LECTURE IV

THE SCOPE OF METAPHYSICS

§ 1. In the preceding lectures we have considered the Scope of Philosophy in relation successively to:
(1) Sciences or 'Positive Sciences.'
(2) Arts and Practical Studies—Ethics and Politics.
(3) Psychology.

In the course of this inquiry we have been led, by the mere effort to give a comprehensive definition of the Scope of Philosophy, to note various primá facie one-sided views.

(a) Materialistic Philosophy, which does not recognise Mind—at any rate as an object of scientific knowledge—except as a complex mode of matter in motion.

(b) Naturalistic or Positive Philosophy, which does not recognise what ought to be as an object of knowledge, distinct from the knowledge of the existences and sequences of phenomena.

(c) Psychological Philosophy, which regards the knowable world as consisting, when analysed into ultimate elements, of mental fact: and—in the case
of the division of this school which has especially applied to its method the term 'psychological'—regards the ultimate elements as being the 'feelings' actual and possible of particular minds—using the word feeling in a wide sense to include sensation as well as emotion.

I call these views *prima facie* one-sided, because they neglect or obliterate important distinctions which we find in our common thought, and which I conceive we ought to take note of in defining the subjects—however much we may be ultimately disposed to treat them as subordinate.

In the first part of this survey—in considering the relation of Philosophy to Sciences and Arts, we came near Metaphysics without taking note of it: it was there, but it did not come distinctly into view. But in trying to make clear and precise the distinction between Philosophy and Psychology we found ourselves drawn into this central region of Philosophical study. For though it is possible to keep clear of metaphysics in our empirical investigation of the relation of states of consciousness to their physiological antecedents and concomitants, it is not possible to keep clear of it in considering the relation of Mind to Matter as our object of thought: the distinctions I tried to indicate, between various 'isms'—Natural Dualism, Mentalism, Idealism, Sensationalism—were, as my audience doubtless perceived, Metaphysical distinctions. The time has therefore clearly come to concentrate attention more directly on the effort to define the scope of Metaphysics.
The definition of the scope of Metaphysics presents peculiar difficulties: partly owing to a widespread doubt whether such a study ought to exist. We are all agreed that there are such bodies of systematic knowledge as the Sciences:—we may dispute how far they are valuable or complete, but that their methods are in the main valid, and their results real knowledge, no competent judge seriously doubts. The case is otherwise, as we saw, with Philosophy: but when Philosophy is explained to be aiming at co-ordination and systematisation of the Sciences, it is generally admitted that its work is possible and desirable, though it may be at present in a rudimentary state, —at any rate we are not thought to be transgressing the limits of the human intellect in trying to achieve it. But there is a widespread idea that Metaphysicists are guilty of such transgression: consequently the term is not unfrequently used in a bad sense, to denote inquiries which experience has shown to be futile. This is not my view: I think that the questions, which—according to the traditional meaning of the word—it is convenient to distinguish as metaphysical, are, in part at least, questions to which as rational beings we are bound to seek some kind of answer;—though we may have to content ourselves with a very imperfect and provisional answer. And whether we pursue Metaphysics or not, I think it important to ascertain clearly the place that the knowledge it seeks would occupy in a complete scheme of human knowledge.

The disparaging use of the term, then, must be
faced and allowed for: accordingly I try to find a definition which will suit both friends and foes of Metaphysics. That is, I do not omit questions that the human mind seems to me strongly impelled to ask, merely because thinkers of influence have pronounced them futile. Here, however, you may think that the method I proposed, in the case of Philosophy, to find a definition acceptable to all schools—by concentrating attention on the questions Philosophy asks instead of the answers given by philosophers—can hardly be applied; because I admit that important thinkers hold that the questions Metaphysics asks ought not to be asked. But the interest of the questions is, as I have said, too profound to allow them to be simply ignored: so that even those philosophers who refuse to ask the questions have to give a reason for their refusal.

Thus if they do not admit the questions directly within the scope of their study, they have to admit them indirectly by investigating the previous question whether they ought to be investigated. For example, Spencer holds as a fundamental doctrine that 'the power which the Universe manifests to us is utterly inscrutable,' and devotes several chapters to establishing it. The discussion of these chapters I call metaphysical.

Let us then, in order to define the boundaries of this study, briefly survey its confines;—the other studies with which it is liable to be partially confounded, but from which, in common usage, it is
more or less vaguely distinguished.¹ (1) The distinction between Metaphysics and Physics has to be made clear—since it is evident that Metaphysics aims at knowledge of some kind about the material world. The vulgar are aware that the Metaphysician asks 'what is matter' as well as 'what is mind.' (2) On the other hand, Metaphysics has to be distinguished in some way from Philosophy. This distinction is obscurer in ordinary thought; probably many of the persons who distinguish Philosophy from Science would identify it with Metaphysics. I think, however, that there is a preponderance of usage in favour of including Metaphysics within Philosophy, as a part or kind of philosophy; as it is generally understood that there is a manner of philosophising which claims to be 'Positive,' in contrast to 'Metaphysical.'² So,

¹ Here, as in many similar cases, inquiries into original derivation will not much help us. For there is no doubt that the use of the term 'Metaphysics' is derived from the title of a treatise of Aristotle's, that was not given to this treatise by Aristotle himself. Aristotle himself calls the subject 'First Philosophy' or 'Theology' or 'Philosophy about divine things': the Greek title modernised into 'Metaphysics' was given to the treatise by a Peripatetic of the first century A.D., Andronicus Rhodius, who collected and arranged Aristotle's works; and perhaps it merely meant that the treatise came 'after Physics' in his arrangement.

² Fortunately the works of Comte and Spencer give us voluminous concrete examples of the difference. I will take Spencer as more familiar to our own time: I cannot say that Spencer, like Comte, really treats Metaphysics simply as a form of error: in fact he is not more interested in the Agnosticism of his 'First Principles' than he is in the 'Transfigured Realism' of his Principles of Psychology; and the latter is strictly meta-
again (3), the difference between Metaphysics and Psychology is now pretty widely recognised. We must allow, I think, a certain amount of common ground to the two subjects; but, if Metaphysics is taken to be a part or kind of Philosophy, the distinctions which in a previous lecture I drew between Philosophy and Psychology will apply here. Indeed the development of the older English Empirical Psychology, and especially the more recent development of experimental Psychology and Psychophysiology, have made current and familiar the conception of a kind of Psychology which is not metaphysical; on the other hand the spread of Kantian or Neo-Kantian doctrine in England has diffused intelligence of a kind of Metaphysics which claims but a slender connexion with Empirical Psychology.

To make the last point clearer, I may recall the distinction of methods which I gave in discussing the relation of Philosophy to Psychology. It would be generally agreed that (a) the method of direct reflective analysis—whether pursued with or without the aid of Physiology,—and (b) the psychogonical method,—whether pursued with or without the aid of comparative Zoology or Sociology,—are not, in the main, metaphysical. On the other hand the Transcendental Method—which endeavours to penetrate beyond the results of empirical reflection, by ascertaining the necessary conditions, not the physical doctrine, though I find it difficult to make it agree with the former. But of the ten volumes of his Synthetic Philosophy, the whole of the prima facie metaphysical discussion, if put together, would not occupy more than one: and the most interesting part of Spencer’s work lies in the other nine.
historical antecedents, of our empirical knowledge—undoubtedly belongs to Metaphysics.

(4) Finally, a line has to be drawn between Metaphysics and Logic. Readers of Mill's Logic will be aware that the latter subject continually takes them up to the border of the former; indeed, they must be aware, too, that Mill sometimes takes them over this border, and therefore that the line is rather difficult to draw. But provisionally we may say that, while Logic is primarily concerned with the validity of Inference, the discussion of the validity of cognitions attained otherwise than by inference takes us into Metaphysics.

Let us, then, consider further these distinctions in order to get them as clear and precise as possible.

§ 2. To begin with the first and most obvious,—how shall we draw the line between Metaphysics and Physics? Firstly, since we have taken Metaphysics to be a part or kind of Philosophy, it is clear that it will not be concerned with detailed knowledge of the material world, but only with general propositions of fundamental importance relating to it. Still, this consideration will not furnish us with the distinction which we require; since there can hardly be a proposition more general or more important than the law of gravitation, which no one certainly would call metaphysical. Nor, again, is it sufficient to say that while Physics deals with matter so far as it is an object of external perception, Metaphysics considers it as an object of abstract thought; since theoretical mechanics does not exactly treat of matter as it is
perceived, but of such matter ideally simplified for the convenience of abstract reasoning—perfectly smooth planes, perfectly rigid rods, etc. Probably the most generally accepted formula of distinction is that the propositions of Physics are always such as are somehow capable of 'empirical verification' or 'reduction to sensible experience,'—that is, such as admit or might admit of being proved or disproved, directly or indirectly, by some particular sense-perceptions, some apparently immediate knowledge of the external world, obtained by exercising one or more of the organs of sense; while propositions about matter that do not admit of this are metaphysical. And doubtless most of the questions that are now continually raised and settled in the progress of physical science are decided by observations of sensible facts:—by watching, measuring, weighing, testing in some way in which organs of sense are exercised. I propose, therefore, provisionally to accept this distinction, subject to additions or qualifications hereafter.\(^1\)

The line thus drawn seems to correspond broadly to the current usage of the term 'Metaphysics.' The widest physical generalisations that keep within the range of physical science—such as the law of gravitation—are commonly conceived to rest upon an empirical basis: to be verified directly or indirectly by numberless observations and experiments that continually confirm their truth. This may be said even with regard to the belief in the conservation of

\(^1\) Cf. below, p. 99.
mass and the conservation of energy. It was indeed held by Descartes and his followers that we could know \textit{à priori}, by abstract reflection on the conception of matter as a substance, that the \textit{quantum} of matter in the world always remains unchanged. But at any rate the proposition is indirectly verified by its correspondence with experience as collected and generalised by science; and it is on this verification that physicists would now commonly rely.

On the other hand—there is a group of questions—highly interesting if they could be answered—which relate to the physical world, but clearly do not admit of a similar appeal to experience: such as whether the world is infinitely extended in space, or whether it had a beginning in time. These would be universally relegated to Metaphysics: and it seems clear that any one who is bold enough to answer these questions at all must do so on other than empirical grounds. The case is not so clear with regard to inquiries into the ultimate constitution of matter: the question whether its ultimate elements are to be conceived as incompressible bits of matter or in some other way may possibly some day meet with a solution based indirectly on experiment and observation. But this strengthens rather than weakens the distinction now drawn: since it would seem to be only in view of this possibility that the question of the ultimate constitution of matter is admitted by physicists as a legitimate subject even of speculation.

I do not mean that the general distinction is always easy to apply, or that we ought to regard its
application as something fixed and final. On the contrary I think we may expect that, in the progress both of Physical Science and Psychology, questions that now seem beyond the range of empirical Science and are therefore left to Metaphysics may be brought within that range, probably after undergoing some transformation. Something of this kind seems to me to have happened with regard to this very question of the ultimate constitution of matter. A century ago this question—in the form 'whether matter is infinitely divisible or not'—seemed as much beyond the range of the methods of physical Science, as the questions already mentioned, which Kant classed along with it:—'whether the world had or had not a beginning in time' and 'whether it is or is not infinitely extended in space.' But though I assume that these latter would still, by the unanimous consent of men of science, be left to the Metaphysician, if he likes to discuss them, this is not the case with the question as to the ultimate constitution of matter: for this, no doubt in a changed form, has been the subject of keen and active discussion by physicists, which is—I understand—still going on. I assume that everybody has heard of the theory to which I chiefly refer—the theory that the ultimate element of matter is a vortex returning into itself and forming a closed ring in a homogeneous incompressible fluid identified with the ether of which the vibrations are supposed to constitute light. I understand that the conception of this vortex-ring will serve for the atom, in the sense
in which Physics is interested in atoms:—i.e. for the physically indestructible element in all variations of physical change.

