thinkers all bent upon showing that the world is one. Their monotheistic religion went hand in hand with a monomorphic science. And when we look at this science in some detail we find it so framed as to show that

[11] The evidence is poetry such as the *Hippolytus* of Euripedes, and Aristotle's *Metaphysics.*

it must have arisen out of a **[202]** pre-existing polymorphic science in the same kind of way in which their monotheistic religion arose out of a pre-existing polytheistic religion.

Thales is famous as the 'philosopher' who maintained that the world and everything in it was made of water. His contemporaries thought him a great man, and that opinion represents the popular judgement of which an ounce is worth more than a ton of academic or professional reputation. To have said in the time of Thales that the world is made of water must, therefore, have been regarded as an intellectual achievement of the first magnitude. To us it sounds rather childish. But that is because we, as heirs to the scientific tradition of Christendom, inherit a full and satisfactory solution, being in fact the fourth-century Greek solution, of what the Greeks called the problem of the one and the many. Thales was just beginning to tackle that problem.

If you got hold of any intelligent but 'uneducated' man today, and asked him why he thought it childish to say that everything was made of water, he would give you some such answer as this: 'I suppose it is true that in the long run everything is made out of the same sort of stuff. And I dare say water is as good a name for it as any other. But why make such a song about it? It is the differences between things that are interesting. If you told me why the piece of water that I call a stone sinks to the bottom of the sea when the piece of water that I call a flame jumps up into the air, or why the piece of water that I call a caterpillar turns into a butterfly when the piece of **[203]** water that I call an egg turns into a hen, you would be telling me the kind of things I want to know.'

This is as much as to say that nowadays we take the oneness of things for granted and are chiefly interested in their manyness. If we repeat the mistake which in an earlier chapter I ascribed to the eighteenth century, and fancy that the way in which we think nowadays is the way in which all human beings think and always have thought, we shall infer that in the time of Thales, too, 'human nature' being what it is, people took the oneness of things for granted and were chiefly interested in their manyness. If they had, it would certainly have been childish of Thales to go on in this way about the oneness of things. As they did not think him childish for doing that, we may infer that they did not draw the line between the things one takes for granted and the things one wants to know in quite the same place as ourselves.

The work of the Ionian 'philosophers' becomes intelligible when we think of it as an attempt to introduce unity into a pre-existing mass of scientific work which was polymorphic in character. Being polytheistic in their religion but already quite capable of scientific work (for the existing fragments of Thales are no more the work of a 'primitive' than are the existing poems of Homer; and if Homer implies a pre-existing tradition of literary art, Thales no less implies a pre-existing tradition of scientific thought[12]) the Greeks must already have worked out a number of departmental sciences of the kind roughly **[204]** described in the preceding chapter; but with this difference, that in the preceding chapter I was describing a very primitive state of society in which the 'information', as I called it, that went to make up one such 'science' would be from our point of view less like a collection of scientific observations than like a collection of folk-lore, and pretty savage folk-lore at

[12] As Collingwood describes it in *The Idea of Nature* [6, pp. 29–30], that tradition must have settled "a large number of preliminary points," including (1) that there are natural things, (2) which constitute a single world of nature, because (3) they are made of a single material.

that; whereas the Greeks of a time not long before Thales were very far from being savages; they were already Greeks, already heirs to the Minoan world with its accurate observation of natural detail, already pupils to the scribes and star-gazers of Mesopotamia, the sculptors and engineers of Egypt.

It is something more than a guess, then, to say that before the time of Thales there already existed in Greece, and especially in the Greek cities of the Asian coast, a well-founded and well-developed science of nature, or rather a number of departmental sciences of this, that, and the other natural realm; and that the professional and educational organization of these sciences must have been focused in the specialized cult-centres of polytheistic religion; a state of things which survived here and there to a much later date in such examples as the college of medical men attached to the temple of Asklepios at Epidauros.[13] And Thales would not have produced on the history of Greek thought the effect which he did produce unless this departmental and polymorphic natural science had reached a point of development, necessarily a rather high point of development, at which the lack of any co-ordinating authority to draw up a **[205]** map of the sciences and arbitrate in frontier disputes between them was beginning to be acutely felt.[14] People had become a little tired of the manyness of things. It was when Thales began talking about the oneness of things

[13] Since Collingwood mentions "the Greek cities of the Asian coast," I note that one can also visit the remains of a medical college in Bergama, the ancient Pergamum.

[14] Frontier disputes are a theme of Collingwood's earlier *Speculum Mentis*, which has the alternative title *The Map of Knowledge.* Such a map is needed, because "the field of human experience seems to be divided into provinces which we call art, religion, science, and so forth"; presently history and philosophy are added to the list [3, p. 39].

that they began to hear the kind of things they wanted to hear.

