MANCHESTER UNIVERSITY LECTURES

NO. XVI.

THE DISTINCTION BETWEEN MIND AND ITS OBJECTS

SHERRATT & HUGHES
Publishers to the Victoria University of Manchester
34 Cross Street, Manchester.
33 Soho Square, London, W.

Agents for the United States
LONGMANS, GREEN & Co.
443-449 Fourth Avenue, New York

The Distinction between Mind and Its Objects

THE ADAMSON LECTURE FOR 1913
WITH AN APPENDIX

BY

BERNARD BOSANQUET, M.A., LL.D.,
D.C.L., F.B.A.

MANCHESTER
AT THE UNIVERSITY PRESS
1913

CONTENTS.

APPENDIX.

1. "The New Realism; Co-operative Studies in Philosophy." By Edwin B. Holt, Walter T. Marvin, William Pepperrell Montague, Ralph Barton Perry, Walter B. Pitkin, and Edward Gleason Spaulding.

The Distinction Between Mind and Its Objects.

WHAT I desire to consider with you to-night may fairly be described as a new situation in the philosophical world. And I may begin by saying that it is satisfactory that there should be a new situation. It is a testimony to the inexhaustibleness of reality, and, what is really the same thing, to the fecundity of the human mind. And in the next place, I shall attempt to shew that the nature of the new appearance constitutes a real advance. There is, indeed, always, I believe, a double interpretation possible in face of new attitudes of mind. The novelty may be satisfactory in itself, or it may be satisfactory because of its suggestions. I shall touch upon such a problem of interpretation this evening.

But the first and principal matter to which I wish to call your attention is that we have

before us in twentieth century philosophy something which, whether unsatisfactory or not, is definitely new. Of course I do not mean that it is wholly without precedent. You can find much that has led up to it; but I do not think it has before been propounded and defended consciously and on its merits.

What is it, then, that I am speaking of? and how is it connected with the subject of this lecture?

What I am speaking of is twentieth century Realism; and the point of novelty about it,—on the whole, though not in every case, and throughout—is its contrast of principle with Materialism. Or, speaking in terms of our subject, the novelty is this; that the realism in question, though it gives much less to Mind than Idealism, gives much more to Reality than Materialism. Whether the position will prove untenable is a question to be discussed. But that the position, if tenable, would go far to rearrange the whole battle-field of, say, Idealism and Materialism, is, I think, indisputable.

We all know pretty well what is meant by Materialism. Its popular aspect is summed up in a phrase of James Hinton, which I quote from memory, and shall recur to below. "What a world is that which science pronounces real; dark, cold, and shaking like a jelly." Of course there is a sheer confusion in the statement; but perhaps it embodies popular materialism none the worse for that. The idea is, in general, that such characters as shape and motion are self-existent properties of things, while colour and sound for instance are effects produced in our minds through our sense-organs, and bear no resemblance to anything in the real external objects. Now I do not say that this theory need necessarily give us a narrow view of the world; but it very naturally did so, and I believe always will do so. The reason is, that it makes us think all the things we live with and care about most, faces, voices, music, light, taste, smell—all these things are, if not illusions, yet in a sort of way on a lower level of truth and reality than things

like atoms and gravitation. You can explain this result away; but man will always honour the self-existent, and you cannot really destroy the worship of matter as long as you hold this doctrine.

In terms of our subject, this theory treats some objects of mind, the sensation of colour, and so on—as mental in nature, or, roughly speaking, as products or bits of mind; while other objects of mind, like perceived shapes or resistance, it treats as self-existent realities. And when this is believed, the products or bits of mind will always be disparaged by comparison with what we suppose to exist in its own right. And then, on such a doctrine, what are you going to do with such realities as universals—general facts? They don't seem to fit well into space; while, as bits of mind, they seem impotent.

Then, of course, comes the return match—what is known as subjective idealism. Someone points out that, as objects of mind, space, and motion, and so forth, are just on the same level with sound and colour; if, there-

fore, the latter set are to be called products of mind, or bits of mind, so ought the others to be. Then you may conclude to subjective idealism, in which all objects of mind without distinction are absorbed into mind, become either minds or bits of mind, or products or states of mind.

We are told that beneath any such view as this there is the mistake of confusing acts of mind with its objects—seeing with colour; and that may be true. All the same, such a view gives you one enormous gain for general culture and general philosophy. It puts the common qualities we love—what practically make up the world we live in—colour, sound, and the rest—on the same level of reality and claim to existence as the shape and motion of atoms or the facts of gravitation. The humanising effect of this belief, and the reality it enables you to assign to beauty, for instance, is an unspeakable gain for life and for philosophy. And, I believe, although the fallacy above-mentioned is operative—yet I believe there is a sound

underlying motive in subjective idealism, a recognition of the necessity that the most interesting things should have at least as much reality as anything else, and that mind should not be cut off from its objects, which constitute nature and the world. We shall return to this point.

But now, in contrast with the two familiar positions which I have briefly mentioned as Materialism and Subjective Idealism, we find ourselves confronted with twentieth century Realism. It is a novelty in two principal characteristics: one a characteristic of its advocates, the other of its doctrine. The point as regards the theorists themselves is that no one can say their views are due to ignorance or incapacity. Many former realists, and especially materialists, have displayed a quite uncritical attitude; partly owing to their historical position, partly to other limitations. But the realists of to-day, most certainly at any rate the realist about whom I am going to speak, are learned in all the wisdom of the Egyptians. What

Professor Alexander—for he is to be our guide—does not know about metaphysics, logic, and psychology is, I take it, not worth knowing.[1] One may modestly differ from such a man; but to treat his views as due to philosophical inexperience, is simply not to be done. And then secondly, about the doctrines themselves. Although a realism, and even a physical realism, they contrast sharply with what is meant by Materialism. If they are meant to be called materialist, which I do not know that they are, it is the conception of matter that has widened, and not the nature of reality that has been cut down to fit an abstract matter. The theory aims at totality, at a fair and complete recognition of the world as we know and love it. It does justice to the sensations of sense, and to the secondary qualities. And at least the doctrine which I am to discuss to-night has no faith in a prerogative reality of spatial properties.

1. Since writing this passage, I have seen "The New Realism" of the six authors. I could not altogether, from the point of view of my own studies, apply this judgment to them. They strike me as better informed outside philosophy than in it.

For this reason, because it is so new, and in its aim is so complete, and because it issues from so high a philosophical source, and because that source must here be of paramount interest, I propose to take the liberty of re-stating before you, as simply as I can, the doctrine of physical realism, which has become familiar to the English world in the last few years as promulgated from the University of Manchester.