§ 3. Turning from Matter to Mind, we may similarly distinguish Metaphysics, so far as it is concerned with Mind, from Psychology regarded as an empirical study of Mind, proceeding by methods of observation, experiment, induction, analogous to those used in Physics. It is true that the difference here is subtler: since psychological reflection or introspection is less easily distinguished than sense-perception is from metaphysical reflection. But at any rate we may say that empirical Psychology is mainly concerned with the variable and particular elements of consciousness: whereas Metaphysics aims at determining the necessary or universal characteristics or conditions of Mind and Cognition. The question whether, as some thinkers have held, we can cognise empirically a universal and permanent self or ego—'presented as substance'—may be regarded as on the border-ground between Metaphysics and empirical Psychology. Here there is some controversy as to the content of psychical experience which the empirical psychologist analyses and classifies. I myself side with those who regard the self as object of immediate intuition. It seems to me that, introspectively, at any moment, with a certain exercise of memory, I perceive that I exist and perdure through changing states of consciousness. I know that I am, though I do not know what I am. But for the old view of certain dogmatic Metaphysicians that I perceive myself to be a self-
subsistent entity and therefore indestructible by the forces that ultimately destroy my material organism—for this I find no warrant in introspection. This is how I divide the question of the substantiality of mind between Empirical Psychology and Metaphysics. Here again it is possible that, in a changed form, the question whether finite human minds persist when the bodies connected with them are destroyed, may come to be generally admitted as properly within the range of Empirical Psychology, but if so, the method of empirical observation applicable to it will be quite different from ordinary introspective observation.

§ 4. A similar criterion may be applied in drawing the line between Metaphysics and non-metaphysical Philosophy. We may say that so far as the synthesis of the knowable at which Philosophy aims is capable of being verified directly or indirectly by particular experiences, it is philosophical but not metaphysical. This is the case (e.g.) with the Newtonian identification of terrestrial and celestial mechanics, so far as this is verified by the correctness of predictions as to the apparent position of the heavenly bodies; and the same may be said of any similar attempt—whether successful or not—to unite sciences hitherto distinct by reducing their principles and method to common principles and a common method. For instance, the doctrine that the phenomena of life are ultimately explicable by the laws of theoretical physics is philosophical, but not necessarily metaphysical; since if it ever passes from the stage of hypothesis to that of established theory, it will probably be by means of
some experiments or observations in which sense-perception has been exercised. And though Philosophy in its widest reach,—i.e. when it attempts a synthesis of our knowledge of mind with our knowledge of matter—generally becomes metaphysical, this cannot be said to be always the case according to the ordinary usage of the term, and the line above drawn. A co-ordination of the results of empirical psychology with the results of the physical sciences, which shall not involve any propositions incapable of being empirically verified either by introspection or sense-perception, is not only conceivable, but is actually exemplified in a great part of Spencer’s Synthetic Philosophy; which, so far as it deals merely with the ‘knowable’ (so called), is, to a great extent, philosophical, without being what would ordinarily be called metaphysical. I mean so far as it traces, both in the region of matter and in that of mind, a progress from ‘indefinite incoherent homogeneity’ to ‘definite coherent heterogeneity’: for these are qualities in which particular states of mind, or groups or successions of such states, may be perceived to resemble particular grouped portions or grouped movements of matter. In fact Mr. Spencer’s system seems to me once more to afford a good illustration of the difference between philosophy and metaphysics; for his philosophy of evolution has had a great influence on the thought of the age, and won many disciples; while his metaphysical doctrines, so far as I know, have found few adherents.

I may illustrate this difference still further by
referring to a question discussed by Professor Riehl: Is our age a philosophical age? Riehl says that "our scientific age, with its ideas of the indestructibility of energy, of the unitary origin of the forms of life, its explanation of organic processes by the general laws of matter and motion, its connexion of psychology with physiology, is an eminently philosophical age—certainly more philosophical than the age of Schelling's and Hegel's philosophy of nature." I pass over the last phrase, as comparisons are odious when they are not instructive: I have quoted it, not to decide which age is the more philosophical, but to contrast the different character of the two philosophies. The character of Schelling and Hegel's work—even when they dealt with 'philosophy of Nature' was in the main metaphysical; according to my definition. For instance, Hegel told us that 'the moon is the waterless crystal which seeks to complete itself by means of our sea, to quench the thirst of its arid rigidity, and therefore produces ebb and flow.' Now I do not propose to discuss the truth of this remarkable contribution to the theory of the tides. What I wish to point out is that it appears to be clearly incapable of empirical verification, direct or indirect. The alleged effort of the moon to complete itself and quench its thirst has no connection whatever with any part of the system of laws by which physical science explains the empirical facts of terrestrial and celestial motions. On the other hand, the conservation

1 Der philosophische Kriticismus, II. ii. p. 84.
2 Quoted by Riehl, a.c. p. 121.
of energy and other principles mentioned by Riehl belong to Philosophy regarded as systematising science, and receive their confirmation entirely from empirical facts: they are not therefore in any degree or manner metaphysical, according to my use of the term.¹

It seems to me, then, that any study of the world as a whole, which contemplated it from the point of view of the positive sciences—as a world occupying space and changing in time—and which, in its endeavour to put together into a systematic whole the partially systematised knowledge furnished by the aggregate of these sciences, continued to rest on experience as they rest on it, would, according to the usage and tendencies of current thought, be called Philosophy, but Non-metaphysical Philosophy. Whereas any study aiming at knowledge of the whole which adopted a different method, discarding verification by particular empirical cognitions, would ultimately fall under the denomination 'Metaphysical.'

To sum up: Metaphysics aims at ascertaining what, if anything, can be known of Matter, Mind, and their relations, besides such knowledge as is based upon or verifiable by particular empirical cognitions: that is, what can be known à priori and what can be known

¹ But I do not say that all sciences relating to the material world attain their conclusions by inductions from particular experiences: for this would not be admitted by mathematicians generally. Geometry, as we all know, professes to attain its conclusions by deduction from self-evident axioms, combined with definitions of ideal figures, intuitively seen to be possible in space. But however the Geometer's conclusions may be attained, there is no doubt that they are continually verified by their correspondence with empirical measurements.
as necessary or universal elements or conditions of Mind and Cognition.

§ 5. Observe that I say not 'verifiable by experience' but 'verifiable by particular empirical cognitions': I use this phrase because the attempt of a certain school of Philosophy, by the use of a Transcendental Method, to determine the necessary conditions of experience would be affirmed by them to lead to conclusions in a sense verifiable by experience: but in this case the verification is, I conceive, obtained if at all by reflection on any or all experience, not by any particular psychological experiment or observation. Just because it is the necessary conditions of experience which the Transcendentalist seeks to determine, if his theory is not accepted as regards the experience we already possess, it obviously falls altogether: it cannot be left open as a hypothesis possibly verifiable by other experiences.

It seems desirable to illustrate this Transcendental Method, of which I have now twice had occasion to speak. I may perhaps illustrate it most conveniently, by explaining briefly the changed relation in which the Metaphysical systems based on it—as compared with older dogmatic Metaphysics—stand to ordinary physical science.

We have seen that the ordinary empirical Physicist turns away from questions as to the beginning in Time of the material world or its extension in Space—whether finite or infinite—and perhaps as to its ultimate constitution. But he turns away from them merely because there is no means of
finding an answer to them, not because, if I may so say, there is no answer to them in the nature of things. He conceives the material world as a reality which exists independent of his knowledge: which therefore must either have been eternal or have had a beginning in time, must either be infinitely or finitely extended, etc.: although his method of obtaining knowledge does not enable him to decide between the alternatives. Even if he is an Empiricist of a mentalistic or phenomenalistic type, who bases on his Empiricism the conclusion that the real—or the knowable real—is nothing but a series of feelings, he still cannot deny that the question 'when did any series of this kind begin' is one to which there must in the nature of things be some answer if we only knew it. But the Transcendentalist—at least if he is a follower of Kant—discards these questions for a different reason. He holds that Time and Space are not elements of reality, but only forms of the human apprehension of Reality: hence the question, 'When did the past—whether materialistically or mentalistically conceived—really begin,' is to him a futile question, springing from a mere misunderstanding, and is intrinsically as incapable of being answered as the question whether the angles of a triangle are blue or red, heavy or light.

What the Transcendentalist does with Reality, where he brings it to anchor after he has thus floated it 'from out our bourne of Time and Place,' it is beyond my province now to inquire.\footnote{See Appendix at the end of this lecture.} I merely wished
to illustrate how his conclusions, though based on a study of experience and analysis of its contents, are yet not capable of verification by any particular empirical cognition; for the question whether Time belongs to reality, or only to man’s apprehension, as it is a question relating equally to all our experience—which necessarily is or appears to be in time—cannot be decided by the test of any particular experience. The whole application of the Transcendental Method thus belongs to Metaphysics according to the distinctions above drawn, no less than according to usage.

To sum up once more. So far as Metaphysics is concerned with the nature of matter and finite minds, I distinguish it from the positive sciences, Physics and Psychology, and from non-metaphysical Philosophy, primarily by the characteristic that its method dispenses with empirical verification in the sense above explained; and not by the characteristic that it studies reality as distinct from appearance: because Physical Science regards its objects as real and itself requires the distinction between Reality and Appearance, and because the objects that Empirical Psychology studies are no doubt transient but not therefore unreal.¹

¹ That is to say the sensations, emotions, thoughts, volitions which it distinguishes, analyses, and classifies, and of which it studies the laws of coexistence and succession, are commonly conceived to be real events in the history of human minds—changes that really happen, not merely appear to happen. So that here again the distinction between Appearance and Reality does not give a generally acceptable line between Psychology and Metaphysics so far as the latter investigates the nature of finite minds.
§ 6. There is another region of inquiry which constructive metaphysicians, from Plato and Aristotle downward, have specially claimed as their own—Rational Theology. For God, considered as the object of metaphysical inquiry, is conceived by all except Agnostics as the One Universal Mind—whatever else may be included in the conception. Here, however, the line that we are called upon to draw in defining Metaphysics is prima facie of a different kind from those already discussed. For theologians generally—at least philosophical theologians—do not hold that it is possible to attain [certain] knowledge of God['s existence] by anything that corresponds to observation and experiment; hence Rational Theology has to be distinguished not from Empirical, but from Revelational Theology.¹

This distinction, however, I do not propose to examine further till I come to treat of the problem presented by the relation of Theoretical to Practical Philosophy. For it is in the confident solution of this problem which constructive Theology offers that its most obvious interest now lies for educated persons. Were we merely curious to learn what is, has been, and will be, we might be content with Sciences and Positive Philosophy: were we merely desirous of obtaining a clear view of what ought to be, we might be satisfied by an ethico-political system. It is because we require a satisfactory synthesis of these different

¹ This, as it stands, too much ignores the teleological view of the physical world, arguments for the existence of God based on evidence of design in organic life, and in the adaptation of organic life to its environment. [To meet this correction of the author's the words in brackets are inserted.—Ed.]
fundamental conceptions that the offer of Theology, to prove that Good somehow eternally Is, irresistibly claims our attention.

It thus appears that what I described as the 'final and most important' problem of Philosophy—the determination of the relation of 'what is' to 'what ought to be'—belongs to Metaphysics, so far as it is treated in its Theological aspect. But we cannot therefore say that this fundamental problem falls necessarily and entirely within the limits of Metaphysics. For if we give 'good' an empirical interpretation—e.g. by defining it as 'desirable feeling or consciousness'—and merely inquire how far 'good' so defined has been or will be realised in the world of living things empirically known, it is obvious that the question will be properly treated by empirical methods. That is, we shall seek the answer to it from Biology, Psychology, and Sociology, and from Philosophy co-ordinating these sciences with Ethics and Politics, without necessarily entering into Theology—or into Metaphysics as we have so far defined it.