To drop the political and cartographic metaphor, the collection and study of isolated blocks of material, each drawn from a single realm of nature, was finding itself handicapped by the obscurity of the relations between one such block and another. It is not easy for us to grasp such a state of things, because for us it is an axiom that rules of method which are valid in one science will hold good, either without modification or *mutatis mutandis,* in those most nearly akin to it. But this is because science is for us no longer polymorphic. In a polymorphic science there is no sense in calling one science nearly or distantly akin to another. They are all just different.[15] If anybody after a training in one science began to study another, his previous training would be valueless; he would have to start again at the beginning. It is an axiom for us that in any realm of nature there are certain laws which hold good not only there but in all other natural realms without exception, and others which hold good either without modification or *mutatis mutandis* in the realms nearest akin to it. In a polymorphic science there is no such axiom. There is no more ground for expecting discoveries in one science to point a way towards discoveries in

[15] Compare the *Ion* [21, p. 415], where the title character can recite Homer and talk about him *ad nauseam,* but can say nothing about any other poet:

> Socrates. Then, my excellent friend, we shall not be wrong in saying that our Ion is equally skilled in Homer and in the other poets, seeing that you yourself admit that the same man will be a competent judge of all who speak on the same things, and that practically all the poets treat of the same things.
>
> Ion. Then what can be the reason, Socrates, why I pay no attention when somebody discusses any other poet, and am unable to offer any remark at all of any value, **[532c]** but simply drop into a doze, whereas if anyone mentions something connected with Homer I wake up at once and attend and have plenty to say?

another than for expecting methods in one science to indicate **[206]** methods in another. And where it is impossible for one science to come to another's help with hints and suggestions depending on assumed analogies between their respective subject-matters or their respective methods it will be impossible for any one science in this isolated condition to attain more than a very low degree of orderliness and method in its inquiries, or of certainty in its results.

All modern scientific work rests on the absolute presupposition that nature is one and that science is one: that the different realms of nature are in part governed by one and the same code of absolutely identical laws, the laws of mathematics, and in part by special codes which do not differ radically among themselves but are so linked together by analogies and similarities that they may be regarded as so many local variants of laws which in spite of these variations can still be called 'laws of nature'; while the various sciences that investigate the various realms of nature are not independent sciences but only modifications of one and the same thing, a single thing which we call by the single name of natural science. What Thales was fighting for, when he 'childishly' said that the world was made of water, was this principle we so lightly take for granted: the principle that in spite of all the differences between different natural realms and the different sciences that study them there is one thing that is nature, and one science that is natural science.[16]

The attempt to replace a polymorphic by a monomorphic natural science was logically bound up with **[207]** the attempt to replace a polytheistic by a monotheistic religion. Or rather, since even in Homer a kind of monotheistic tendency exists side by side with a polytheistic, an attempt to develop the monotheistic tendency already present in popular religion, and to prevent it from being choked by the polytheism which prevailed over it in popular ritual practice. Perhaps to avoid this danger, the 'philosophers' did not, as certain poets like Aeschylus did, graft their monotheism upon the monotheistic element in Homer by giving to their one God the name of Zeus. They did not constitute themselves a sect of Zeus-worshippers. They declined to use any personal name at all, and spoke simply of *ὁ θεός*, God.

This was in effect a refusal to allow certain poetical motives to interfere with the motives of religion on the one hand and those of theology or metaphysics on the other. The Greeks were a people whose artistic genius was not less remarkable than their scientific. In the work of the Greek mind it is not

[16] Collingwood's argument seems belied by the quotation from Wigner in note 5 on page 23; the elided passage reads,

> We have seen that there are regularities in the events in the world around us which can be formulated in terms of mathematical concepts with an uncanny accuracy. There are, on the other hand, aspects of the world concerning which we do not believe in the existence of any accurate regularities. We call these initial conditions. The question which presents itself is whether the different regularities, that is, the various laws of nature which will be discovered, will fuse into a single consistent unit, or at least asymptotically approach such a fusion. Alternatively, it is possible that there always will be some laws of nature which have nothing in common with each other. At present, this is true, for instance, of the laws of heredity and of physics.