For this doctrine comes, so to speak, on the top of the two doctrines we have already alluded to. Say that Materialism logically wins the first game—I am not speaking in historical order—I think that Subjective Idealism must so far be held to have won the return match. But the temper which demands a self-existent non-mental reality may be held to open the game again with twentieth century Realism, a very different thing from Materialism; and whether an existing or a future philosophy, whatever it may be called, can once more win the return match against the realistic side, or—dropping

the metaphor—absorb its tenets into a completer view—is just what remains to be seen. I proceed to describe in its broad characteristic features a realist doctrine of the twentieth century, which is promulgated from this University. We have briefly referred to a conception in which, so to speak, the universe is mental—is mind or states of mind—through and through, and we now turn to this realism because it is *prima facie* the completest conceivable counter stroke to any such affirmation, and because, through its very completeness, it suggests a meeting of extremes which the commoner doctrines, resting on a more half-hearted demarcation of the psychical and physical provinces, inevitably exclude. Yet other twentieth century realisms, though less—may I say it?—less paradoxically thorough-going, may be seen, in the light of that which is here discussed, to corroborate its fundamental lessons.

As I understand the thesis, in order to grasp the distinction between mind and its

objects, we must start from the simple case of any two bodies being together in space, like a table and the floor. This is the fundamental relation at the root of knowledge and perception as of all the order of the world. And, in fact, unconscious objects, so far as in this relation, I think the theory would say, do in principle know each other, though as they possess no conscious selves their knowledge is at a vanishing point. But among these existents which are so together, there are some which are minds, that is, bodies which have acquired the capacity of consciousness. When these are together with other existent things, within the range of reaction through the senses, the conscious thing is aware of being together with the other thing, in the various degrees of sensation, perception, and thought or knowledge. This is nothing more than the amplification or development through consciousness of the fundamental fact which consists in two existents being together in space. My mind is here, in my body; the table is there. My

mind is mental; the table, its object, is external or physical, even down to its colour as I have sensation of it. This is the essential experience of cognition and sense-perception; and this is all there is about it.

What is here the line between my mind and its object? How much belongs to my mind and how much to the table?

To grasp the realist's answer we must insist on a distinction which all twentieth century thinkers acknowledge, though not all admit the same degree of distinctness between its terms. I speak, of course, of the distinction between the act and the object—between the act of seeing and the colour which I see; between the act of perceiving and the present thing which I perceive; between the act of thinking and the thing, it may be, absent, of which I think. Opinions differ as to the assignment of these objects, especially such an object or content as seems directly present in sensation, to the mind on the one hand, or to the external or physical reality on the other. But the realist whom

we are following makes no compromise. Acts, and acts only, belong to mind. Objects, all objects, including what are called contents, are external, and with few exceptions, physical. Blue, for instance, is a physical existent. It is an aspect of physical reality, and is there in space, over against our mind. No doubt, if we had no suitable retina and optic nerve, we should be unable to see it. But that, so to speak, would be merely our loss. It would no more affect the existence of blue than my missing the train affects the existence of the train.

Mind, then, it follows, is cut down to the narrowest limit. It is nothing but a system of efforts in various directions, efforts which carry with them feelings of relative success and ill-success which amount to pleasure and pain. Consciousness is nothing but effort with its felt direction to our object, and the affections which attend such effort and direction. The object is always non-mental. The direction and effort are such as you feel in any desire or voluntary progression—you

realise what it is like if you are stopped short of the object. Breaking off in a sentence gives a good case of this feeling.

Knowledge, then, and thought, so far as it is what we think of, are non-mental, or physical. They are simply the existent things, or parts of them, so far as we apprehend them; never, of course, completely apprehended, but so far as our powers go, apprehended as they really are. Colour, sound, taste are not mental facts. They are physical realities to each of which there is a corresponding mental act, to see, to hear, and so forth. But act and object, even act and the nearer object which some would call content, are not to be identified. Your mind does not in any way make nature. It does not make the object of sense or perception, or construct the object of thought. You are here; the object is there. It stirs your mind in a certain way; and your mind reacts and apprehends, and finds the object as it is, according to the degree in which your powers of apprehension are developed. If you are

colourblind, that is your affair. There is then a defect in your organ of apprehension; but that does not interfere with the physical reality, which we know from better equipped observers. This doctrine of the open door, as I may call it, or of the window with degrees of transparence, through which reality comes to you as it is, though with varying completeness, is very powerful in twentieth century realism, and is at times connected, strangely enough, with some extreme doctrines of other worlds.

It follows—and this is largely the point of the doctrine—that the physical reality which is the object of mind is the thing, or part of the thing, which you suppose yourself to apprehend. I mean, it is in no sense part of your own body or mind. Your organs let it in, but they do not, in principle, modify it, except in degree. [The question of error *can*, I think, be dealt with from this position, in agreement with the best thinkers, at least if we read "real" for "physical." Error is always *about* a reality.] Your mind, then,

is not, as Spinoza called it, the idea of your body, and of other things only through that. You open your eyes, and are aware of a tree before you. This is a fact just like that of a table being on the floor. Only in this case one of the existents is a mind. The other is, just as the mind is aware of it, an external physical reality.

And, as I understand the argument, the tree itself is made up of objects corresponding to your mental acts; of what you " sense," of what you perceive, of what you think—that is, of flashes or fulgurations of its qualities, of qualities themselves, something more permanent than the flashes, and of a universal nature or real law governing the combination and action of its qualities. We have of course to resist being led away by the sound of this doctrine, to impute to the realist an extreme idealism. When you read [1] that a physical thing, a material substance, ' is made up of *sensa*, *percepta*, and thoughts ' you have hard work to remember

1. *Ar. Proc.*, 1909-10, p. 32.

that for the author all these are the objects of the mental acts, not the acts themselves, and are therefore physical realities, and in no way bits of mind.

Hence arise two further peculiarities, one, if not both, of which characterise most twentieth century realism, and save it in a great measure from the defects of the older eclectic or demarcating realisms, in a word, dualistic realisms, which necessarily leaned toward materialism. I do not say that the new Realism is not itself in a sense dualistic.