§ 7. Returning to the consideration of finite minds and finite matter, we observe that the definition of Metaphysics so far obtained is merely negative. Can we then complete it by adding a positive characteristic? Here I may recur to the view, noticed in the first lecture, that the knowledge which the physical sciences and empirical psychology afford is only knowledge of 'phenomena' or 'appearances,' while at the same time we cannot but believe in the existence of a 'reality underlying appearances,' sometimes referred to as 'the
Absolute.' So far as this view is accepted, it seems in accordance with usage to say that it belongs to metaphysics to investigate what may be known of this 'absolute reality,' and the place of the conception of it in a system of rational thought. This statement need not imply that absolute reality can be known: it may be equally accepted, whether the method of Metaphysics is held to lead to positive knowledge of the Absolute, or to be merely critical and limitative, showing that we can only know the 'phenomenal' or the 'relative,'—and perhaps further explaining the origin of the impulse towards knowledge of the Absolute, and even guiding this impulse to some profitable result. It may be accepted (e.g.) by Mr. Spencer, who holds that the "reality underlying appearances is totally and for ever inconceivable by us," no less than by Green, who holds that "nature in its reality" implies an eternal "spiritual principle" or "self-distinguishing consciousness," which he calls God. On this view, if we denote systematic knowledge of Reality or Realities—as contrasted with mere Phenomena—by the old name 'Ontology,' we may say that Metaphysics includes Ontology so far as its claims are admitted, and in any case includes an investigation of those claims.

The terms 'absolute' and 'reality,' however, seem to require some further discussion. Sometimes 'the Absolute' is taken to mean that which cannot exist in relation. But this cannot be an object of knowledge, since knowledge is a relation: and it would be absurd to define Metaphysics as the study—from any point
of view—of what is ex vi termini unknowable. Moreover, if the conception of the Absolute is to have any place at all in our system of thought, it must be conceived in some relation to the phenomena which it 'underlies' or which 'imply' it.

Sometimes, again, the Absolute is understood to be that of which the existence is not limited or conditioned by, or dependent on, the existence of anything other than itself. But—Theology apart—nothing that we know, or have any reason to conceive as possible, can be thought to have this characteristic except the Universe as a whole: and we have no ground for thinking either that the Whole has reality exclusively of its apparent parts, or that its reality should be separately studied. This separation is avoided if we understand the term 'absolute reality' in a third sense, in which it is sometimes used, in antithesis to 'relative,' to denote that which is completely real,—i.e. that which exists precisely as we apprehend it, independently of its being apprehended by our minds. In this sense, however, we can hardly take it as undisputed that physical science is not concerned with absolute reality; for physical science certainly considers its objects to have the characteristics scientifically attributed to them, independently of their perception by any mind. It is true that physicists are ready to admit, verbally, that they are merely concerned with 'phenomena'; but that would seem to be because any physical fact or event, when scientifically apprehended, is always thought as to some extent different from the same fact as perceived through the
senses: accordingly (so far as they are not metaphysicians), the physicists commonly mean by ‘phenomenon’ not merely ‘something that is perceived,’ but ‘something that happens, and is perceived to happen.’ As an accepted handbook (Deschanel and Everett) artlessly says, ‘A phenomenon is any change that takes place in the condition of a body’; and we cannot advance a step in the explanation of such changes without conceiving bodies to possess permanently certain definite qualities, whether perceived or not.

Here it may be said that Physics is not concerned with the question whether ‘matter in itself’ really has these qualities, provided it will always consistently appear to have them, as apprehended through the senses; that, in fact, Physics need not trouble itself about the distinction between Reality and completely Consistent Appearance. And this view seems in accordance with the line before drawn between Physics and Metaphysics; since we cannot test by any appeal to particular sense-perceptions the proposition that the whole material world as known through the senses is a mere phenomenon. On the other hand, Physics cannot do without this antithesis of reality and appearance: for it has continually to explain to un instructed common sense that what really happens is something quite different from what appears to happen:—e.g. that our earth moves round the sun; that apparently continuous matter is really composed of discrete parts; that apparently simple matter, as pure water, is really compound. How, then, are its state-
ments in such cases empirically verified? Reflection on this question will, I think, show that the provisional view of 'verification' which I gave at first is inadequate; and that, so far as Physics distinguishes reality and appearance, its criterion is not sense-perception, but consistency with an elaborate and complex system of represented fact, in which the results of many perceptions and inferences are combined according to certain laws. An apparent perception that is inconsistent with this system is declared to be merely apparent; as, e.g. when a man 'sees a ghost,' and is afterwards persuaded that he was hallucinated,—because the existence of something so material as to produce through the organ of vision this apparent perception of a man, and yet so immaterial as to pass through the wall of a room, is incompatible with the conception of the physical world, formed by systematising experience. And thus, in another way, we see that the criterion of 'agreement with sense-perception' is inadequate, for it assumes us always to know what is sense-perception, whereas scientific reasoning leads us to conclude that in certain cases what the mind at first takes to be perception through the organs of sense is really a different mental operation.

Indeed, the history of thought shows that the system of conceived reality which thoughtful persons have framed on the basis of particular experiences has varied very much from causes independent of any changes in these experiences. Thus—to take an instance analogous to that of the ghost—Epicurus was
not in his age regarded as prone to superstition, but rather as the great deliverer from the terrors of superstition: yet Epicurus held it to be an important argument for the existence of gods that phantasms of them appeared to men in dreams and visions. Again—to take one of the largest changes ever made in our view of the material world—it was not in virtue of any new decisive observations of the heavenly bodies that Copernicus established the heliocentric system of celestial motions: his system prevailed through the greater simplicity and consistency with which it explained phenomena already known.

Further, it is evident that to a great extent our scientific generalisations cannot be verified by any sensible experience; because to a great extent they relate entirely to the past—e.g. all that we suppose ourselves to know of the past history of the inorganic world or the world of organic life, or of human society. Now no proposition with regard to the past can be directly verified by sensible experience: so far as we ever regard it as so verified, reflection always shows that we do this on the basis of certain assumptions as to the uniformity of natural laws and causes. Suppose then that any dispute is raised as to the validity of such assumption, how are we to settle it? It does not exactly seem to belong to any physical science to settle it decisively, as the methods characteristic of such sciences seem to be not available for its solution.¹

¹ Though we cannot, without paradox, as I have shown, draw a line between Physics and Metaphysics by saying that Physics deals with appearance and Metaphysics with reality, we may recognise as an important branch of study that which deals in a comprehensive way with the concep-
Shall we, then, refer the determination of such controversies to Metaphysics or rather to Logic or tions of Reality, Being, Existence, in their application to the objects of scientific thought.

And it is with this fundamental question that a great part of the historical study called Metaphysics has been concerned.

To the plain man, no doubt, this inquiry seems superfluous in respect of the objects of sense-perception and of Physical Science. The existence of material things as we conceive them—stones, trees, and other objects of experience—seems so clear and certain to him, that it is not easy to get him to take a serious interest in the inquiry, 'How far, and in what sense do these objects really exist with their empirically known qualities, size, weight, colour, structure, life?' Still a little reflection will show not only that the plain man has a view on this question, but also that this view changes and gets involved in perplexity by the progress of Physical Science.

For example, a plain man begins by thinking that material inorganic things are coloured, resonant, etc., quite independently of their relation to any organism. But even the popular science that every educated man learns alters this view; I think, perhaps, most easily as regards sound. For if a plain man asks himself, when he hears one hard body strike another, 'where the sound is'—a very natural and apparently simple question—it does not seem to him (as colour does) to be attached to the colliding hard bodies, but to be coming from them. But when he asks himself what really thus 'comes,' he finds from popular physics that it is vibrations of air, which do not become sound till they reach his ear, and further, from popular physiology, that they do not become sound till they reach his brain: but thus his view of the manner of existence of sound is fundamentally altered.

Still more prominent does this question become when we turn from physical science and its objects to Psychology or Theology. Indeed, it is in reference to these subjects that the need of ontological speculation is most readily perceived. Mankind, even if they feel equal certainty as to the existence of Mind as distinct from a material organism, or as to the existence of God, see that the existence of these objects of thought is not the same in kind as that of material things, or that, at any rate, our knowledge or belief about it is not obtained in the same way; so that there is some difficulty in conceiving and co-ordinating these different manners of existence. An ontological inquiry that shall give us certain and clear convictions in respect of different kinds of existence and their mutual relations is then of real value, if only we can discover the true method of such inquiry.

Now, when the scope of Ontological inquiry is thus made clear, all would agree that it is included in Metaphysics. But whether it constitutes the whole of Metaphysics or a part of it; and, if a part, what part, and what its
Methodology, the general study of method? This question leads us to the fourth and last of the lines that I originally proposed to draw,—viz. that between Metaphysics and Logic or Methodology. This will occupy us in the next lecture.

APPENDIX TO LECTURE IV

TRANSCENDENTALISM AND IDEALISM

The Transcendentalist holds with the Mentalistic Empiricist or ‘Phenomenalist’ that Matter as an object of experience is something that we have no ground for regarding as existent apart from experience, since it is composed entirely of mental elements. But he holds further that these elements are not to be conceived as really existing, or as having really existed in a series or aggregate of series; since Time and Space, as we have seen, are for him forms of apprehension of the human mind, not elements of the reality of things. When I say that the Transcendentalist holds this, I mean that some part of his language justifies us in attributing to him this opinion: for I seem to find that he is too much under the influence of Common Sense to hold it, consistently. But in any case we are justified in regarding as a reasoned conclusion attained by the Transcendental method that of Matter as it exists apart from experience we can know nothing, so completely nothing that the very questions whether it had a beginning or not, is or is not infinitely extended, and what its ultimate parts are, are all alike irrational. For if Time and Space are forms of human sensibility having no application beyond the range of sensible experience, it is illegitimate to carry them beyond this range, even in asking questions.

So much for Matter, how about Mind? Well, Kant relation is to other parts: and what remains of Metaphysics if we give up as hopeless the inquiry after ontological knowledge—on all these points there is much disagreement, with which I shall deal later.
similarly discards questions as to Mind regarded as a thing in itself. What, according to him, we know in introspection is only how Mind appears to itself. But on the lines of Kantian thought a way out of this 'Agnosticism' was obvious and was soon found. Mind, as a particular substratum of phenomena, was unknowable. But the fundamental assumption of Transcendental Analysis is that the necessary conditions of experience are knowable by analysis of experience; which thus enables us to lay down what thoughts or system of thought is involved in their being an experience at all. Now if knowable these conditions must be in a sense real, though not in Time and Space—Time and Space being among the conditions or forms of sensible apprehension. Thus reflection led to a conception of Thought and the truly Thinkable, as a Reality contrasted with the phenomenal world existing in Time and Space.

And this, in the present state of thought in England, is widely held to be the great object of metaphysical study. The Intellectual Idealists, as I may call them, for distinction—but my term 'Mentalist' allows me to call them simply Idealists—hold that, granting, as we must grant, that Time and Space and the things, material or mental, commonly conceived to exist in Space or in Time or both, are merely phenomenal—mere appearances—there is yet a reality—Eternal Universal Thought—which appears in and through them and may be known by metaphysical study.

And the view that Time and Space do not belong to the world of Real Reality is admitted by Agnostics who profess to know what is out of Time and Space to be unknowable, as well as by Transcendentalists who profess to know much about it. This view is also often admitted by men of science who do not profess to know whether Real Reality is unknowable or not, but are aware that it is unknown to them, and are content to occupy their minds with phenomena.

Now in subsequent lectures I propose to examine this doctrine in the form in which it was held by Green [see Prefatory Note]. But meanwhile it may be convenient that I should give my view of Transcendentalism generally.

1. I am not convinced by the arguments tending to show that Time and Space, Motion and Change are unreal and merely apparent. I admit, however, that there are difficulties in the
conceptions of them, and so far as these difficulties are unsolved, I admit that these objects of thought are imperfectly known, that they would be in some degree altered by complete knowledge. I admit accordingly that it is conceivable that these difficulties would be removed by a thorough grasp of Reality out of Time and Space, not subject to motion or change. If they were removed, we should know exactly how far the current conceptions of Time and Space, and of changes in Time and motions of matter in Space, represented or grasped reality and how far they did not. But until we can somehow transcend the appearance, we cannot know this.