Wigner may thus have experienced the loss of faith—the betrayal of Thales—that Collingwood is concerned about.

always easy to distinguish the respective operations of their artistic and their scientific genius. Their habit of representing their gods in vividly realized human form was not a piece of theology, it was a piece of poetry. When they described or portrayed Aphrodite, for example, they did not think they were describing or portraying a magnified and non-natural woman who, by the exercise of something like will, but a superhuman will, brought about the various events which together made up her realm, namely the events connected with sexual reproduction. They **[208]** did not think they were describing or portraying a person who controlled or produced these events, they thought they were describing or portraying these events themselves, regarded generically as natural events, or events not under human control, and specifically as sexual events. The human or quasi-human figure of Aphrodite is merely the poetical way in which they represented these events to themselves. The power or might or royal status annexed to that figure is merely the poetical way in which they represented to themselves their conviction that events of this kind are not only beyond our control but are also of the utmost importance in our lives; so that we must adjust ourselves to them as best we can, since a successful adjustment will mean a happy and successful life for ourselves so far as that realm of nature is concerned, whereas an unsuccessful adjustment will entail our misery or destruction. There can be no more fatal misunderstanding of Greek literature than the failure to grasp this principle. In the *Hippolytus* of Euripides, for example, a young man is cruelly done to death because he refuses to gratify the incestuous passion of his stepmother. In terms of poetry, his destruction is compassed by a quasi-human person called Aphrodite, in the execution of her vengeance upon him for refusing, not then only but always, to take part in sexual intercourse; a refusal which she regards as insulting to herself as the patron of sex. In order to achieve her vengeance this goddess deprives his stepmother first of her happiness and self-respect and then of her **[209]** life, and robs his father both of wife and of son, making him his son's murderer.

Simple-minded modern readers can hardly restrain their indignation; allow themselves strong language about the low moral quality of Greek religious ideas; and hint a suspicion that Euripides may have been deliberately attacking the beliefs of his countrymen. Yet if these same readers heard somebody say that a steeple-jack, notoriously careless about the condition of his ropes, fell one day by the operation of the law of gravity from the top of a church tower, so that himself and a harmless passer-by were killed, and his aged father ended his days in the workhouse, they would hardly suspect their informant of meaning to suggest that so inhuman a law ought to be repealed. They have simply been deceived by the Greek habit of personification. The story of the *Hippolytus* would be exactly the same if you left the goddess out. Here it is.[17]

[17] After *An Essay on Metaphysics,* Collingwood started on *The Principles of History* [10], which contains three stories: (1) "Who Killed John Doe?" (pp. 21–4), illustrating the meaning of historical evidence;[i] (2) "Excavations at Highbury, 193–" (pp. 63–7), an account of archeological research at an imaginary dig; and (3) "Psychology in Lagado" (pp. 89–91), a Swiftian satire:

> 'There is a sect of philosophers among them' (I quote the words of Philip Gulliver, whose manuscript account of the voyages in which he retraced his grandfather Lemuel's footsteps came to my hands in very strange circumstances that I am not yet at liberty to disclose) 'who hold that whatever exists can be measured and weighed, and that nothing can be known except what is known by these means. Now many persons in that island are much addicted to music; and this is a great annoyance to these philosophers, be-

[i] This story is part of what Collingwood's literary executor Knox included in *The Idea of History* [8, pp. 266–8].

'Once upon a time there was a young man who had a horror of women. To persuade himself that there was nothing wrong with him, he devoted himself to blood-sports. His mother was dead, and his father married again, a nice young woman, good-looking and of good family, though there were odd stories about them. . . . Well, as luck would have it, or perhaps it was that queer streak in her family, she fell violently in love with her stepson. She was almost dying of love, when her old nurse found out about it and persuaded her to speak to the young man. He refused her with such disgust that she **[210]** didn't know what to do. So she committed suicide, leaving a letter for her husband saying that it was because her stepson had made love to her. The old man believed it; so he had him murdered.' The moral is that sex is a thing about which you cannot afford to make mistakes.

These stories, already hundreds of years old when they were piously preserved in the Greek literature of the fifth century before Christ, a literature which was consciously and professedly the handmaid of Greek polytheistic religion, are often found to inculcate such morals as this, and may be regarded as documentary relics of the polymorphic science which the

cause as a condition of entering their sect they have been forced to undergo an operation which renders them perfectly deaf . . . '

Collingwood describes his writing in a letter to his wife Ethel on February 18, 1939, from "Djokja," or Jogyakarta [13, p. 537]:

> I have got in some priceless episodes, one a full-size detective novel, another a bogus report on the excavation of a hill-fort, both in my opinion great fun . . . I don't think I ever realized before, how fatally I missed my bus when I took a job at Oxford instead of becoming a professional writer. I know why I did it, it was because I was angry with my father for being that sort of person and not being able to bring up his family in consequence . . .

Collingwood will turn fifty in four days. In the summer he will cruise to Greece with Oxford undergraduates [11].

'philosophers' set out to reform. Refracted as they are through the atmosphere of fifth-century Greek civilization, they can hardly be called direct evidence as to what that polymorphic science was like; but indirectly they are evidence of a very valuable kind, and enable the metaphysician who is conscious of the historical character of his own work to carry the history of the absolute presuppositions involved in Greek science back beyond the point to which it was brought by the reformation that Thales initiated.