First, the doctrine of the open door, as I have made bold to call it, destroys the superstition that spatial properties are distinguished by being self-existent, while sensations of the special senses, and these only, are dependent upon mind. Its attitude is indeed the reverse of that to which this destruction is *usually* ascribed. It does not say that primary qualities, like secondary, are mind-dependent; but that secondary, like primary, are mind-independent. But for the immediate purpose of destroying the distinc-

tion either of the thorough-going views will serve. It is only the eclectic view that is bound to beget superstition. Thus a complete physical realism, even if it claims to be materialism, is largely free from the vice inherent in the older doctrine of that name, that it discredits as unreal the most precious elements of the world. For our modern realist, whether right or wrong, the world is genuinely as it seems to be—bright, warm, responsive; not as even James Hinton said that science shows it to be—" dark, cold, and shaking like a jelly." An extraordinary confusion, to presuppose the operation of the sense-organs in observing the consequences of their own supposed absence! The terrible and sinister prejudice of materialism which here finds expression is, as we said, emphatically and necessarily repudiated by the doctrine before us. We are warned of this in definite language. " To such a conception," as that now promulgated, Professor Alexander observes, " we oppose our habitual notion of material things as being somehow

arrangements or motions of whatever constituents we regard as ultimate. But it cannot be too often repeated, for those who are likely to forget the lesson, that extension and motion or material substance are in themselves on the same immediate footing as colours and smells; that they, too, are made up of *sensa* and *percepta* and thoughts, and exhibit the same problem of presenting these features in their combination."[1]

I must observe, however, at this point, that while materialistic prejudice is thus thoroughly repudiated as regards the secondary qualities of things, I cannot see how the tertiary qualities, say, for example, those which we call æsthetic, can have justice done them on this principle. Can they escape being regarded as distinctively psychical and so far of inferior reality, so long as even feeling is reserved as something belonging to mind? This remark anticipates our later argument, to the effect that thorough and solid as this new realism attempts to be,

1. *Ar. Proc.*, 1909-10, p. 32.

it proves that in the end there is no realism that can be completely solid and thorough; that is to say, that can sweep all characters of things, which are on the same level of objectivity, into the mass of non-mental reality. A thing may be charming quite as really and truly as it is red; but its charm according to realism, and even according to the realism before us, must be a mind-dependent attribute (for to be charmed is a mental act), while its redness is physical and mind-independent.

However, on the whole the tendency of realism to-day is away from eclecticism and towards a complete acceptance of external things, in all their concrete richness of existence, as reality independent of mind. And so far we are dealing with a new attitude, with a physical realism which has in the main stripped off the character of materialism.

And secondly—and here I think all twentieth century realism goes together—universals are admitted to be real, though by no means mental. *Our* particular realist

even calls them physical facts. Any way, they are held to exist or subsist independently of mind or knowledge. The nature of a thing, in respect of which it is an object of our thought, the general law of action and construction which dominates it, is spoken of as a universal and as corresponding to our concept. A material object, we are told by other modern realists, consists, apart from mind or knowledge, in a connection of universals.[1] A physical realism of this kind takes us I imagine into a new country, which Reid perhaps visited, but did not explore or subdue. Call us idealists or what you will, we who follow the watchword "Das Wahre ist das Ganze" might *prima facie* find in it much of what we demand; and what no eclecticism of the materialist type can by any possibility afford us. If (*per impossibile*, as I still must hold) all that is precious and substantial could truly be fused and focussed in an admitted real, I at least should not be greatly troubled at being ordered to call it

1. Prichard, Kant's "Theory of Knowledge," p. 243.

physical. Call these things physical or what you will, if they are the most real of realities, then nominalism has gone by the board, and the realism of the modernist is joining hands with the realism of the schoolman. There appears to be indeed a twentieth century realism which cuts down physical reality to the imperceptibles of science—something scarcely belonging even to the world of primary qualities; but this is a half-theory of the Lockeian type, though it pushes abstraction one stage further than his. Our realist's doctrine of the physical world gives us a far fuller picture of the reality which is in principle the same for all and accessible to all. And moreover, as I said, *all* the modern realists, I think, agree in recognising the reality—whether as existence or as subsistence—of universals.

The interest of the theory we have been contemplating has lain for me in noting what I take to be the inevitable results of reducing the place of the mind in the actual world to its narrowest conceivable limits. This result

is, as I view it, that on the one hand the great body, or the corpse as I should call it, of so-called physical reality, has been cut off and set over against the living nature of mind—which is reduced, as we saw, to a scheme of directions of effort addressed to objects outside them. But on the other hand, just because this is done so thoroughly, it by inherent necessity shows signs of life, and begins to exhibit within itself a vitality, primarily logical, but, for this reason, ultimately and in essence involving continuity with a psychical system.

(i.) First, a word as to the analogy of the two spatial things, on which the whole position is founded. One cannot be too careful at the beginning; and I shall make an observation which may be held trivial and hypercritical, but which, I am inclined to think, will lead us in the end to quite a different attitude towards the whole relation of mind and its objects.

The remark is merely this; that mind is never confronted by one object only. The

facts are not described by saying that we start with a pair of objects facing each other, of which one may be a body having a mind. The relation is not that of a mind on one side and a tree on the other. If there is a mind on one side there is at least a complex of objects on the other.

But for my own experience even this does not seem true. "On one side," and "on another side" are incorrect expressions. Speaking of fact as I find it, I should compare my consciousness to an atmosphere, not to a thing at all. Its nature is to include. The nature of its objects is to be included. When I came into this hall, out of the smaller room in which we met, the circumference of my mind seemed to expand. The limits of my consciousness became, at any rate, not narrower than the walls of this chamber. From the beginning, then, the analogy of two objects confronting one another seems to me inapplicable. I never seem to think in the form, "my mind is here, and the tree is there." Mind takes itself *ab initio* as a

world, not as an object in a world. I think "the tree is there, in the panorama," and the panorama *is* essential to my mind, though my mind has more before it, *e.g.*, thoughts of other places, and of incidents at other times. I am describing facts. I am not making any argument that the *existence* of the objects is in my mind or is mind-dependent. I am merely stating what I am directly aware of. In describing my awareness there is always an "and" or a "before"—or "behind" or "beside"—some conjunction or preposition. It is never just one object aware of one other.

The kind of observation this suggests to me is that *ab initio* one kind of thing is a whole, and another is a fragment. A mind is a whole, that is in its nature and intent; an object is a fragment. This fact forebodes a difficulty in assessing the reality of objects apart from mind, and so in drawing a line between them. For what is real must surely be a whole, whatever else may be its character. We shall see reason to return to this point.

(ii.) In the theory before us, sense-presentations count as non-mental or even as physical.

The distinction between act and object, or, as some take it, between act, content, and object, is here the governing consideration. It has been held to remove the principal reason for thinking that sense-presentations are something mental. I believe the word mental to be misleading, as I shall explain later on. But I desire to suggest that though it may be well to distinguish clearly between seeing and the object seen, yet it is not a mere failure to make this distinction which causes some of us to believe that the object seen has a character continuous with our mental life. Merely referring to the controversy between Manchester and St. Andrews, which I incline to think has established this point so far as sense-presentation is concerned, I endeavour to describe a more general argument which strongly appeals to me.