2. For myself, I am unable to form any clear, useful, or definite conception of Reality out of Time and Space: indeed, I can at most suppose that there is such an entity. But it appears to me presumptuous to say that what I do not know is therefore unknowable: and as I find other persons with trained and cultivated intellects consider that they can form a useful conception of this kind of Reality, I am quite disposed to hope that they may be in the right.

3. But speaking for myself and others who find that they cannot grasp this object of Transcendental knowledge, I demand, before I can recognise the inquiry into it as practically legitimate, some proof that knowledge of it will assist us in understanding the so-called phenomenal world. Reality, if known as reality, ought to explain appearance. I do not demand that it should explain it completely, but that it should at any rate give some help to the understanding of it. Take as analogy the inquiry into space of more than three dimensions. Here again I regard the legitimacy of such an inquiry—from the point of view of a person who can only conceive space of three dimensions—as dependent on its explanatory utility. If reasonings about $n$-dimensional space can be shown to help us to solve problems relating to space of three dimensions, I will admit them as scientific; till this is shown, I regard them as probably idle and fantastic. So with regard to Reality out of Time and Space.
LECTURE V

THE SCOPE OF METAPHYSICS (continued)

§ 1. In seeking for a definition of the subject of Metaphysics, we have still to consider whether it is or is not to include the inquiry which by some thinkers is distinguished from it under the name of Epistemology.

I have taken it to be the business of Philosophy—in Mr. Spencer’s words—to ‘unify’ or systematise as completely as possible our common thought, which it finds partially systematised in a number of different sciences and studies. Now before attempting this unification, we must wish to be somehow assured that the thoughts or beliefs which we seek to systematise completely are true and valid. This is obvious; no rational being with his eyes open would try to work up a mixture of truth and error into a coherent system, without some attempt to eliminate the error.

It is *prima facie* necessary, therefore, as a preliminary to the task of bringing into—or exhibiting in—coherent relation the different bodies of systematic thought which furnish the matter for Philosophy, to have some criteria for distinguishing truth from error.
It may, however, be thought that this need—though undeniably urgent in the case of such studies as, e.g. Politics and Theology—will not be practically presented, so long as the philosopher's work is confined to the positive sciences. The prevalence of error in Politics is kept prominently before our minds by the system of party government; and the effective working of this system almost requires the conviction on either side that the political programme of the other party—unhappily often in a majority—is a tissue of errors. So again in Theology, it is the established belief of average members of any religious denomination that the whole world outside the pale of the denomination lies in the darkness of error on some fundamental points; and even within the pale, the widespread existence of right-hand backslidings and left-hand deflections from the standard of orthodoxy is continually attracting the attention of the newspapers. But, no doubt, in elementary study of the positive sciences error is commonly only brought before our minds in the strictly limited form of slight discrepancy in the results of observation, as something reducible to a minimum by an application of the theory of probabilities.

Still, the danger of error is only thus kept in the background, so long as we confine our attention to the more settled parts of the established sciences in their present condition. Around and beneath these more settled portions, in the region where knowledge is growing in range or depth and the human intellect endeavouring to solve new questions, or penetrate to
a more solid basis of principles, we find continually conflict and controversy as to the truth of new conclusions, which appear established, and demonstrated to the adventurous minds that have worked them out; and as to the legitimacy of new hypotheses, or the validity of new methods; and wherever we find such conflict and controversy, there must be error on one side or the other, or possibly on both.

Further, as I noticed in speaking of the relation of Philosophy to the Sciences, besides the controversies within particular sciences, we also find controversies between different sciences either (1) of a general kind, one science criticising the validity of methods employed by another, or (2) as to particular conclusions. Thus as regards the first, it is at any rate no long time since an important group of physiologists made sweeping attacks on the use of the 'subjective' or 'introspective' method in psychology, which they roundly declared to be incapable of leading to scientific results of any value. As regards special points, I may note a controversy which I understand to be still going on between geologists and physicists as to the past duration of the earth: geologists affirming that their method requires them to claim a longer period than the method of the physicists will allow for the process of bringing our planet into its present condition. Such controversies force on any one who aims at systematising the methods and conclusions of the sciences a searching inquiry into the fundamental assumptions of those methods.

But the fact of scientific error is still more
prominently brought before our minds when we turn from the present to the past, and retrace the history of the now established sciences: since we find that in almost all cases human knowledge has progressed not merely by adding newly ascertained facts to facts previously ascertained, but also, to an important extent, by questioning and correcting or discarding beliefs—often whole systems of connected beliefs—previously held on insufficient grounds. In this way, convinced by Copernicus, the human mind dropped the Ptolemaic astronomy and reconstructed its view of the planetary and celestial motions on the heliocentric hypothesis; convinced by Galileo, it discarded the fundamental errors of Aristotle's view of matter; convinced by Lavoisier, it rectified its conception of chemical elements, and relegated the remarkable substance 'phlogiston'—that had enjoyed an imaginary existence for something like a century—to the limbo of recognised non-entities; convinced by Darwin, it abandoned its fundamental notion of the fixity of organic species, and accepted a revolution in morphological method.

Now the student of science is ordinarily not much disturbed by this evidence that his class forms no exception to Pope's oft-quoted characterisation of man as 'sole judge of truth, in endless error hurled.' When in the progress of thought any prevalent scientific belief is recognised as erroneous, he simply discards this—with more or less endeavour to ascertain the particular causes of error and guard against their recurrence—and, on the whole, continues his usual
processes of acquiring, evolving, systematising beliefs with undiminished confidence. But to the philosophical mind the ascertained erroneousness of some beliefs is apt to suggest the possible erroneousness of all. If a belief that I once held to be certainly true has turned out to be false, what guarantees me against a similar discovery in respect of any other belief which I am now holding to be true? The mind is thus overspread with a general and sweeping distrust of the processes of ordinary thinking, which is not exactly to be called philosophical scepticism—since this usually presents itself as systematically deduced from premises accepted by philosophers—but is rather to be conceived as the naïve untechnical scepticism of a philosophic mind, which may turn out to be (as in the classical case of Descartes) a mere stage in its progress toward a dogmatic system. At any rate, it is the removal so far as possible of this philosophic uncertainty—in respect of beliefs that, in ordinary thought, are commonly assumed to be true—that I regard as the primary aim of Epistemology.

So far I have considered only the sciences commonly so-called. But the necessity for the systematic inquiry that I have termed Epistemology becomes still further evident when we consider that there are other more or less systematic studies claiming to be scientific, but not always recognised as such. Philosophy must deal with these claims somehow: and if it takes—as philosophers commonly have taken—the prevalent opinion of educated persons on this question, it must as philosophy be
prepared with a rational justification for adopting this criterion of 'real' and 'sham' science. Nor is this opinion always clear and decisive. Not to speak of Psychology, I suppose that Sociology, for instance, is now accepted as a science; but it is not so long since Mr. Leslie Stephen declared that "Sociology at present consists of nothing more than a collection of unverified queries and vague generalities, distinguished under a more or less pretentious apparatus of scientific terminology": and I am not aware that Mr. Stephen has changed his mind.

Then further, we have to consider other studies not commonly called sciences, though too respectable to be regarded as pseudo-sciences, such as Ethics and Theology, which Philosophy must, as we saw, include within its scope. The satisfactory consideration of these in connexion with the positive sciences raises, as is well known, difficulties which cannot, I think, be solved without careful critical examination of the fundamental assumptions and methods, on the one hand, of these studies or branches of knowledge, and, on the other hand, of the positive sciences which are liable to collide with them, and which claim to dominate them. I have said, I trust, enough to show the need of a systematised inquiry into what is taken for knowledge, either universally or by important classes of persons, with the special aim of attaining satisfactory tests of its validity, criteria of its truth and falsehood.

§ 2. Mr. A. J. Balfour defines Philosophy thus: 'Multitudes of propositions, all professing to embody
knowledge belonging to one of these three departments [viz. Science, Metaphysics, Ethics], are being continually put forward for our acceptance. And as no one believes all of them, so those who profess to act rationally must hold that there are grounds for rejecting the propositions they disbelieve, and for accepting those they believe. The systematic account of these grounds of belief and disbelief makes up the fourth of the classes into which possible knowledge is divided, and is here always called Philosophy.¹

I prefer the more comprehensive definition of Philosophy which I have sought to expound and justify in previous lectures: but I quite admit that the vagueness and variation in the current use of the term gives any thinker a long range of license in selecting the meaning he prefers. And you will observe that Mr. Balfour's view of Philosophy coincides, as far as scope and subject-matter go, with the view previously given, which regards it as concerned with knowledge as a whole, but introduces the limitation of a special end—or rather a special aspect of the end previously overlooked. Philosophy thus understood considers the fundamental principles of all departments of systematic thought, but considers them with the special object of examining their validity and evidence.

For myself, taking, as I have explained, a more comprehensive view of Philosophy, I prefer to distinguish this aspect or function of Philosophy as Epistemology or Theory of knowledge. I call it

¹ *A Defence of Philosophic Doubt*, 1879, pp. 1, 2.
'aspect or function' rather than 'division,' because I do not myself regard the separation between Epistemology and Ontology as other than formal and superficial: for in the main, when we have decided the most important epistemological questions we have, in my view—implicitly though not explicitly—decided the most important ontological questions. Of this more presently. I have now to show that as in the view considered before the difficulty was to distinguish Philosophy from Psychology, so in this latter view the important point is to distinguish it from Logic.

What we primarily want—what Philosophy in this view of it at any rate wants—is a criterion for distinguishing True Beliefs generally from False ones. We all assume that some beliefs are true and others false, and that there is some way or ways of distinguishing the one sort from the other; and the systematic knowledge of these ways is an indispensable element of the systematisation of rational thought, which we have seen to be the function of Philosophy. But Logic is commonly taken to aim at this systematic knowledge, in some measure: the question therefore, how Logic and Epistemology are to be distinguished, is a question requiring careful consideration.

Here, as in other cases which I have examined, we have to admit a considerable variation and uncertainty in common usage: and Logic appears to be sometimes used (e.g. by certain Oxford writers, Bradley and Bosanquet) with a scope so extended that it is difficult to find room for any Epistemology outside. But perhaps this is partly due to the comparative recency
of the term 'Epistemology' (or even 'Theory of knowledge'); and certainly in the older view of Logic its scope was generally conceived as narrower than that which we have assigned to Epistemology, viz. the systematic investigation of knowledge with the view of making clear the general distinction between truth and error, and the method or methods of applying this distinction successfully in any particular case of alleged knowledge.

§ 3. This more limited view of the sphere of Logic—so far as concerns the criterion of truth—is held by different Schools in modern times though from different points of view. For instance, the Kantian logicians\(^1\) stated it as the function of Pure Logic to give the criterion of Formal, but not of Material truth. By Formal Truth they meant truth as far as it depends on the right use of the faculty of judgment including conception and reasoning, not so far as it depends on the right use of any other faculties, or of anything else that contributes to truth. Whatsoever we conceive, judge, or reason about, they said, we conceive, judge, and reason about, in the same way, at any rate if our thought is really to be called thought: that is, as they said, reasoning or thought deserving the name has the same form, though its matter varies as we pass from one subject to another. Logic then examines the form of our conceptions, judgments, and reasonings about things, and in so far as errors can be shown to lie in this form points out and puts us on our guard against such error. Thus if

\(^1\) E.g. Mansel, Prolegomena Logica.
a complex conception contains contradictory elements, or if a proposition is a 'contradiction in terms,' that is, denies what is a part of the meaning of the subject, or if a piece of reasoning, when thrown into a syllogistic form, is such that the conclusion does not necessarily follow from the premises—the thought in question is formally bad. Logic, thus, it is said, secures us formal correctness in our judgments. But why does it not secure material truth? The answer that the Kantian school usually gave to this question is that any general criterion of material truth is impossible: material truth varying in its nature with the variety of objects about which we think.