The high-water mark of this reformation is recorded in Aristotle's *Metaphysics*, where the central problem is to expound the presuppositions of a science of nature (the science of nature which was pursued by Aristotle himself, the foremost natural scientist of his age, and those whom he regarded as his fellow workers in that field) in which the balance was evenly held between the oneness of things and **[211]** their manyness. Aristotle's *Metaphysics,* openly and professedly a theology, reminds the reader by this fact of the intimate connexion that there must always be between the doctrines of religion and the foundations of natural science. In it Aristotle tries to express both the genuine unity of the natural world, as envisaged by this science, and also the genuine plurality of the realms within it, in other words, both the genuine unity of natural science and the genuine plurality of the natural sciences, as these things existed in his own time, by affirming the following propositions. The reader will understand that my purpose is only to summarize a few of Aristotle's points, and that in every case I leave it to him to insert the metaphysical rubric.[18]

Of Nature

1. (DEF.) *The 'world of nature' is a world of movements*

[18]"We believe" or "It is presupposed," as in note 2, page 16.

which happen of themselves.

Note on prop. 1. That there is such a world is a thing we discover by the use of our senses.

Of the Unity of Nature, or of God

2. *There is one God, and only one.*

3. *God is not a creator from whom natural movements receive their origin (for if so they would not happen of themselves); he is the perfect being whom all the things in nature are trying to imitate.*

4. *God is mind; but all these imitations are movements; therefore natural movements imitate God in the only way in which movements can imitate the activity of mind.*

5. *The activity of mind is rational activity; therefore* **[212]** *natural movements in general, as imitations of God, are rational movements, i.e. movements taking place according to laws.*

Of the Plurality of Natural Realms,
or of the Intelligences

6. *There are various realms of nature, in which various different kinds of movement obtain.*

7. *There is only one realm of nature, the sphere of the fixed stars, which directly imitates God.*

8. *It does so by moving with a uniform rotation, this being the only kind of motion which can go on uniformly for ever, and thus serve to imitate the eternal and unchanging activity of God.*

9. *The non-circular and non-uniform movements characteristic of other natural realms are imitations, in terms of movement, of other kinds of mental activity.*

10. *They are imitations, in terms of movement, of the activities of certain Intelligences, which are minds themselves imitating in various partial and incomplete ways in terms of mental activity the one activity of God; these Intelligences being neither divine nor human, but belonging to an order intermediate between the two.*

Note on prop. 10. The statement that there are many different ways in which God's single activity can be imitated by other minds implies that all these different forms of mental activity already exist within God's single activity. This may be expressed by saying that the unity of God's activity is a 'self-differentiating unity', like the unity of the logical universal (see p. 6).[19]

[19] In the example on the page referred to, *number* differentiates itself into the even and the odd. Collingwood then makes a forward reference to pages 212 (the present page), 219, and 220.

XXI
QUICUNQUE VULT[20]

If Aristotle's account of the presuppositions underlying natural science as he understood it are compared with those of modern European science, certain points of agreement and certain points of difference will be found. I will begin with the most important points of agreement.

I. That *there is one God*; in other words, that there is one world of nature with one system of laws running all through it, and one natural science which investigates it.

II. That *there are many modes of God's activity*; in other words, that the oneness of nature does not preclude, it logically implies, the distinction of many realms within nature, and the oneness of natural science does not preclude, it logically implies, distinctions between many departmental sciences.

This solves the 'problem of the one and the many'. The solution in terms of religion is not to be found in a polytheism which asserts a diversity, however harmonious, of departmental gods; it can only be found in a monotheism which regards the one activity of the one God as a self-differentiating activity. This solution has the minor drawback, if you think it a drawback, that although you can quite well understand how a single activity differentiates itself into various activities

[20]The chapter title is the first words of the Athanasian Creed [16, pp. 864–5]: "Whosoever will be saved, before all things it is necessary that he hold the Catholic Faith."

(Plato had already made this clear when he showed that the four 'virtues' of temperance, **[214]** courage, wisdom, and justice were differentiations of one single 'virtue' which includes them all, so that a man is properly called 'good' not because he is either temperate or brave or wise or just but because he is alike temperate and brave and wise and just[21]) you cannot personify this in sculpture or painting or poetry; so that people who fancy they cannot understand a thing unless they can see it mythologically represented in a picture will fancy they cannot understand this. When a sculptor, for example, wishes to express the idea that the divine activity is one, he will personify it in a single human figure invested with conventional attributes of divinity: when he wishes to express the idea that this one activity diversifies itself into many activities, he will personify it in a group of figures, rather comic to an irreverent eye, appearing to represent a committee of perhaps strangely assorted gods. An unintelligent spectator will think that there is inconsistency here, and will complain that he cannot tell whether monotheism or polytheism is being expounded.

There are at least two points, however, where Aristotle's account of his own presuppositions fails to agree with the presuppositions of modern natural science. When these points are examined it will be seen that Aristotle was not so much failing to anticipate the absolute presuppositions of a future age as failing correctly to define his own.