When I am told that I must not confuse

an idea as a mental act with an idea as a content of sense or an object of thought, I think I understand what is meant. When I am told that the content of sense or object of thought may therefore be something quite non-mental or even physical, I am, to speak plainly, inclined to feel myself the victim of sophistry. It seems obvious at first sight that a blue is as psychical as a pain or an inferential transition. And though you may argue at length that it is nothing but an external object, I feel all the time that I am being defrauded. You have put the vital character of a certain experience into what you call an act, and I admit that it is specially observable in connection with a certain function. But now you tell me that the main thing in the object, what I value in it and what I want it for, is removed and abolished by the distinction, and the experience as such is left for dead.

Now it is a good point on my side to say that objects of the kind in question cease to be, with the minds which entertain them or

even with the cessation of those minds' attention. And it seems obvious to me that this is so. But the doctrine of the open door denies the fact; and in any case, this fact would only be an external proof and not an analysis of the essence, and *prima facie* would not apply to the objects of thought.

I will try to state an argument going deeper into the merits, as I see it, and will support my statement by two applications of it.

The assertion that an object or content has or has not a mental character, ought, it seems to me, if it has any value, to be supported by positive analysis, and not merely by extraneous proof. Whether a certain object is continuous with the nature of mind is no question of mere origin or concomitant variation; it is a question of what sort of thing the object is, and what sort of thing mind is, and whether or no the one is connected with the other by inherent character.

Now if I try to escape the sort of negative sorites or gradual withdrawal of characters by which the so-called "mental" character

of presentations seem to me to be fraudulently attacked, what comes to me as something not to be reasoned away is in a word the life of mind; or, if we prefer the old technical language, its explicit unity. Well, it may be said, but a bar of iron has unity, and you will not say that this is a character inherently connecting it with your consciousness. No, I should not say that is so, directly and with reference to my single consciousness. But then in the case of the bar of iron I can say—or if I cannot, a physicist can—what else *is* meant by this unity, in what relations it lies, and on what characters it depends. And it is, we then see, not an explicit unity; not one which states itself. But now come to a content of sense. What I see when I look at a blue thing has unity, and life. Its parts that is, though varied, confirm, support and determine one another by explicit "compresence." It pulsates with feeling, a common tone, which involves the presence of a whole all at once, reinforcing and modifying every part by the simultaneous effects of all. What does a unity of this kind consist in? Identity

of ethereal wave-lengths? Not at all. That may be presupposed, but it will not do the work by itself. Blue is a peculiar "effect"; effect, I mean, in the artistic sense of the word; and wave-lengths, received say on a photographic plate, are not the peculiar effect which we call blue, even if as a physical cause they were to produce it *qua* physical effect. How do the elements of the effect hold together? What makes the blue reinforce or modify the blue? There is no push or pull between them. They work on each other through their identity and difference; or, to avoid disputes, here irrelevant, through their likeness and unlikeness. What sort of medium does such a unity involve? Surely, that of consciousness and no other. Blue, then, while it retains the characters of blue, must have in it the life of mind. *I* do not call it "mental," for I am not sure what that means. But I will call it logical. This argument, I am convinced, might be much better stated, but it at least makes an attempt to express a central consideration which I have uneasily

felt to be entirely omitted throughout all the recent realistic controversies. I will press it further by two applications. First, we saw that the realist of to-day asserts the reality—even the physical reality—of universals. The modern treatment of Plato's Ideas, in this connection, is extraordinarily interesting, but not perhaps as new as it might appear. Now a universal is a working connection within particulars. Again we might use the phrase which to me appears so apt, and say it is the life of the particulars. It is, indeed, at bottom, of the nature of a conation. Now the objects of sensitive and perceptive acts are charged with such working connections, which are expressly and precisely connections of content and of nothing else in the world. No possible handling of contents *ab extra* by a mind made up of pure conations and directions will get out of them the determinate and peculiar result which their inherent nisus to the whole brings out, as, for instance, in any case of relative suggestion. I find myself indeed comparing our twentieth cen-

tury realism with the erroneous side of Kant's synthetic unity.

No mind can make a world synthetic if that world is not synthetic in itself. But again; no world can be synthetic in itself, that is, can possess universals as a part of its own nature, if its elements have not, pervading them, the living *nexus* and endeavour towards a whole which indicates participation in the nature of minds. I cannot understand any attempt to explain a universal which does not recognise that it absolutely consists in the effort of a content to complete itself as a system. You may say that it would not do this of itself, but only by the mind working in it. And I am disposed to agree. But *then* you have abandoned the doctrine that the universal is a physical reality, so far as that means a reality that working as a universal can exist independently of mind. Either you throw the work of mind on the shoulders of a physical reality, and thereby transform the latter fundamentally, or you connect it with

the nature of mind as living in the contents, and then you have abandoned the doctrine of petrified or extra-mental universals. To recognise the universal as real, while killing and stuffing it, is to admit a claim which you refuse to satisfy. The reality of the universal is a sufficient proof that the objects of mind may be alive with its vitality.

The second point is that of the tertiary qualities, to which we referred above. It is a feather in the cap of recent realism to have given the secondary qualities their due. But here its achievement must end. It is impossible on the same principle to do justice to the tertiary qualities, say, beauty or delightfulness. If you reserve anything for a mind stripped of objective contents, you must, as realism admits, reserve pleasure and pain. But if so, all qualities involving pleasure and pain are mind-dependent, and no physical realism can recognise them as real. And yet, in truth, they are the most actual, most profoundly inherent, most objectively characteristic qualities of all. And whether pain

and pleasure are sense-contents or not, I think it has been proved impossible to separate them in treatment from sense-contents either as elements of feeling or as objects of emotion. You must either assign sense-contents to the mind, or æsthetic contents to physical reality.

(iii.) We have been pursuing throughout the idea of continuity in kind between mind and its objects. It has appeared to us that as long as a severance prevails, a just estimate of reality-values is impossible. On the one side we have a *caput mortuum;* on the other an empty synthetic function.

The twentieth-century realism which has been our guide has carried out this idea of continuity up to the penultimate step. Great as seemed to be its advance beyond eclectic or materialistic realisms, it still seemed to us to fail in discarding the last trace of eclecticism. And therefore we asked ourselves if it was not, for some reason of principle, unable to complete its portrayal of a reality at once solid and vital. And the reason which sug-

gested itself was, that it neglected to enquire into the conditions of self-existence.

For here, I am convinced, and not in the fallacies which have often been noted as the basis of subjective idealism, lies the fundamental ground for placing mind in the centre of reality. And, even in the case of subjective idealism, I am sure that the genuine logical motive is the same in principle. It is not the failure to distinguish between an act and an object of mind. It is not any simple prejudice that mind can apprehend only what is a part of itself. But it is the insight—an insight substantially just—that a universe severed from the life of mind can never fulfil the conditions of self-existence. We saw that to overlook the character of mind which bears on this point, when stating the simplest facts of perception, is to be misled *ab initio*. Mind is always a world; its objects are always fragments.