§ 4. Mill's position is somewhat different: he treats the distinction between Formal and Material truth as a useless subtlety; but he limits Logic much in the same way as the Kantians, though not from the same point of view. Logic he regards as giving a criterion of truth so far as it depends on inference, but manifest incorrectness—of the kind above illustrated—in the form of conceptions and judgments taken by themselves, he thought, hardly ever occurs. It is true that another kind of formal defect in our conceptions and judgments as expressed in language—vagueness, indefiniteness, and ambiguity—is continually occurring: but in order to remedy this kind of defect we have for the most part to consider the matter of discourse, and to go beyond the scope of Formal Logic. Pure Logic does not profess to remove verbal ambiguities, except in its own words—such as 'some,' 'or.' We have now, however, to observe that
Mill does not altogether confine his discourse to inferred judgments. And an examination of his actual procedure in this respect will bring us back to the point from which I digressed at the outset of the lecture,—the relation of Metaphysics to Logic. For there are primum facie two kinds of propositions the truth of which Mill’s Logic does not profess to secure: (1) Particular propositions obtained by direct observation and not by inference, and (2) General propositions obtained by direct intuition and not by inference. And accordingly the discussion of the existence of Truth and Falsehood in the case of both of these is by Mill formally relegated to another science, viz. Metaphysics. “The grand question,” he says, “of what is called metaphysics is, What are the propositions which may reasonably be received without proof?” (Log. v. c. iii. § 1). That is, just as Logic gives the criteria of true inferences, or truths mediately known, so Metaphysics gives the criteria of true perceptions or intuitions, truths immediately known; so that the two together make up a complete investigation of the general characteristics or criteria of truth.

But this reference of such questions to Metaphysics is found to be illusory with regard to general propositions at least; as it is sufficiently evident that, in Mill’s view, their truth is really inferential, that is, depends on correct induction. This is partly made clear in the long discussions in Book II. on ‘Necessary Truths or Axioms’ (chaps. v.-vii.); and, later, when he comes to treat Fallacies, Mill makes a clean sweep of the a priori assumptions of various antecedent
philosophers, under the head of 'Fallacies of simple inspection,' or 'a priori fallacies' (cf. bk. v. chap. iii.). Again, turning to particular observations, we find that Mill (in bk. iv. chap. i., 'Observation and Inference,' supplemented by bk. v. chap. iv., 'Fallacies of Observation') does at least partially enter into the question of the sources of error and the means of avoiding error, not in the process of inductive reasoning, but in the 'observation' which supplies us with the particular premises of such reasonings.

In short we find that, both as regards the particular premises of scientific reasoning which we call 'observed facts,' and the universal premises—whether intuitions or fundamental assumptions—Mill's Logic continually overlaps the narrower limits that he has drawn for it, and becomes a general theory of the criteria of truth, enters in fact on that other portion of Epistemology which he seems to have relegated to Metaphysics.

General Logic, or Methodology, and Metaphysics (as conceived by Mill) are two closely connected departments, it seems to me, of a general theory of evidence or philosophical certitude. Hence though we thus have Mill's authority for defining Metaphysics so as to include the portion of Epistemology which his definition of Logic expressly leaves on one side, we must be on our guard against aiming at too decisive a separation between the two.

Just as an inquiry like Mill's, which concentrates attention primarily on the Theory of Valid Inference, finds it practically impossible to exclude the
question of the validity of propositions obtained—by those who hold them—otherwise than by inference; so Epistemology, concentrating attention primarily on the latter question, cannot wholly leave on one side the theory of valid inference. It will have nothing to say on many topics which ordinary Logic treats in systematic detail: on syllogistic moods and figures and reductions of syllogisms, for example; and not much on the four or more Methods of Induction which Mill puts forward. But in examining the validity of the fundamental conceptions and intuitions or assumptions of Science or Ontology, it will be compelled also to study in some measure the processes of mediate thought which employ these conceptions and, resting on these intuitions or assumptions, attain conclusions of philosophical importance: though it should try to keep this study of Inference as strictly philosophical and as little technically logical as possible.

§ 5. The question then is, how far such a theory of evidence, including self-evidence, is properly connected with Metaphysics as previously defined. My view is that provisionally at least—so long as the procedure of Metaphysics is as uncertain and controverted as it is at present—this connexion is inevitable. The ‘investigation of the claims of Ontology’ of which I spoke must form part of a general theory of the criteria for distinguishing truth from error: indeed the distinction between ‘reality’ and ‘appearance’ can hardly be studied separately from the distinction between ‘truth’ and ‘error’: since
truth, so far as it relates to what is, has been, or will be, is the representation of reality in thought expressible in words. It would, indeed, be paradoxical to affirm that all truth has this direct relation to actual existence; since the distinction between truth and error is commonly held to be applicable to propositions relating to what ought to be, and also to affirmations as to the logical connexion of merely hypothetical premises and conclusions. If therefore the claims of Ontology should ever come to be incontrovertibly established, and its method should come to be as fixed and accepted as the methods of the physical sciences are, it may perhaps then be thought more proper to separate Epistemology or Methodology from Ontology, no less than from Physics. At present, it seems best that the general investigation of the grounds of our belief in such conclusions as are held to be based on experience should be combined with the study of what may be known, or has been thought to be known, by a non-empirical method about mind, matter, and their relations, or about the ‘absolute reality’ that ‘underlies’ or is ‘implied in’ the world empirically known: especially since, as we have seen, the notion of ‘verification by experience’ appears to be inadequately analysed and defined in ordinary thought. And I conceive it is in accordance with usage to give to this investigation as a whole the name of Metaphysics.
APPENDIX TO LECTURE V

RELATION OF EPISTEMOLOGY TO ONTOLOGY

To show the difficulty of separating Epistemology from Ontology I may refer to Külpe’s third epistemological controversy as to Idealism, Realism, and Phenomenalism. I cannot conceive how the issues raised by this controversy can be regarded as other than Metaphysical in Külpe’s sense. *

First, it will be observed that Külpe brings the antithesis between Idealism and Realism under the head of Epistemology as distinguished from Metaphysics in the narrower sense of Ontology. Further, he conceives Epistemology to be concerned with three questions: (1) as to the origin of knowledge, (2) as to its validity or limitations, (3) as to the nature of its objects or contents. According to my view the second is the primary epistemological question. Epistemology is concerned with the first question only so far as that is connected with this¹; and when we come to (3) any separation between Epistemology and Metaphysics or Ontology becomes forced and perplexing rather than helpful. For primâ facie the object of Knowledge is Being, ‘what is’: when we truly know a thing we believe that it really is what we perceive or think it to be. Thus any general theory of the nature of the object of knowledge cannot properly be divided from a general view as to the nature of Being.

Külpe no doubt tries to avoid this in his definition of Idealism: “Idealism maintains that everything knowable . . . is in its proper and original nature simply content of consciousness” (§ 26, p. 194). This seems to leave it doubtful whether there

¹ Empiricism in Epistemology is, according to me, not the view that experience is the origin of our ideas, but the view that particular cognitions are alone ultimately valid as premises of scientific reasoning, and universal propositions only valid so far as they are based on these. Accordingly the Rationalism which I oppose to it is the view that affirms the validity of intuitive cognitions universal in form, if in abstract reflection—a process referred to Reason—they are clearly and distinctly seen to be true.
is anything besides consciousness; and in fact Külpé expressly declares that epistemology is not competent to decide concerning existence. It is, of course, possible to hold that all that is knowable consists of ideas or data of consciousness and yet to leave the question of existence undecided. But it seems to me more in accordance with usage to call this Phenomenalism or Positivism rather than Idealism.

Külpe's definition of Realism is less guarded and appears frankly ontological. "The characteristic of Realism," he says, "consists in the recognition of an external world existing independently of the ideas or states of consciousness of the knowing subject." The antithesis of Idealism and Realism as defined by Külpe then turns on the opposition between idea and fact, between what is merely imagined or thought and what 'exists in reality.' But we observe that this distinction, as applied in ordinary thought, is applicable to the contents of consciousness no less than to facts of the material world. My idea of what another thinks and feels may be very unlike what he really thinks and feels; and this unlikeness is continually brought before our notice by the experience of life. The opposition of Realism and Idealism as explained by Külpe is again a bad opposition, because it suggests that states of consciousness are not real: but the plain modern man does not think this, though the materialist may. I use Dualism, therefore, not Realism, to express what Külpe here defines as Realism. And when we note that Külpe himself describes Dualism as looking upon "matter and mind, the subjective and the objective, as two separate and independent existences" (§ 18, p. 133), it surely becomes difficult to distinguish between this and what he calls Realism; and we are led to seek some explanation of this double characterisation of what seems broadly the same view—the view that matter exists independently of mind.¹

¹ The explanation is, I think, to be found in that double relation of Mind to matter noticed in the third lecture (Relation of Philosophy to Psychology). In our ordinary view of the empirical world and its process, as I pointed out, Mind qua Cognitive is tied to Matter at two ends: not only is some material process (in the grey matter of the brain) the invariable accompaniment of every mental process but at the same time the mental process may be a cognition of matter.
Now in discussing Dualism Külp has the former relation *primarily* in view; his question is whether we can regard these psychophysical ‘two-sided’ processes in the brain, taken along with their physical causes and effects, as due to the ‘interaction’ of two distinct substances. He says (p. 135) that “the standpoint is generally discredited as inadequate to the problem of interaction,” and in arguing the *pros* and *cons* of Dualism, he considers it as opposed to Materialism and what I venture to call Materialistic Monism, the view that regards the mental fact—thought and feeling—as an appearance of or mysterious appendage to the material process in the brain.

But when he comes to Realism, he has the other antithesis in view—the relation of matter to mind as an object of perception; and therefore primarily of matter external to the organism (not the grey matter of the brain). Here the opposition is not to Materialism or Materialistic Monism, but to Idealism or what I call Mentalism.
§ 1. In the preceding lectures my aim has been to define the Scope of Philosophy neutrally—i.e. so as to avoid adapting it only to the view of any one philosophical school, on points that are still matter of controversy. With this aim, I was led ultimately to define it as the study in which the principles, methods, and main conclusions of the special sciences and other departments of systematic thought are compared and considered together, with the view of reducing them, as far as possible, to a higher unity of system. In the process of attaining and making clear this definition, I considered the relation of Philosophy to the physical sciences, to ethics and politics, to psychology and, briefly, to logic and methodology. I also took pains to make clear the relation of the wider term Philosophy to the narrower term Metaphysics, which evidently denotes a part or kind of Philosophy. But there is one ancient and important study which I did not mention in this connexion, namely, History.

One reason for this omission was that the relation of Philosophy to History is, in the present state of
thought, somewhat obscured and perplexed by various differences and confusions of meaning, and in trying to dispel this confusion we are inevitably led to consider the relation of Philosophy to Sociology: this I also thought it best to defer, as entailing a peculiarly complicated and prolonged discussion.

To these two closely connected questions I now propose to pass. I begin by noticing a remarkable change of view as to the relation of Philosophy to History, causing some confusion. According to the older view of History, taking the term in its widest sense so as to include Natural as well as Human History, it is the business of History to ascertain particular facts; Science then systematises the results of History, by ascertaining relations of resemblance and empirical laws or general relations of sequence and co-existence among these particular facts: finally comes Philosophy, which systematises the results of science. History, thus viewed, is at the bottom of the scale of knowledge, conceived as rising from the particular to the general; nearest to the particularity of empirical fact, and furthest from the unity of thought at which Philosophy aims.