III. When Aristotle says that *God did not create the world*, this means that the existence of nature is not a presupposition of natural science but simply an **[215]** observed fact. For if it had been said that God created nature, this would

[21] The discussion of the four qualities is in *Republic* IV, beginning at 427E [20, p. 347].

have meant that the existence of nature is a presupposition of natural science; since God is such a presupposition, and any activity which we ascribe to God is an integral part of what we believe about Him, and therefore when we presuppose Him we simultaneously presuppose anything which we regard as the product of His activity.

Aristotle thought, and he was not the only Greek philosopher to think it, that by merely using our senses we learn that a natural world exists. He did not realize that the use of our senses can never inform us that what we perceive by using them is a world of things that happen of themselves and are not subject to control by our own art or any one else's. I have already pointed out that the existence of such a world is a presupposition, the first and fundamental presupposition, on which alone any science of nature can arise. When Aristotle described it as a fact discovered by the use of the senses, therefore, he was falling into a metaphysical error. For his own science of nature, no less than for any other, the thing was in fact an absolute presupposition. This metaphysical error was corrected by Christianity.

If metaphysics is our name for the statement of absolute presuppositions, and if metaphysics and theology are the same, there are three ways in which the existence of a world of nature might be made to figure among the doctrines of theology.

1. It might be a proposition in metaphysics, as it is for Spinoza, that God and nature are the same. **[216]** But this would entail the consequence that natural science is the same thing as metaphysics: which cannot be right if the business of metaphysics is to state the absolute presuppositions of natural science.

2. It might be a proposition in metaphysics that the world of nature exists, but this proposition might be left wholly

unrelated to the proposition that God exists. But then it would not be a proposition in theology; and therefore, if theology and metaphysics are the same, not a proposition in metaphysics. And what about the presupposition of which it was the statement? The act by which we hold such presuppositions, I have said elsewhere, is religious faith; and God is that in which we believe by faith; therefore all our absolute presuppositions must be presuppositions in holding which we believe something about God.

3. It might be a proposition in which the existence of the world of nature was stated in the form of an attribute or activity of God; and this seems the only possible alternative.

IV. The second point of discrepancy between Aristotle's metaphysics and the presuppositions of modern science is concerned with motion as a feature of the natural world.

Let it be granted that there is a natural world, no matter what our reasons for believing it. Greek and modern physics are agreed that the most universal characteristic of this world is motion. Now, if we ask how we know that in the natural world there is such a thing as motion, the Greek answer is that we **[217]** know it by using our senses. That is how we know that there are natural things; that is likewise how we know that they move. But if the existence of natural things is not a fact discovered by experience but a presupposition without which we could never convert the data of experience into a science of nature, the idea that these things move must be a part of that same presupposition. For when we speak of the existence of natural things we mean (as Aristotle very truly says) the existence of things that move of themselves or events that happen of themselves. The idea of movement or happening, and self-movement or automatic happening at that, is contained in the idea of a natural world. The idea of motion, therefore (for if the world of nature is a world of bodies all the events in nature are motions), cannot be an idea which we obtain, as the Greeks thought we obtained it, through the use of our senses. It is an idea which we bring with us in the shape of an absolute presupposition to the work of interpreting what we get by using our senses. The proposition that there is motion in nature is a metaphysical proposition.[22]

How could this proposition be incorporated in a theology? Obviously by saying that God, when he created the world of nature, set it in motion. The other alternatives, (1) that God is nature and that the movement of nature is God's activity of self-movement, and (2) that science involves this presupposition among others, that natural things move, have been in principle already considered and rejected. **[218]** But if we say that God set the world in motion when he created it, we are saying that his thus setting in motion the world he created is an integral part of his creating it, and therefore arises out of something in his essential nature. Aristotle did not think that movement, as such, in the natural world arose out of anything in God's nature; he thought it happened of itself. He only thought that the orderliness or regularity or 'rationality' of such movement arose from something in God's nature, namely from the rationality of God's thought, which things in nature imitated. But if we drop the idea of natural movements as first (logically first, of course) occurring of themselves, and only secondly acquiring their orderliness through imitating God, and substitute the idea of these movements as created by God, we are saying in effect that to be the creator of movement in

[22] That there is motion in nature is an absolute presupposition; from this, incorporating the metaphysical rubric, we obtain the proposition that *we believe* there is motion in nature.

the natural world is just as much a part of God's nature as to be the source of diversified orderliness in the natural world.

Here again, it will be seen, Aristotle failed in his metaphysical analysis; and his failure was not limited to himself alone; the metaphysical mistake which he made was a commonplace of Greek thought. And since metaphysics is inseparable, as regards success or failure, from ordinary thinking, this breakdown of Greek metaphysics implied a breakdown of Greek science.