This nature, the nature of being a world or whole, is what I take to be the condition of self-existence. It is an old argument for

monadism or panpsychism that nothing can strictly be treated as being at all, which does not possess a self. Our doctrine extracts the logical principle of this argument, as distinct from a certain sentimental bias in favour of a spiritual society. Consider, for instance, Plato's Ideas, which our realist has taken as typical of the most real and most important of all physical facts. Consider, if this is really their place, the task they have to fulfil, as Plato indeed continually represents it—the function of conciliation of all contraries, the resolution of all problems, the completion of all fragmentariness, the systematisation of all abstractions into a more than organic concreteness.

Indispensable conditions of the fulfilment of such a function are unquestionably, at the very least, retention to let no element drop out, compresence to maintain explicit unity, continuity to make every part permeate every other, and concrete or focussed being to transcend space and time. And all this means mind. There can be no concrete

whole but a whole centering in mind, and no self-existent whole but a concrete whole. I do not appeal to the idea of "self," at least in its current sense. Opinions differ, for example, as to whether society has a self; and therefore it is clear that the notion of self is too indefinite to use in establishing the notion which verbally appeals to it—the notion of self-existence or of a self-maintaining whole of experience.

How then do we compare the reality thus conceived with the world of the physical realist? We may illustrate by an old description of matter as *mens momentanea*, that is, I suppose, as what reality would be if the conditions of its full and explicit concreteness were removed, and its retention and continuity cut down to a vanishing point. We have most of us actual experience of some such stages as we pass under the influence of an anæsthetic, when continuity in space and time, concrete system, retentiveness, are gradually wiped out, and we feel ourselves stage by stage reduced from mind

to its vanishing point in body. The nature of the self-existent whole is then being by degrees extinguished in us. Suppose, *per impossibile*, that the universe could be anæsthetised; then, in the same way, the conditions of its concrete reality and self-existence would be gone.

But, it may be objected, its abstract reality, as a mass of insentient matter, would persist and exist none the less unaffected by the extinction of consciousness.

First, however, we have to consider whether we know that an abstract reality can persist by itself. Those who take the imperceptibles of science as the absolute type of what is real might here have something to say. But the physical realism which has been our guide, together with our own attitude to it, lead us to a different position. The reality of universals, as also that of secondary, and, in our view, of tertiary qualities, could not be separated from that of the most concrete self-existence, *i.e.*, from the nature of mind or experience. An anæsthetised universe,

according to this doctrine, would be dissolved and leave not a rack behind. For the primaries, as we have seen, stand on the same ground with the secondaries and tertiaries. Now this conclusion is in no way drawn from confusing the acts of minds with their objects. It is not drawn from things being mind-dependent, as colour may be on the act of sight, though certainly we cannot hold them complete unless all their conditions are present. It is drawn rather, one might say, from their being mind-component; that is, possessing a logical nature or implicit unity, which finds completion only in the focus of mind, which, in turn, it conditions. The real universal, which we considered above, and our analysis of the life of blueness, are cases in point.

Next, what is our conclusion with regard to Mentalism? Mentalism is a false form of Idealism proffered as its support, with the result that the same refutation is held to involve them both. The question as stated in terms of Mentalism seems to be wholly

beside the point of mind's relation to its objects. The objects of finite mind—mind other than finite could hardly have an object —are, according to the view to which our argument has led us, neither minds nor products of mind, nor states of mind, nor in any sense except as parts in contrast with wholes, are they secondary and less actual adjuncts or adjectives of minds. They are necessary to minds, as minds are to them, and are discriminated by a concurrent process within the same totality. They are external, and though relative to mind are not mental or psychical *in se*. They are parts of wholes or of a whole, which can only be ultimately self-existent through the full-grown nature of mind. But then, as the nature of mind is above all things to be a whole, when we say that objects are parts, we actually say that so far they are not mental. The more anything is a fragment or an abstraction, the less it is or belongs to a mind. This leads to a paradox which seems to me all important in dealing with mentalism. Take the case of

the physicist's matter. It is, for our view, phenomenal, or even epiphenomenal (I owe this latter excellent paradox, I believe, to Professor Stout). It is an object gained by ideal construction and inference, which is of course one aspect of a discovery of the real fact, selected within the universe as accounting for some part of its behaviour. Now just because thus selected, constructed and discriminated by thought, it is itself—say the imperceptible of science—as far removed as possible from anything that could be held to be mental. It has no secondary qualities; and next to none that are primary. I suppose there is no reason to doubt that it represents some actual behaviour within the system of nature; but it is obviously removed as far as possible from the conditions of totality or self-existence, that is, of mind. If you take physical nature as our physical realist took it, and not as the imperceptibles of science, that approaches more nearly to mind, because it is more nearly concrete. But to say that the imperceptibles of science are real, because

they represent a behaviour within the universe, and are capable of being inferred by thought and of being an object of mind, is one thing; to say that they partake of a mental nature and have a claim to substantive self-existence *per se* would be quite another thing.

You can consider a portion of the behaviour of a system on its own merits, with reference to its special function, without committing yourself to the belief that it could be real apart from the whole system, or that it adequately displays, within itself, the quality of the system. Objects of finite mind, in short, and finite minds themselves, are bound, after our discussion of physical realism, to strike us as details of reality essentially continuous with each other and reciprocally indispensable. But yet any object picked out and isolated within the whole is *eo ipso* not-mental, for you have taken it apart from the life of the whole, and have, by abstraction, killed and stuffed it for examination.

To put a point upon our conclusion as

regards the line between mind and its objects, I might suppose myself challenged in terms of the doctrine of knowledge advocated by the realist. What are we to say of knowledge? Is it mental, or physical, or neither? Have you, in the case of knowledge, *here* the mind, made up of empty acts and inclinations, and *there* over against it the real thing, say, a physical object as perceived or remembered? Or have you, within and as part of the mind, some content or mental furniture, which, belonging to the mind, yet is part of and informs you about the real physical spatial object (to take this single case) which you are sure is there and plays its part independently of what you think about it?

Omitting the special case of sense-contents on which I follow on the whole the St. Andrews' contention (while convinced that on the test question of error we can all be substantially agreed), I answer that as a matter of principle it really makes no difference from which end you approach the facts. If you say: knowledge is empty mind plus

physical objects, and therefore is physical; then you must subjoin, and our physical realist does most fully and carefully subjoin, that it is physical objects *so far only* as my organism can receive them, so far as my memory and mental system can revive and interpret them, so far as my personal incapacity does not take them at cross purposes and mix one with another. If you prefer to say, knowledge is the system of reality as reconstructed and stored up within my mind, and is part of my mind, and is a mental system; then you must say in addition that the name of knowledge belongs to this mental system *so far only* as it presents to us the world and its components as they completely and necessarily are. In either case it is impossible to omit the "so far only," and if you retain it you are not a single hair's breadth nearer to reality in the former statement than the latter, nor to mentalism in the latter than in the former. What special use or gain is there in saying that knowledge is physical, when you have to subjoin an elaborate

explanation admitting into this physical reality all the ignorance, errors and illusions that the feeblest or most fantastic of minds could be guilty of? Or what gain for mentalism is there in treating knowledge as a part of your mind, when you must say in the same breath that it is only knowledge in virtue of the reality that appears in it? The double nature of knowledge, as the continuity of mind and reality, is the ultimate truth to insist on. The distinction between reality as it is and as we apprehend it is after all ineradicable, and either statement fully and equally insists on it.