This is, as I say, the ancient view of History, but there are many signs that this view is now not only ancient but antiquated. The nineteenth century has been called, in contrast with the eighteenth, a pre-eminently historical century—the eighteenth being the ‘Seculum Rationalisticum’—and in the energetic and continuous progress which the study of history has certainly exhibited
in the century drawing to a close, it has developed a strong tendency not to be content with the humble position above assigned to it. It has brought to the front the conception of a 'Historical Method,' conceived not merely as the right method of studying history, but as the right method of studying other subjects. Indeed, in the view of its enthusiastic admirers, it seems to be held the right method of studying all other subjects; for it is claimed that it has 'invaded and transformed all departments of thought.' But if this be so, it concerns philosophy much to examine the nature and extent of this invasion and transformation; for if this breadth of scope, and this height of pretension be admitted, it seems at least doubtful whether the Historical Method can leave room for any important and effective philosophical method distinct and apart from it. It is true that some of the most eager advocates of the Historical Method take pains to explain that they not only leave room for Philosophy, but even concede the first rank to it, as the more dignified and profound inquiry: they confine themselves merely to the relative and phenomenal, and—with the utmost formal courtesy and humility—leave the whole sphere of Absolute Being for philosophy to study. But this humility and courtesy is usually ironical: the Absolute thus left is usually held to be unknowable; the egg thus offered for simple-minded philosophy to brood over is shrewdly suspected of being addled. At any rate if we are to admit the claims of the Historical Method, in all the breadth and fulness with which they are
widely asserted, we shall have to admit that it constitutes an indispensable and main part of philosophical method so far as Philosophy is concerned with objects of knowledge other than Absolute Being. Now I do not for a moment deny the interest and importance of studying the past, with a view to the understanding of the present and future, in any department of the world of changing things and events which constitutes the object of empirical knowledge. But I think that the dominant and architectonic position which is now sometimes claimed for this study of the past is claimed unwarrantably, with an exaggeration due to confusion of thought. In order to make this clear, I propose in the first instance to take history to include the study of past changes, whether of things or thoughts. It is, indeed, the history of human thoughts about things which primarily concerns us, in considering the relation of Philosophy to History and the so-called 'Historical Method': but, for reasons that will appear hereafter, I think that a brief consideration of the wider question will be a useful preliminary to the discussion of the narrower.

I must begin, however, by limiting somewhat the temporal meaning of History:—or rather by expressing a limitation which it is usual to make tacitly in discussing the subject. History, in the sense in which 'Natural History' is a species of it, includes all recorded facts: all the facts on which the generalisations of any empirical science are based are at the present moment 'portions and parcels of the dreadful
past' in the sense that they were observed and recorded in past time. But if we were to take History in this widest meaning, the historical method could hardly be distinguished from the inductive method; and its alleged 'invasion' would not mean more than a spread of a tendency in all departments of thought to pay more attention to facts and less to deductive reasoning from general premises, assumed or supposed to be self-evident. Well, no doubt this movement is to some extent real, at least in departments that I know about. The German of fable, who sat down to evolve a camel out of his inner consciousness, was certainly not a Teuton up to date: we cannot place him later than the first half of the century. Of course I need hardly say that even this old-time German never evolved out of his inner consciousness anything so insignificant as a camel: but he might have been capable of evolving the principles of chemistry or the proper constitution of the Modern State. But what has happened to this mythical Teuton, and the relation of induction to deduction in science generally—this is beyond the scope of my present inquiry.

In the present discussion, then, I propose to take History in the ordinary sense of the more or less distant past: the past so far as we can trace it back. For the Historical Method which is supposed to have invaded and transformed all departments of thought is mainly the method of studying the more or less remote past, so far as it is different from the recent past:—it is a method of studying in each department the whole series of changes either in things
thought about or our thoughts about them, in order to understand the general laws of these changes and so comprehend and explain the present as resulting from the past in accordance with these laws. It is the claims of History thus regarded, as presenting not merely facts in chronological order, but laws of development, which I propose to examine not in a hostile, but in a critical spirit.

§ 2. Let us take, then, in order the chief departments of science, and consider briefly how far it is true that they have been 'invaded' by the Historical Method, distinguishing the two cases I have brought together—viz. the past history of things or objects, and the past history of thoughts.

As regards the former, it is obvious that no such invasion has taken place, or is threatened, in the department of pure mathematics—the sciences of space, number, abstract quantity. The objects of these sciences, the relations which they investigate are, of course, independent of time: they cannot be conceived as having had a past different from the present. Our conceptions of these relations have had a history no doubt; and in the general increase of historic interest, which is characteristic of our age, this branch of historic inquiry has, among others, received its share of attention. But whatever philosophic aim the students of the past history of mathematics may propose to themselves, they certainly do not propose to modify the received method of mathematical reasoning by the introduction of a historical element; or to support the fundamental assumptions
of mathematics by arguments drawn from history; or to explain anything that may seem unexplained or arbitrary in these assumptions by a reference to the process of development through which they have passed.

Much the same may be said of the fundamental universal premises which we use in our general reasonings about the material world—the laws of motion, or the law of gravitation. We conceive such laws to have operated unchanged through all conceivable time; and whatever doubts and disputes may exist either as to the exact way in which such laws should be formulated or the exact nature of the evidence on which they rest, we do not commonly suppose that this doubt and conflict admit of being solved by any knowledge of the process of development through which our conceptions have come to be what they are. This applies both to Mechanics regarded as a special science, and to Mechanics widened into Natural Philosophy, into an attempt, that is to say, to explain all physical phenomena by dynamical principles. Whatever need we feel of further light on the fundamental notions of mass and conservation of mass; on energy and conservation of energy; on the ultimate constitution of matter, molecular and atomic; on the laws of molecular motion, and their relation to the laws of chemical combination, etc.,—we do not commonly expect to get this light by looking backwards; but either by reflecting more carefully and profoundly on the facts provisionally systematised and our present concep-
tions of these, or by looking more carefully, with the present resources of experiment and observation, at the world as it is here and now before us; or rather by both processes combined.

It seems to me, therefore, that the methods and conclusions of mathematics and rational physics cannot be materially affected by the historical method. In order to establish this decisively, I have allowed myself briefly to consider together in reference to these sciences both applications of the historical method—the application to things as well as that to thoughts. In the rest of the present discussion I shall, for clearness, confine myself to the history of fact, leaving the history of thought, on the subjects to which I shall now proceed, for a subsequent lecture.

For what I have said of the complete exclusion of the historical method from rational physics as an abstract science is, I admit, no longer applicable when we contemplate the physical universe as a particular concrete fact and seek for an explanation of its concreteness and particularity: when we ask why there should be seventy or more different kinds of matter distributed in what appears to be so arbitrary and irregular a manner through the spherical mass on which we are carried about in space, and why there should be—as astronomy declares—a no less apparently irregular and arbitrary distribution of this or other matter through the rest of space. Here no doubt we have a problem for which some inquiring minds have sought a solution in history—in the wide sense in which I am now using the term: they have
hoped, by studying the processes of change through which the physical universe has passed, to find some explanation of the complex of irregular differences which its actual condition exhibits. And it may be fairly claimed that—in the wider sense which we are now giving to history—the nebular theory does connect astronomy and geology and physics into one historical study of the knowable physical universe as a complex, concrete fact.

I should not think of denying the interest and importance of this speculative physical history, nor am I competent to criticise the methods by which it has been worked out. But I venture to affirm that whatever success may have been obtained in tracing back the past states of the physical universe has not really helped us a step towards a philosophical solution of this problem: all that has been done is to change one particular mode of arbitrariness and irregularity for another no less apparently unaccountable.

This negative result, indeed, is not always plain at first sight. For example, when we first consider the formula in which Mr. Spencer generalises the process through which the physical universe has passed, and contemplates matter “passing from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity,” it seems at first sight that our complex of arbitrary differences might be ultimately simplified away if we could retrace this process far enough back. But reflection shows that the ‘indefiniteness’ which Mr. Spencer attributes to primæval matter is not a
condition of matter as we conceive it to have existed, but only relates to its apprehension by our limited intellects. If we conceive any particle of matter as existing at all, we of necessity conceive its spatial and kinematic relations as perfectly definite. Similarly, we are forced to conceive every particle of matter as always in a sense coherent—that is, connected by dynamic relations—with every other particle. The discovery of the law of gravitation at once and permanently introduced this degree of definiteness into our conception of the physical universe. And finally, whatever heterogeneity the whole aggregate now possesses requires us to suppose a corresponding heterogeneity at every point of the process of complex motion through which it has passed in time. I say 'a corresponding,' not 'an equal' heterogeneity, because I quite admit that, in the earliest stage to which the nebular hypothesis takes us back, it leads us to conceive matter as more uniformly distributed through space. The process which Mr. Spencer describes as a process from the homogeneous to the heterogeneous is a process which may increase the amount of difference between the parts of space compared, in respect of their occupation by matter; but it is not a process which can originate any difference, it can only reduce the size of the parts of space between which the difference exists. The heterogeneity that now exists between larger parts of space in the whole space through which our planetary system extends:—e.g. the difference between the space occupied by our planet with its atmosphere and
any equal and similar contiguous portion of space—
this heterogeneity no doubt seems to disappear when
we have, in idea, resolved the whole aggregate of
planets into a continuous rotating nebula. But this
appearance is merely due to the fact that we happen
to concentrate attention on the interplanetary spaces:
in truth the heterogeneity has not disappeared, it has
only been broken up smaller. The differences that are
now found in the comparison of parts of space as large
as planets were then only to be found by comparing
parts of space of the size of molecules and atoms.
With whatever confidence we may give the rein to the
most audacious of speculative astronomers, and under
his guidance sweep back through æons of time to the
most diffused of nebulae, we shall yet find in the
nebula with which we leave off a complex of
apparently arbitrary and irregular differences, needing
explanation just as much—or just as little—as the
particularities of our actual planet, rolling in the
‘gleam of a million-millions of suns.’

In saying this, I must repeat that I do not mean in
any way to depreciate the interest and importance of
attempts to trace out the past history of the cosmos,
by speculative geology and speculative astronomy
combined: I wish merely to point out that, whatever
degree of success may crown such efforts, there is no
prospect that they will tend to solve the philosophical
problem suggested by the actual particularity of the
cosmos. If we take as given—as our point of depa-
ture—the positions and velocities of all parts of the
physical world at any point of time, present or past,
we may reasonably regard all subsequent changes as 
ultimately explicable by the known laws of physical 
motion, and the partially known laws of chemical 
combination. If we take any two such points of time 
—say the present and the remotest past to which the 
most daring hypothesis can carry us back—we can 
reasonably regard the intervening changes as thus 
explicable. But however far back we go, the state of 
matter at the point of time that we began with is 
exactly as inexplicable as the state of matter now: 
it presents the same unsolved problem to Philosophy, 
which aims at an explanation of the world as a whole. 
And this being so, any conjectural history of the past 
which we construct—however valid the reasoning on 
which it is based—will not in any way affect the 
received methods of rational physics or natural 
philosophy: nor do I see how it is likely to affect 
the received methods of chemistry.

§ 3. But what shall we say of the sciences that 
deal with organic life? Is it not true that zoology 
and botany have been ‘invaded and transformed’ by 
the Darwinian theory, and all the speculation and 
investigation about the development of organic life 
to which it has given rise? It is certainly true that 
this historical biology—if I may be allowed the term 
—has wrought a change in our general conception 
of the actual differences in the organic world, to which 
no parallel can be found in the sciences dealing with 
inorganic matter. For no hypothetical history that 
has been offered us of the inorganic world has even 
professed to explain how the qualitative differences
have arisen—the differences in *kinds* of matter—which modern chemistry still presents to us as unreduced: at least it has not professed to explain them by any method resting on an empirical basis and capable of being tested by facts. Whereas the hypothetical history of the organic world which we owe to Darwin does attempt to show how differences of kind, in the matter with which it deals, have been developed out of an original homogeneity.

If the Darwinian theory, in its broad outlines, is valid, we may reasonably suppose that the world of living things was—at a point of time much less remote than that to which the nebular hypothesis carries us back—far more homogeneous than it now is: the source of the greater heterogeneity which the later time shows lying primarily in the indirect action of the diverse inorganic environment on different parts of this world of living things. Differences in external relations, in the situations and circumstances of living things have thus, in the course of ages, been taken in—if I may so say—and transformed into differences of internal relations, differences of organisation.