This was very clearly seen by the Patristic writers, who made all the four points I have enumerated, consciously and deliberately emphasizing their im- **[219]** portance for natural science. I will go over the points in a slightly different order.[23]

I. *There is one God.* Here they agreed with the philosophical tradition of the Greeks, and also with the prophetic tradition of the Hebrews, which resembled it in asserting a monotheistic religion against a background of popular polytheism.

II. *God created the world.* Here they accepted the Hebrew tradition and departed from the Greek. For Plato, God is not the creator of the world, he is only its 'demiurge'; that is to say, he made it, but made it on a pre-existing model, namely the eternal hierarchy of Forms. For Aristotle, he did not even make it; he is only the model on which it tries to make itself.

In order to understand what the Christian metaphysicians were doing, and why the thing they did was ultimately accepted by the Greco-Roman world, in other words why that world was converted to Christianity, it is necessary to bear in mind that at this point they were correcting a metaphysical error on the part of the Greek philosophers. I have already explained that the article of faith 'God created the world' meant

[23]The middle two points are interchanged.

'the idea of a world of nature is an absolute presupposition of natural science'. In maintaining that article of faith, the Christians were substituting a correct piece of metaphysical analysis for the incorrect piece of metaphysical analysis whereby the Greek philosophers had been led to the doctrine that we learn of the natural world's existence by the use of our senses.

III. *The activity of God is a self-differentiating* **[220]** *activity, which is why there are diverse realms in nature.* This doctrine was a blend of the foregoing with a notion which Christianity owed to the Greek philosophers. The notion of a self-differentiating unity was characteristically Platonic; and from Platonism it had already found its way into the Jewish Platonism of Egypt. The technical term in Greek for a self-differentiating unity is *λόγος*, and this word was taken over by the Egyptian schools, and later by Christianity itself in the Fourth Gospel. Everybody knows Gibbon's gibe to the effect that this notion was taught 300 B.C. in the school of Alexandria, revealed A.D. 97 by the Apostle St. John. Most people know, too, that Gibbon lifted this statement out of St. Augustine's *Confessions,* characteristically omitting to acknowledge it and at the same time falsifying the facts by suppressing Augustine's point, which is that the notion of the *λόγος* was a commonplace familiar to every Platonist, but that the Johannine doctrine according to which 'the *λόγος* was made flesh' was a new idea peculiar to Christianity.*

*Gibbon's remark occurs in his table of contents to chapter xxi.[i] 'My personal acquaintance with the Bishop of Hippo', he says in note 30 to chapter xxxiii (Bury's ed., vol. iii, p. 607),[ii] 'does not extend beyond the *Confessions* and the *City of God.*' Here is the passage from the *Con-*

[i]I confirm this with Womersley's edition [15, vol. I, p. 23].
[ii]Note 28 of Womersley's edition [15, vol. II, p. 285].

[221] IV. *The creative activity of God is the source of motion in the world of nature.* This, like number II, was a departure from Greek precedents and a point borrowed from the Hebrew creation-myth, where 'the spirit (breath) of God moved upon the face of the waters', and where God after modelling Adam out of clay 'breathed into his nostrils the breath (spirit) of life'. God is pictured as blowing over the world he makes, thus setting it in motion; blowing into the living creature he makes, thus giving it power to move itself.

This point is logically connected with number II. If the world of nature is by definition a world of movements, and if the existence of that world is an absolute presupposition of natural science, the movement which is its essence must be an abso-

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fessions, vii. 9: 'et ibi [sc. in libris Platonicorum] legi non quidem his verbis, sed hoc idem omnino, multis et multiplicibus suaderi rationibus quod *in principio erat verbum, et verbum erat apud Deum, et Deus erat verbum; hoc erat in principio apud Deum* (and so on, quoting John i. 1–5, then omitting the reference to the Baptist and beginning again at verse 11). Quia vero *in sua propria venit* . . . (quoting verses 11–12) non ibi legi. Item ibi legi . . . (quoting verse 13) sed quia *verbum caro* **[221]** *factum est* . . . (quoting verse 14) non ibi legi.'[i] The extreme care with which Augustine details every point in which the Evangelist is merely repeating the commonplaces of current Platonism throws into sharp relief the points in which he claims that the Christian doctrine departs from the Platonic; and makes one regret the slipshod way in which Gibbon speaks of Plato as having 'marvellously anticipated one of the most surprising discoveries of the Christian revelation'.