Finally, then, you gain nothing in principle by the tenet of the open door—that is, that things walk into your mind and organism just as they are outside it—and you lose nothing by its opposite, that is, that your organism, which you cannot separate from its mind, is one of the conditions which things require for the manifestation of their complete being. The former seems to me a gratuitous hypothesis, recommended only by

a fallacy which confuses "independent of" with "in abstraction from." Continuity of the real world with mind seems to me the inevitable goal and climax of twentieth century physical realism, as opposed to eclectic materialism. If the object is to be real in its fulness, as it is the merit of that doctrine to affirm, it must be maintained in connection with its complete conditions. To try and hypostasise it apart from organisms with their minds is in my judgment an evasion of the task laid upon us by the arduousness of reality. Reality, I urge, is always on ahead, where the fuller conditions are focussed. Abstraction is abandonment of the quest.

APPENDIX.

ON SOME POINTS IN THE METAPHYSIC AND LOGIC OF "THE NEW REALISM."

I.

METAPHYSIC AND EPISTEMOLOGY.

SINCE, by the courtesy of the Publications Committee, I am permitted to subjoin an Appendix to my Lecture, I feel that I ought to say a word in explanation of the footnote on p. 11.

As I hope the Lecture has shown, I sympathise strongly in many respects with the New Realism. More particularly I welcome the criticism of "the crude brickbat notion of physical object,"[1] and what I hope will prove to be the rectification of some current views of implication[2]; and, of course, the points in which the authors seem at one with Professor Alexander. And I can see that they are at home in regions of science which I cannot enter.

1. 371 ff.
2. See below on Logical Priority.

On the other hand, I am compelled to hold, that in questions of first principles they have not really made their own the standpoint and intention of modern metaphysical theory.[1] This suggestion I must illustrate far too briefly. For I shall give greater space, perhaps, than it merits, to a study which only supports this opinion in a secondary degree, and which I pursued in the first instance because of what seemed to me its intrinsic interest, and the kinship of the authors' view with an old tenet of my own. The subject of this study, which follows the present section, is "Logical Priority." If anything in its argument is sound, the authors' doctrine is no doubt in some degree shown to require modification, but is indicated, at the same time, to contain an important element of unrecognised truth.

The centre however, of the six authors' polemic directed, as I understand, against the Idealism of to-day, is concerned with the fundamental position which it is held to assign to Epistemo-

1. I should judge that their philosophical training, which is very likely more thorough than ours, or, say, than mine, *e.g.*, in the detail of Kant, has not directed itself so much to the whole text and context, first of ancient, and secondly of quite recent metaphysic. There is no impropriety, I think, in saying this. It is a very natural difference; and I am absolutely certain, not from their writing alone, that it is the fact. Their training has enabled them to contribute very suggestive novelties to philosophy. That is more than most people have done.

logy.[1] This impeachment is indicated in the Introduction (p. 16, where Epistemology is significantly coupled with Psychology), and under the title "The Emancipation of Metaphysics from Epistemology" forms the subject of Mr. Walter Marvin's Essay which stands first in the volume. His principal thesis, I take it, is this: "The first and most prominent tenet of the criticist may be stated thus: Inasmuch as all sciences are cases of knowledge the science which investigates knowledge as such is fundamental, and is, both in fact and in right, a critique of all science." (P. 51.) Compare "There must be a science prior to all others, even to Logic, which shows the possibility of knowing." (P. 60, cf. Green, cited below p. 57.) This polemic I suppose to be connected with the attitude taken up in such a statement as the following (Introduction, p. 20). "The Idealist is wont to reason that all philosophy and all science must be built upon the one fact that nobody can make any unchallengeable assertion about anything except his having an immediate experience."

1. I suppose that this is the "epistemological error which unites": "such writers as Fichte and Berkeley, Mr. Bradley and Professor K. Pearson." "New Realism" (p. 10). The polemic against the ascription of a fundamental position to Epistemology is directed against the "criticist" *eo nomine* (p. 50 note). But I gather that all of us who acknowledge a considerable debt to Hegel are lumped as "criticists," that is, I understand, as sharing with Kant an attempt to establish a fundamental science, consisting in Epistemology, and prior to Logic and Metaphysics. This identification seems to me quite exactly wrong.

The whole meaning I take to be that the Idealist or Criticist is a subjectivist, and starts from "Knowledge" (how it should be knowledge I cannot conceive) as a jumping-off place to get across a gap to reality. The possibility of this miracle he is concerned to demonstrate by a science dealing with knowledge as such [it would be just not as such, I should have thought] and prior to his theory of Reality. A theory, on the other hand, which, treating of first principles of Reality, includes in its treatment an account of cognition and truth, is not, as I understand the question, epistemology in this incriminated sense. If I am wrong in my understanding of the polemic, of course my immediate criticism of it ceases to apply. But my account of modern speculative philosophy, I venture to think, remains the only true one.

The priority alleged to be assigned to Epistemology, I suppose, is taken as connected with the priority which the Idealist ("Criticist") is believed to ascribe to immediate experience. He begins from his own mind, and has to bridge a gulf to reality.

If I am right in taking this to be the true bearing and intention of the Realist's criticism as directed, say, against those of us who acknowledge a special debt to Hegel, I must hold that the conclusion is inevitable. The popular conception of "psychological idealism" (Wallace's phrase of repudiation) has in this criticism been insufficiently distinguished from the attitude of what Hegel calls Logic, Green Metaphysics, and Mr. Bradley, I think, the study of first principles. What at once amazed me in the polemic before us

was the continual collision between its statements, and passages which crowded into my mind in which Green, Wallace, and Mr. Bradley —to mention no more than these—seemed most sharply and in their whole aim and method to dissociate themselves from what I understand by Epistemology.[1] According to my understanding and conviction, the whole movement from Hegel downwards, and most explicitly Green's contribution to the movement in England, was a revolution against psychological idealism and epistemology, having much in common with what the realists are now more emphatically attempting. My view of the situation was expressed in 1885, when I said that the plan of the great masters has been handed over to be carried out piecemeal by the journeymen; and I still believe this view to be sound. If I could transfer, for example, into this Appendix a couple of pages from Wallace's "Introductory Essays" to Hegel's "Philosophy of Mind,"[2] I really

1. See previous page. I repeat that I understand by Epistemology in the sense which I repudiate a theory of knowledge which is not simply a portion of a general theory of Reality. I do not, for instance, consider my own work in Logic to be Epistemological, and have never used the term or acquiesced in its use. I was careful to exclude the idea. Vol. i, pp. 2 and 3.