It is therefore in a sense true that the historical or evolutorial method of biology has ‘transformed’ previously existing departments of knowledge; at any rate it has annexed to science a new and important region hitherto desolate and only viewed as it were from a sort of philosophic Pisgah as possibly destined for orderly scientific cultivation. The Darwinian theory has opened out to us an entirely new view full of interesting detail, of the meaning and import of
relations among living things—and between living things and their environment—which were always there to observe, though often overlooked—e.g. the curious resemblances between species of plants or animals, often of very different genera, through which one species escapes the attacks of certain enemies by looking like another species which these enemies do not attack.

Still though our knowledge of the world of life has thus become more full and penetrating, whatever positive systematic knowledge of living things was thought to be given us by zoology and botany, pursued on pre-Darwinian methods, is in no way invalidated or set aside by the newer speculations: what has been invalidated is merely the negative conception of ultimate irreducibility as regards specific and generic differences. And it is important to observe that even an elementary knowledge of the history of life on this planet combined with a philosophical grasp of the present conditions of life had made the popular conception of ultimately irreducible differences of kind philosophically untenable, before Darwin’s theory was produced; for it had become evident from the geological record that we could not deal with organic as with inorganic differences of kind, by throwing them back to the inscrutable origin of all things. Our existing fauna and flora must be held to have appeared on the planet after long periods of time, in which pre-existing species had lived and died out: they could not have trooped in, as we know them, on the most conveniently arranged fleet of meteors: they
must therefore have come into being on the planet: but how? 'Special Creation' was a popular answer; but, scientifically considered, special creation was a purely negative notion: it simply denied a causal relation, in the sense in which empirical science understands the term causal, between the novel fact, the newly existing species, and all antecedent cosmical facts: and no philosopher could accept such a denial, at least without evidence which can hardly be conceived and certainly could not be produced. But if the new organism was not, physically speaking, uncaused, its production must be due either to conditions of pre-existing inorganic matter, or to other organic life: these were the only two alternatives, and of the two the latter was indefinitely more probable even before we had any evidence from which we could infer the particular nature of this causal connexion.

It has always struck me that in the active, and sometimes heated, discussion which took place a generation ago, on Darwinism and Evolution, the philosophical reasons for accepting the general conception of biological Evolution were not sufficiently distinguished from the scientific reasons for accepting the Darwinian theory. This was not unnatural, because no doubt the new conceptions of 'struggle for existence' and 'survival of the fittest' and the detailed evidence of the widespread operation of the causes of change in living forms which these conceptions represented, did in fact greatly contribute to the force of the philosophical arguments against
what may be called 'Creationism.' At the same time, it is important to recognise that the two lines of argument are quite distinct: and it is quite possible to accept the general doctrines of the historical continuity of life and the derivation of all living things from antecedent living things, without holding that we have adequate grounds for regarding the Darwinian—or any other—theory of the mode and process of derivation as giving a complete explanation of the facts.

This point is important to us on account of the great influence which the conceptions of Biology, and especially the evolutionary method in Biology, has had upon the development of Sociology. For in Sociology the general conception of evolution, of the gradual and continuous growth of new forms of polity and social relations out of old forms, has been commonly accepted without question from the first;¹ but the application of the notions of struggle for existence and survival of the fittest is much more doubtful and disputed. But keeping now to Biology, it may be said that whether, on the one hand, we simply contemplate the general theory of biological evolution and the philosophical reasons in its favour, or, on the other, accept the special Darwinian doctrine of the struggle for existence and the survival of the fittest as the leading or sole factor in causing changes in forms of life—it remains equally undeniable that the study of Biology has been invaded and transformed

¹ What corresponds to Creationism here is the attribution of novelties to heroes, men of genius, etc.
by an evolutionary and in a wide sense historical method. And I do not deny it; but I wish to point out that if, on the one hand, all this is true, it is no less true that our theory of past change has been determined by our scientific knowledge based on observation and experiment of changes actually taking place. If the past of life taken as a whole helps us to comprehend the present, it is only on the assumption that the past, so far as we venture to trace it back, has been in essentials like the present; and that no causes have operated to produce morphological changes in the past, except those which we know to have operated in times quite recent.

Let us take first the philosophical argument. Why do we reject the doctrine of 'Special Creation' when put forward as an alternative to Evolution, in respect—let us say—of the coming into being of the type of animal known as *Plesiosaurus*? Because, firstly, it is an assumption on which the whole of our *actual* investigation of the physical world depends that all changes have physical causes, and we have no positive reasons to set against this assumption in the case supposed: and because, secondly, if we admit that the coming into being of the *Plesiosaurus* was a physical event or complex of events causally connected with physical antecedents, it is in accordance with recent experience scientifically investigated to assume the animal to have come into being through biogenesis and not through abiogenesis.

So again, if we accept the Darwinian theory as giving an adequate account of the specific process of
evolution—rejecting the Lamarckian (*direct* modification by the environment)—it is because we hold that recent experience scientifically investigated shows the influence of the environment on organic forms through the struggle for existence and survival of the fittest to be a cause really operative, and that we have no clear evidence of any other cause. In either case our view of the remote past is altogether determined by the conclusions formed from scientific study of the present and recent past. And therefore even this splendid triumph of what may be called, in a wide sense, historical study turns out to be an example of the paramount importance of the study of the present in determining the basis on which we interpret the records of the past; rather than of the paramount importance of the study of the past, in determining the scientific principles on which we frame our conception of the present.
§ 1. In my last lecture I was occupied in considering the relation of Philosophy to History: and especially—taking History at once in its widest range and deepest interpretation, as a study of the past, pursued with a view of ascertaining laws of change and development—the recent claim of History to supply a universal and dominant method to all studies. I examined this claim in relation to the sciences that are concerned with the inorganic world, distinguishing between the recent past and the remote past in order to obtain a clear issue, and a clear distinction between the Historical Method and the Inductive Method. I pointed out first that Mathematics and Abstract Physics were obviously unaffected by the Historical Method: meaning by Abstract Physics the study of the general laws of matter and motion, as distinct from the study of the particularities of the concrete physical universe in which we find ourselves placed. It is no doubt true, when we turn to Concrete Physics, that we find a very interesting, though highly speculative branch of History—in the wide sense of a study of the
past—which, based upon and combining Astronomy and Geology, professes to explain how the Solar System, as we know it, was developed out of an original rotating nebula. Without denying the interest of this hypothetical history, I pointed out that its explanatory force was liable to be exaggerated: since however far, and within whatever degree of probability, we can trace back the antecedent conditions in time of the physical universe, the particular collocations of material particles at the point at which we leave off present a philosophical problem requiring just as much explanation as the actual physical world in which we now live. We do not really get back, even with the utmost aid from conjecture, from heterogeneity to homogeneity.

The case is different, no doubt, when we turn to the hypothetical history of the world of organic life, which has become current under the influence of Darwin's work. So far as we accept this theory of Biological Evolution, it does show us how the differences of kind in living things have been developed, in continually increasing magnitude and complexity, from an originally simpler and more homogeneous condition of life, through the influence, direct or indirect, of the differences in the environment. And undoubtedly the view thus formed of the past history of living things profoundly modifies our view of their actually existing differences, by explaining the manner in which these have been developed. But I pointed out that if a study of the Past of life, taken as a whole, thus helps us to comprehend the Present, it is
equally true that this is because our method of studying the recent past is based upon our scientific knowledge of the present, and assumes that the causes which have operated to produce morphological changes in the past are the same as those which we know to have operated in recent times, subjected to scientific observation and experiment. And therefore I think the new history of organic life which the Darwinian theory gave us, so far from invalidating anything that we had before taken for positive knowledge of living beings, did not even meet, in philosophically trained minds, with any prepossessions that had to be overthrown.

§ 2. It may be thought, however, that—even granting what I have just urged to be true of the study of organic life generally—it cannot be true of the living being that interests us more than all the rest, of man. Surely, it may be said, if we admit that man has been gradually developed out of an ascidian or other low organism, the old conception of a dual nature of man, a mysterious combination of spirit and body, will have to be given up: materialism then clearly wins in its old conflict with spiritualism. I know that this is a popular inference from the Darwinian theory; but I cannot see that it has any philosophical basis. However completely we accept the theory, all the really philosophical obstacles in the way of a purely materialistic view of man appear to me to remain unchanged. It remains true, as Mr. Spencer says—and the statement is perhaps more impressive as coming from him than if made by a
more idealistic philosopher—it remains true that psychical facts, as known to us by 'subjective observation and analysis,' have no 'perceptible or conceivable community of nature' with physical facts, ascertained by objective observation and analysis: it remains true that—as the same writer says—"of the two it seems easier to translate so-called matter into so-called spirit, than to translate so-called spirit into so-called matter (which latter is, indeed, wholly impossible)."  

It may be replied that even granting the untenability of mere materialism, the Darwinian theory of the origin of man renders it impossible for us to conceive of the continued existence of the individual man after his physical death; and that therefore, however the metaphysical issue between materialism and idealism may be settled or left unsettled, at any rate Evolution has eliminated the old belief in the immortality of the soul; so that materialism wins on the only point of any practical importance to a plain man.

If historical biology had achieved this result, I should recognise that it had 'invaded' with tremendous effect our study of man and his destiny; but the supposed achievement appears to me quite illusory. To show this let us consider briefly what grounds there are, apart from the Darwinian theory, for coming to a philosophical conclusion on the fundamental question—Does the individual mind result from a certain organisation of an individual organism, and

1 *Principles of Psychology*, §§ 41, 63.
terminate when the organisation is destroyed?—admitting that here, in the view of common sense, almost the whole interest of metaphysics is concentrated; that the metaphysician's 'Yes' or 'No' or 'Not proven,' in answer to this question, is, for the plain man, der lange Rede kurzer Sinn.

In order to ascertain how far historical biology throws any light on this question, let us briefly survey the chief considerations that incline us to answer it in the affirmative or the negative. On the former side we have (1) the probability amounting to moral certainty, that whenever any embodied mind has experienced a change, a certain material change has preceded; (2) the absence of any accepted evidence, except in traditions handed down from more credulous ages, of the existence of particular minds not embodied; and (3) the establishment of a vast and complex, though incomplete, correspondence between particular kinds or qualities of mental processes and particular organic actions or conditions. On the other side, we have the unique disparity of physical and psychical phenomena, and the apparent arbitrariness of the connexion between the two. We do not in the least see why movements of nerve particles should produce feelings, and can quite easily conceive the whole series of states which compose our consciousness continuing without these physical antecedents or concomitants; hence it is inferred that the latter cannot be the real causes of the former. The force of this argument, such as it is, is perhaps somewhat strengthened by the occultness of the connexion; we
have no means of observing or definitely inferring the kind of motions of matter that immediately precede mental phenomena. I do not refer to important ethical arguments drawn from the need of a future state to realise justice or to establish the required connexion between virtue and happiness, or to the vaguer reasoning based on the desires and expectations of continued existence commonly found among men, since it can hardly be suggested that these have been materially affected by historical biology. But taking the controversy as argued apart from ethical considerations, I cannot perceive that the force either of the argument from the actual closeness and universality of the connexion between psychical and physical fact and the modifying influence exercised by the body on the mind, or of the opposite argument from the arbitrariness, occultness, and conceivable dissolubility of the connexion, will be affected to any extent worth considering by the Darwinian theory or any other theory of evolution. There is, however, a new argument, which I may call the argument from continuity.