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[i]In the translation of Henry Chadwick [1, p. 121]:

> There I read, not of course in these words, but with entirely the same sense and supported by numerous and varied reasons, 'In the beginning was the Word and the Word was with God and the Word was God. He was in the beginning with God . . . ' But that 'he came into his own . . . ', that I did not read there.
>
> Again, I read there . . . but that 'the word was made flesh . . . ', that I did not read there.

lute presupposition too. Once it was seen that Greek natural science did in fact absolutely presuppose the existence of a natural world, although by an error in metaphysical analysis the Greek philosophers had overlooked the fact; and once the fact had been stated, strictly in accordance with the Aristotelian principle that metaphysics and theology are the same, by saying that the world of nature exists in virtue of a **[222]** creative act on the part of God; it followed inevitably that this creative act should be defined as not merely (*a*) creative of nature in general, nor merely (*b*) creative of distinct realms in nature, but also as (*c*) creative of motion in nature.

When a Christian theologian to-day says that God exists, or (to be precise by making explicit the metaphysical rubric) that we believe in God, he is consciously using words in the sense in which they were defined by the Patristic writers who worked out the notions I have been describing. When an uneducated Christian makes the same statement, he too is using words in the same sense, unless indeed he is attaching to them some private and heretical (that is, historically unjustified) sense of his own. What the words do actually and historically mean is by now, I hope, clear. I will try to summarize it briefly, bearing in mind that I have undertaken to deal only with their application to the absolute presuppositions of natural science.

They mean that natural scientists standing in the Greek tradition absolutely presuppose in all their inquiries

1. *That there is a world of nature,* i.e. that there are things which happen of themselves and cannot be produced or prevented by anybody's art, however great that art may be, and however seconded by good luck.

2. *That this world of nature is a world of events,* i.e. that the things of which it is composed are things to which events happen or things which move.

[223] 3. *That throughout this world there is one set of laws according to which all movements or events, in spite of all differences, agree in happening*; and that consequently there is one science of this world.

4. *That nevertheless there are in this world many different realms,* each composed of a class of things peculiar to itself, to which events of a peculiar kind happen; that the peculiar laws of these several realms are modifications of the universal laws mentioned in 3; and that the special sciences of these several realms are modifications of the universal science there mentioned.

Christian writers in the time of the Roman Empire asserted, and no historian to-day will deny, that in their time the science and civilization of the Greco-Roman world were moribund. Some modern writers, purveyors of sensational fiction rather than historians, say that this was because the Greco-Roman world was being destroyed by barbarian attacks.[24] The causes of historical events are sometimes clearer to posterity than to contemporaries; but not in a case like this. If a man's friends have left it on record that he died of a lingering disease, and a group of subsequent writers, in an age for which it is a dogma

[24] Today it seems popular to blame not *attacks,* perhaps, but immigration:

> The massive migration of barbarians into the Roman Empire, in the 4th through 6th centuries, changed European civilization permanently. They caused the fall of the Western Roman Empire, and centuries later, the rise of a new civilization there, based on the descendants of old Roman stock and Christianized Germanic tribes. Will the latter-day descendants of those Europeans be able to hold back the "barbarian invasions" from Africa in the 21st century? Or will they have to do as the Romans did and absorb the strangers, and, over centuries, create a new civilization? These are the stakes.

Thus Rod Dreher in *The American Conservative,* in an article [14] that Josephine Livingstone of *The New Republic* saw fit to respond to [18], though not along the lines that Collingwood will set out.

that no such disease exists, agreed to say that he was shot by a burglar, a reader might admit that the story told by posterity was more entertaining than that told by the contemporaries, without admitting that it was truer. The Patristic diagnosis of the decay of Greco-Roman civilization ascribes that event to a metaphysical disease. The Greco-Roman world, we are told, was **[224]** moribund from internal causes, specifically because it had accepted as an article of faith, as part of its 'pagan' creed, a metaphysical analysis of its own absolute presuppositions which was at certain points erroneous. If metaphysics had been a mere luxury of the intellect, this would not have mattered. But because metaphysical analysis is an integral part of scientific thought, an obstinate error in metaphysical analysis is fatal to the science with which it is concerned. And because science and civilization, organized thought in its theoretical and practical forms, stand or fall together, the metaphysical error which killed pagan science killed pagan civilization with it.

This diagnosis is naturally repugnant to an age like the present, when the very possibility of metaphysics is hardly admitted without a struggle, and when, even if its possibility is admitted, its importance as a *conditio sine qua non* of science and civilization is almost universally denied. Naturally, therefore, this anti-metaphysical temper has produced an alternative explanation for the collapse of the 'pagan' world: that it was destroyed by the barbarians. But this explanation cannot be taken seriously by any one with the smallest pretensions to historical learning. A good deal of information about barbarians and Romans in the later Empire is now accessible even to persons who profess no special interest in the subject; and any reader who will spend a little time upon it can satisfy himself that it was not barbarian attacks that destroyed the Greco-Roman world. **[225]** Further research will convince him that to this extent the Patristic diagnosis was correct: the 'pagan' world died because of its own failure to keep alive its own fundamental convictions.*

The Patristic writers not only saw this, but they assigned to it a cause, and proposed a remedy. The cause was a metaphysical cause. The 'pagan' world was failing to keep alive its own fundamental convictions, they said, because owing to faults in metaphysical analysis it had become confused as to what these convictions were. The remedy was a metaphysical remedy. It consisted, as they formulated it, in abandoning the faulty analysis and accepting a new and more accurate analysis, on the lines which I have indicated in this chapter.