2. Pp. ciii-iv. Professor Alexander's point about the meaning of calling an object an idea, for instance, is here stated precisely as he states it. I do not think that in modern Metaphysic or Logic it has ever been in doubt. See, *e.g.*, my "Essentials of Logic," p. 12, or Bradley on "what is sometimes called Idealism," "Appearance," p. 249.

think that further discussion would be needless. The speculative philosopher or metaphysician, so far as I know, assumes nothing, absolutely nothing, except that, in thinking, he has to satisfy his theoretical want. "But as to what will satisfy, I have of course no knowledge in advance. . . . . The method clearly is experimental."[1] It is really an extraordinary thing that one should meet with such a statement as that which I cited from Introduction, p. 20, about the unchallengeable assertion. Is it not the well-worn and familiar doctrine of speculative philosophy, from Plato and Hegel downwards, that certainty comes at the end of thought or cognition and not at the beginning; as the result of science and metaphysic and not as their foundation? Is it perhaps contended that we must have it in the beginning if we are to have it in the end? If so, we are confronted with one of the worst of logical vices, which I will call "Foundationism," and I must admit that I have suspected our authors of harbouring it.[2] But consider for instance Mr. Bradley's Knowledge of the Absolute—I presume the only propositions which he would consider unchallengeable; the result of a laborious enquiry into first principles.[3] As regards what we early come to believe in on good grounds, being only our present experience—"his having an immediate experience"—Mr. Bradley's argument against Solipsism[4] seems to me to annihilate

1. Bradley, "Mind," 1911, p. 306.

2. "The New Realism," p. 93, and in many other passages. Cf. my "Logic," ed. 2, ii, 266 note and reff.

3. My own "Logic," such as it is, is of course an attempt to embody this view in a detailed system.

4. "Appearance and Reality," 254 ff.

the suggestion as far as he is concerned. For it consists in pointing out that we are convinced of the existence of other centres of experience on the same grounds and with the same right as of our own.

But you believe, it may be rejoined (see citation above from p. 60), that there is a science prior to all others, even to Logic, which has for its task to show the possibility of knowing. T. H. Green seems to have anticipated this suggestion, and it will be worth while to consider it under his guidance. And then, after this most imperfect study of the point, space will compel me to break off.

Green[1] certainly regarded it as coming within his task to answer the question "how knowledge is possible." This, he pointed out, "is not to be confused with a question on which metaphysicians are sometimes supposed to waste their time. "Is knowledge possible?" "Metaphysics is no such superfluous labour." It is, he continues, a theory of the system of things which (system) renders it possible for things to be accounted for on the supposition of their relation to each other. He contrasts this enquiry in the main with psychology and plainly also with any theory of knowledge which is possible without a theory of the thing known. It is the same distinction which Mr. Bradley implies in his reference, which I always took to be contemptuous, to " Episte-

1. " Works," i, 375 ff.

mology."[1] Wallace (*l. c.*) adopts precisely the same attitude.[2]

Green intended, beyond any reasonable doubt, a rehabilitation of Logic and Metaphysics as against Psychology and Theory of Knowledge considered as independent sciences. He proceeds, as we all do, not by prior assumptions of premisses for demonstration—a method, I should contend, impossible for a sound logician, and Green was an exceedingly sound one—but by trying to construct a conception which would most completely harmonise with the facts[3] and so afford the completest theoretical satisfaction. Of course, he did not deny the existence of externality, not even of unconscious externality.[4] He held, however the conviction, in which I agree with him, that you could not have a world without consciousness as its centre. Here, I am glad to understand, the new realist primarily differs because he supposes any view like Green's to be an unwarranted assumption *ab initio*. He

1. *e.g.*, "Mind," 1900, p. 39 note. I think he uniformly insists that there can be no theory of knowledge except as part of and in connection with a complete theory of Reality, cf. *e.g.*, "Mind," 1911, p. 337.

2. *l.c. supra*. Dr. McTaggart, I ought to admit, refers with interest to Epistemology; but his Idealism is certainly far from Subjectivism. See "Studies in Hegelian Dialectic," 120.

3. "Prolegomena to Ethics," sect. 82, 174.

4. "Works," i, 380; ii, 16. On the existence of Nature beyond finite perception, see Bradley, "Appearance," 273 ff.

leaves, so to speak, a fighting chance for such a doctrine, *after* the nature of the world has been considered.[1] This I think is fair, and I should, for myself, accept that issue; and I believe that modern metaphysic, and Green's method, is with me.

One more observation bearing on my primary thesis in this section. I find on p. 171 a reference thus worded: "the argument (Bradley's) that any and all diversity, and so any and all relations of any and all terms are self-contradictory." Cf. the axiom about relations, taken seemingly as peculiar to realists, p. 477. I must think that here insufficient study of a great writer is revealed. In the first place diversity is present, according to Mr. Bradley as I read him, both in primary feeling and in the Absolute. In the next place, his attitude to relational diversity is really, it seems to me, quite simple. He, of course, so far from rejecting all diversity, was one of the first who fought for and established the principle of identity in diversity in English philosophy. It was his great contention. His books are full of it. What he in principle refuses to accept I understand to be bare conjunction[2] that is, the bringing together of differents, without mediation by any analysis of their conditions satisfactory to thought. Very likely no such analysis is ultimately and completely satisfactory. But every science, surely, in daily practice, demands all of it that can be offered, and rejects

1. P. 32.

2. "Appearance and Reality," p. 600, cf. 570 (ed. 2).

relatively bare conjunctions, that is, such conjunctions as are presented by empirical observations. Is there any man of science, who, in his daily work, and apart from philosophical controversy, will accept a bare given conjunction as conceivably ultimate truth? (See Professor Hobson's address, cited below, p. 68.)

II.

Logical Priority.

I find some difficulty in reconciling with each other, and with the traditional rules of Formal Logic, the statements with regard to Implication through which the definition of Logical Priority is applied, in the work before us, to different cases. I think that there is at least a *primâ facie* obscurity which is worth pointing out. My predisposition is favourable in one sense to the new Realists. For I am inclined to think that the most obvious difficulty which I shall indicate arrives from their recognition of a point in which the traditional rules of implication are at fault, in a way to which I have frequently drawn attention. On the other hand, if I am right, the doctrine of Logical Priority would be in some degree affected.