If we suppose the process of change thus traced to be perfectly gradual and continuous, another argument emerges when we carry the process back until mind vanishes altogether: it is this argument that I propose to call the Argument from Continuity. It is contended that if the highest, most mental phenomena of organised beings are connected by an unbroken series of infinitesimal differences with the lowest (to whose existence we should commonly not apply the
term 'mental' or 'psychical' at all), and even with
the phenomena of inorganic matter, there is no point
at which the existence of mind, as an independent
entity, can be conceived to begin. Probably much
of the alarm occasioned among anti-materialists by
the theories of Evolution and Natural Selection has
been due to the supposed force of this argument. It
has been thought that mind could not be independent
of matter, if man was gradually developed out of a
monkey, and the monkey out of a polyp, and so on.
To this argument there are two answers.

Firstly, it is not really strengthened by the theory
of evolution of species: its force—whatever that
may be—is essentially derived from the undeniable
fact that each individual man has been gradually
developed out of a portion of organised matter,
of which the manner of existence was not more
psychical than the polyp's; it cannot, therefore,
matter much whether his race has gone through a
similar course of change or has not. This difficulty
was always, I conceive, presented in full force by the
known history of any individual organism, and I do
not see that it is materially increased by the completest
acceptance of a similar gradual evolution of the human
species. The process by which the admittedly soul-
less organism grows into that supposed to be soul-
possessing is indefinitely more rapid in the case of the
individual; but I do not see how this difference in
rate of change affects the difficulty of conceiving how
the connexion of an immortal soul with the gradually
changing material organism commences.
Secondly, I am prepared to challenge the validity of the whole argument from continuity against the independent existence of mind. So far as I understand it, it rests on a supposed difficulty in believing that a new thing has come into existence quite gradually. Now I quite admit that it is difficult for us to understand how any really new fact can begin to be at all. But this difficulty has to be overcome, it would seem, by most modern schools of thought in the case of individual minds. For on the one hand they can hardly deny that any particular mind—even if we mean no more by this term than the stream of transient phenomena, thoughts, feelings, and volitions, of which we have direct experience—is a new fact. That is, they cannot deny that it is totally unlike whatever physical facts antecedent or accompany it; and they are not commonly prepared to contend that it is composed of pre-existent thoughts, emotions, etc., rearranged in new relations. The 'hylozoism' on which such a contention may be based, has, I think, little place in English philosophical thought. On the other hand, we have equally to admit that this new fact, so far as known, actually begins to be between certain narrow limits of time. If this be granted, I do not see that a perfectly gradual beginning is harder to accept than an abrupt one; on the contrary I should say it was certainly easier. There is no doubt a certain difficulty in imaginatively tracing a thing to its origin, if that has to be reached through an infinite series of indefinitely small changes. But this is only Zeno's old puzzle as to Achilles
catching the tortoise, turned round and applied to the beginning instead of the end of a finite quantity of infinitesimally divisible changes, and there is no reason why we should be specially troubled by this ancient paradox in considering the question of the independent existence and possible survival of the soul.

§ 3. I have spoken so far of mind regarded as a whole (or of mental phenomena taken generally). I find, however, that some persons consider it fundamentally important in discussing the relation of Mind and Body to draw a distinction between different kinds of mental fact. They are prepared to admit that the kind of fact, which we distinguish as 'feelings,' or 'sensations,' or 'sense-perceptions'—so far as they guide organic action—may have been completely caused by movements of organic matter; but they maintain that this cannot be the case with other kinds of psychical phenomena. Especially is this maintained with regard to knowledge generally, or certain special kinds or elements of knowledge—such as the immediate knowledge of the unity, permanence, identity of the conscious self, or the axioms of arithmetic or geometry, or perhaps abstract notions generally, etc. Much controversy has been carried on about these distinctions, and many persons still seem concerned to maintain that 'general notions,' 'primitive judgments,' or perhaps the synthetic unity in judgments generally and so forth, cannot be derived from sensations, rather than that sensations cannot be derived from processes of organic matter. Indeed
some of those who contend most strongly that knowledge cannot properly be regarded as the function of a material organism seem willing to admit that feeling should be so regarded. This view seems to me to emphasise unduly a distinction which, though important, is less important than the distinction which it overlooks. I do not wish to under-estimate the unlikeness that exists between different species of mental phenomena; in particular between cognitions of any kind and the feelings from which it is sought to derive them. But no difference of this kind seems to me at all equal to the disparity that I find between psychical facts as a whole and the physical facts with which physiology leads us to connect them. Therefore if we once admit that the movement of particles of matter is an adequate cause of the most elementary feeling, I see no firm ground on which we can argue that it cannot be an adequate cause of the most refined and complicated thought.

I conclude, then, that the historical method, as applied to Anthropology on the basis of Darwin's theory, leaves the metaphysical problem of the relation of mind and matter exactly where it was. It remains to consider how far our study of the nature of mind, so far as it is an object of empirical knowledge, of 'subjective observation and analysis,' is affected by investigations of its past history, i.e. how far Psychology is dominated by Psychogony.

§ 4. Now the investigation of the origin and growth of mental phenomena and faculties has, as is well known, occupied a large share of the attention of
English psychologists since the middle of the last century; and has attained results of undoubted interest, in the ascertainment of the laws of co-existence and sequence of mental phenomena. I think, however, that even the psychological import of these results has often been misconceived. In fact it seems to me that a fundamental mistake of method has been made, favoured by the difficulty and obscurity which attend the introspective observation and analysis of mental phenomena. I have already discussed the subject in the third lecture (*Relation of Philosophy to Psychology*), and will now only just refer to the confusion which seems to me to have taken place between psychical antecedents and psychical elements. We might almost say that through this confusion Psychogony or Historical Psychology had, in some minds, completely taken the place of any other. A study of the history of mind as it has gradually become what it is, has illegitimately presented itself as a Sensationalist theory of mind as it is now, all thought being reduced to supposed elements of feeling. And it is noteworthy that by a second illogicality the Sensationalism has led to Materialism. For when the more characteristic states and processes of the fully developed mind have been thus pseudo-chemically decomposed into their supposed elements, then—as all intellectual content has vanished in an imaginary chaos of atomic feelings, the material concomitant of the elementary feeling naturally becomes prominent to the reflective mind that is performing this analysis, and presents itself as the real process.
‘Principiis obsta’—let us refuse at the outset to be led by false analysis into this confusion of conditions and constituents. Observe I do not depreciate the Associational Psychology in tracing the history of beliefs, the antecedent conditions under which they arise; I am only considering the relation of this to the question of what actually exists in mind here and now. No ‘analysis’ of any conception or belief can, I conceive, show it to be something other than careful introspection shows it to be. Analysis can only ascertain conditions, antecedents, and concomitants. For example, Space does not mean to me successive feelings of movement, conceived as simultaneous from association with simultaneous feelings of touch, though this may describe the process by which I have come to have the notion of Space. Similarly in Ethics, my own Pleasure is none the more now the sole object of my desire and volition even if it were proved—which I do not hold—that it was so originally to my remote ancestors. The apparent bindingness of a rule of duty—Another’s greater good to be preferred to my own lesser good, or similar cases to be treated similarly—is none the less ‘intuitive’ because the apprehension of it is shown to be not ‘innate.’

But, it may be said, granting that the question what our thoughts, emotions, or volitions actually are cannot be affected by any investigation of the process by which they have come to be what they are, still such investigation may have an important bearing on the more interesting because
more difficult question, whether they are what they ought to be. The method of introspective observation, it may be said, has commonly professed to do more than give us a mere inventory of our thoughts; it has professed to give us a criterion for determining their validity; and it is this pretension rather than the former that has been successfully traversed and overthrown by historical psychology, or 'psychogony.' And, no doubt, the most interesting part of the controversy between the 'psychogonical' and 'introspective' methods of studying mind has had reference to this question of the validity of beliefs commonly taken as primary and intuitive.

§ 5. Let us consider, then, how far and in what way the validity of such beliefs can be affected by an investigation of their origin and history. At this point, however, it seems to me that we are inevitably drawn from Psychology—or Psychology of the individual as such—into Sociology, or, if you like to call it so, Sociological Psychology. For perhaps the most noteworthy change that has taken place in this study during the last thirty years consists in the increased recognition of the fundamental importance of the 'social factor' in the development of the mind of the individual. It could not, indeed, ever have been denied that a most important part of the conscious thought and feeling of any individual received its character—whether by inherited tendencies or by sympathetic apprehension or both combined—from the current thoughts and prevalent emotions of the society of which he was a member; and that,
accordingly, any adequate attempt to trace the development of his conscious life must soon include or pass into a sociological investigation. This, at any rate, is recognised in the work of J. S. Mill, from which, a generation ago, I and many others learnt our 'Logic of the Moral Sciences.' That "what we now are and do" is "the result mainly of the qualities produced in us by the whole previous history of humanity," Mill, after Comte, enforced with as much emphasis as could be desired. He seems, however, to have held that the sociological laws obtained by a study of this history of humanity ought to be shown to be derivative from certain ultimate laws of human nature, independently ascertained: since—to quote his words—"Men, in a state of society, are still men: their actions and passions are obedient to the laws of individual human nature. Men are not, when brought together, converted into another kind of substance, with different properties; as hydrogen and oxygen are different from water, or as hydrogen, oxygen, carbon, and azote are different from nerves, muscles, and tendons. Human beings in society have no properties but those which are derived from, and may be resolved into, the laws of the nature of individual man."¹

Now it is undeniable that the aggregate of the actions of man in society constitute a more complex fact than the aggregate of the actions of any single individual; society being the whole of which individuals are parts. But it does not follow that, as

¹ *Logic*, bk. vi. ch. vii. § 1.
Mill conceives, a psychology exists or can be constructed independent of sociology, and such that all the laws ascertained by the latter are capable of being resolved into the more elementary laws of the former. In saying that 'men in a state of society are still men,' it is implied that we have some means of knowing them adequately out of a state of society: just as—to take Mill's analogy—we are able to ascertain adequately the properties of hydrogen and oxygen, apart from their composition in water. But I cannot perceive that we have any such means of knowing the properties of men in this supposed elementary, non-social, condition,—so far, at least, as the most important and interesting departments of their mental life are concerned. The men whom we are able to observe are all social beings who have grown up from infancy under social influences: and, if in studying the mental phenomena of such a being we abstract hypothetically all that is due to sympathy and imitation, and endeavour to ascertain the laws of what remains, the result we obtain will not carry us far towards explaining the thoughts and emotions of actual men. We may perhaps study, without taking the social factor into account, the conditions and laws of sensation, appetite, volition in its most elementary forms, and the revival and association of such phenomena: but if we contemplate any of the processes of thought that involve language, or any of the more refined and complex emotions, and endeavour to ascertain the causes of their actual characteristics, we are inevitably carried from the study of the mere
individual into the study of the society of which he is a member, and the whole inquiry into the validity of beliefs must, I conceive, fall into this department of study. The current beliefs, the prevailing sentiments, in a given society at a given time, are no doubt beliefs and sentiments of a certain aggregate of individuals: but we have generally speaking no means of tracing and explaining their development and diffusion in the consciousness of the great mass of individuals who entertain them: for the purposes of our cognition, they must be treated as social facts.

Now there is not, I conceive, at the present day any doubt that the investigation of the laws of change in the prevalent beliefs of human societies is a most important element of the whole study of sociology—or of history, in the ordinary sense. Nor, again, is there any doubt that this study, being a department of history, ought to be pursued according to a historical method.

But much more than this seems to be maintained by the writers who have recently emphasised the claims of the Historical Method especially in the different departments of the theory of practice, in ethics, jurisprudence, politics. They have meant by it not merely an investigation of the sequence in which beliefs have actually succeeded one another as social phenomena, and the causes or laws of this sequence; but also a method for determining—what, after all, is the most interesting question with regard to any class of human beliefs—viz., how far they
are true or false. It is as thus regarded that the Historical Method is sometimes said to have invaded and transformed these departments of thought, and it is as thus regarded that it appears to claim the place and undertake the function of that department of Philosophy which I have called Epistemology—the investigation of criteria of the truth or falsehood of current beliefs. I propose to examine its claims to decide questions belonging to this investigation in the next lecture.