This new analysis they called the 'Catholic Faith'. The Catholic Faith, they said, is this: that we worship (note the metaphysical rubric) one God in trinity, and trinity in unity, neither confounding the *ὑποστάσεις* and thus reducing trinitarianism to unitarianism, nor dividing the *οὐσία* and thus converting the one God into a committee of three. The three *ὑποστάσεις*, that is to say the three terms in virtue of whose distinctness they spoke of a trinity, they called respectively the Father, the Son, and the Holy Ghost. By believing in the

*There may be readers who find strange or even shocking my denial of the vulgar error that Roman civilization was destroyed by barbarian attacks. In the text I remarked that this impression would be dispelled by looking up what modern writers have to say on the subject. Such readers can now be referred to an authoritative discussion of this very pornt in a book which has placed its author among the faremost living historians: A. J. Toynbee, *A Study of History,* vol. iv, pp. 56–63, published while this Essay was in the press.[i]

[i]This note was originally at the end of the chapter and prefaced with "*Note to pp. 223–5.*"

Father they meant (always with reference solely to the procedure of natural science) absolutely presupposing that there is a world of nature which is always and indivisibly one world. By believing in the Son they meant absolutely presupposing that this one natural world is nevertheless a multiplicity **[226]** of natural realms.* By believing in the Holy Ghost they meant absolutely presupposing that the world of nature, throughout its entire fabric, is a world not merely of things but of events or movements. These presuppositions must be made, they said,

*This is why, as everybody knows who has ever looked at the sculptures of a French cathedral, the specialized creative work done on the Days of Creation is represented in medieval Christian art as being done not by the Father but by the Son. The second 'Hypostasis' of the Trinity is the λόγος, the self-differentiation of the divine creative activity. 'Dieu a créé, mais il a créé par son Verbe ou par son Fils. C'est le Fils qui a réalisé la pensée du Père, qui l'a fait passer de la puissance a l'àcte. Le Fils est le vrai créateur. Pénétrés de cette doctrine, les artistes du moyen âge ont toujours représenté créateur sous les traits de Jésus-Christ': Émile Male, *L'art religieux du xiii*[e] *siècle en France,* 1925, p. 29. Cf. Augustine, *Conf.* xi. 5, for the origin of the doctrine: 'quoniam tu Pater in principio quod est tua sapientia de te nata, aequalis tibi et coaeterna, id est in Filio tuo, fecisti caelum et terram'.[i]

[i]The reference should be to *Confessions* xiii. 5, which begins [2],

> ecce apparet mihi in aenigmate trinitas quod es, deus meus, quoniam tu, pater, in principio sapientiae nostrae, quod est tua sapientia de te nata, aequalis tibi et coaeterna, id est in filio tuo, fecisti caelum et terram.

In Chadwick's translation [1, p. 276],

> Here in an enigmatic image (1 Cor. 13: 12) I discern the Trinity, which you are, my God. For in the beginning of our wisdom which is your wisdom, Father, begotten of yourself, equal to you and coeternal, that is in your Son, you 'made heaven and earth' (Gen. 1: 1).

The verse of 1 Corinthians is,

> For now we see through a glass, darkly; but then face to face: now I know in part; but then shall I know even as also I am known.

by any one who wished to be 'saved'; saved, that is to say, from the moral and intellectual bankruptcy, the collapse of science and civilization, which was overtaking the 'pagan' world. The disease from which that world was suffering they regarded as a fatal disease. A civilization is a way in which people live, and if the way in which people live is an impracticable way there can be no question of saving it. What has to be saved is not the way of living but the people who live in that way; and saving them means inducing them to live in a different way, a way that is not impracticable. The different way of living which these writers proposed for adoption was the way of living based upon the absolute presuppositions I **[227]** have tried, in a partial and one-sided manner, to describe. The new way of living would involve a new science and a new civilization.

The presuppositions that go to make up this 'Catholic Faith', preserved for many centuries by the religious institutions of Christendom, have as a matter of historical fact been the main or fundamental presuppositions of natural science ever since. They have never been its only absolute presuppositions; there have always been others, and these others have to some extent differed at different times. But from the fifth century down to the present day all these differences have played their changing parts against a background that has remained unchanged: the constellation of absolute presuppositions originally sketched by Aristotle, and described more accurately, seven or eight centuries later, by the Patristic writers under the name of the 'Catholic Faith'.