I take into consideration three passages in the book which seem to me to agree; and also two passages, continuous with the first and third of the three, which seem to me to introduce a different point of view, inconsistent with that of the former passages and with itself, though, I am convinced, containing an important truth.

The three passages first mentioned are (*a*) p. 45, from the words "First, one science," to p. 46, ending with the words "required quantity of arsenic"; (*b*) p. 112, "It is important" down to "the premises be false"; and (*c*) pp. 204-5,

"Logical priority may be defined" down to "although conversely, not."

The two passages which I contrast with these are (*d*) p. 46, "Much of mathematics" down to the words on the same page "mechanics and physics must be false"; and (*e*) on p. 205, the sentence beginning "Thus, *à propos*" and ending "pure mathematics (arithmetic)." See also pp. 220 and 225, which suggest an empirical basis for the doctrine of (*d*) and (*e*).

Passages (*a*) and (*c*) state the doctrine of Logical Priority,[1] and point out its application, in perfect agreement with each other, and consistently with the traditional rules of Formal Logic. Here is passage (*a*): "By Logical Priority is meant that relation which holds between a proposition and its necessary condition. Thus if A implies B, but B does not imply A, then B is the necessary condition of A; for A's truth depends upon B's truth. That is, should B prove to be false, A must be false; and though A be false, yet B may prove true; for we are saying merely that A's truth is a sufficient condition of B's truth, and are not maintaining that it is the only condition, or a necessary condition. For example, let us assume it to be true that if the tissues of a man's body absorb a certain amount of arsenic, he must die; that there is no preventing cause either known or unknown. Then evidently for it to be true that this man's

1. The doctrine is one apparently obvious to common-sense, and the definition might be borrowed from Aristotle, M. δ 11, 1019 a 2. *πρότερα ὅσα ἐδέχεται εἶναι ἄνευ ἄλλων, ἐκεῖνα δὲ ἄνευ ἐκείνων μή.*

body has absorbed such an amount of arsenic, it must be true that the man is dead; whereas the mere fact of his death does not prove that many another possible cause is not the actual cause. In short, 'The man is dead' is logically prior to the proposition, the tissues of his body have absorbed the required quantity of arsenic." (This is the whole of passage (*a*). Passage (*c*) is much more general, but contains nothing to clash with it.)

Every one sees at once that we are here dealing with the relation of antecedent to consequent in a normal hypothetical judgment, where implication is stated according to the traditional rule which governs all implication and conversion in Formal Logic. Truth of antecedent implies truth of consequent; truth of consequent does not imply truth of antecedent.' It is the same view of implication which admits plural or alternative causes,[1] as indeed the above passage insists.

If we now extend our consideration to passage (*b*) (p. 112), we see that, though the writer does not remark upon the question of Logical Priority, yet he treats precisely the same implications as holding good, in accordance with the ordinary rule, between the pair of premisses of a syllogism and its conclusion. The truth of the two premisses implies that of the conclusion. The truth of the conclusion does not imply that of the two premisses. In this respect conclusion is to premisses as consequent to

1. Note that on p. 112 Causal Dependence is assumed to be reciprocal. And cf. p. 225.

antecedent. It is "the implied," the necessary condition of their truth. They are "the implier." It is clear then that by this definition, applied through this statement of implications, the conclusion of every syllogism is logically prior to its premisses.

Now let us turn to passages (*d*) (p. 46) and (*e*) (p. 205). Passage (*d*) will give us all we want. Passage (*e*) merely confirms it.

It amounts to this. Mathematics are logically prior to Mechanics and Physics. [I shall represent Mathematics, in this argument, by Ma; Mechanics and Physics by Me.] That is to say, Ma does not imply the truth of Me, but Me does imply the truth of Ma. So (1) Me might be false (much of it[1]) without Ma being false; but (2) if Ma were false, then Me would be false.

Here the general definition of Logical Priority is the same as that fulfilled by Consequent in relation to Antecedent and Conclusion in relation to Premisses, considered in accordance with the traditional rules of Formal Logic.

1. This reservation can make no difference. The two requirements which follow from the logical priority of Ma to Me must obviously follow in respect of the same elements of Me, viz., those to which Ma is prior. And these elements of Me are determined by one of the requirements as results of an "explicit deduction" from Ma—results so strict that the falsity of the mathematical premisses Ma will involve their falsity. Thus you cannot account for the required possible falsity of Me while Ma is true, by supposing that some part of Me depends on a false premiss introduced into the chain at a point lower down than Ma.

But we have to note that we are applying it to a different case. Me is "an explicit deduction" from Ma (this is specially necessary in order to make (2) hold good). That is to say, in this case the Logical Priority *is that of Premisses to their Conclusion*. And the same requirements of the definition of Logical Priority have to be satisfied in this case as were shown to be satisfied in the relations of Consequent to Antecedent *and of Conclusion to Premisses*. Thus Logical Priority is ascribed *both to Premisses over Conclusion and to Conclusion over Premisses*. Obviously, then, their relative implications must be differently stated to support these two conflicting pretensions to Priority; and we shall see how this is done.

For here it is asserted that (1) truth of Premisses (Ma) does not imply that of Conclusion (Me); but that (2) truth of Conclusion (Me) implies truth of Premisses (Ma); in other words, (see (1) and (2) on p. 64) that (1) Conclusion (Me) might be false, without Premisses (Ma) being false; and that (2) if Premisses (Ma) were false, the Conclusion (Me) must be false.

To affirm these implications of Conclusion and Premisses respectively is flatly to contradict the traditional rules of Formal Logic, which say that if the Consequent or Conclusion is false the Antecedent or one Premiss at least must be false, in other words, Truth of Antecedent or Premisses implies that of Consequent or Conclusion; but that the falsehood of the Antecedent or Premisses does not involve that of the Consequent or Conclusion, in other words, Truth of Conclusion or Consequent does not imply that of Premisses or Antecedent.

And *these traditional rules were the foundation* of ascribing logical priority to one case of implied proposition (Consequent or Conclusion) over its implier (Antecedent or Premisses).

Therefore it seems clear that the rules of implication by which Logical Priority is ascribed to Consequent and Conclusion over Antecedent and Premisses are in flat contradiction with those by which it is ascribed to Premisses of deduction over its Conclusion.

It is surprising, *primâ facie*, that Logical Priority should be ascribed to Consequent over Antecedent, and to Conclusion over Premisses. But the definition of Logical Priority, and also along with the rules of implication traditional and Formal Logic, leaves no escape.

On the other hand, to obtain what seems *primâ facie* more natural, the Logical Priority of the Premisses over Conclusion, we saw that rules were appealed to which defy the traditional rules of logical implication.

I will draw out the contrast between the two sets of rules.

1. Thus we have it alleged on one side, in support of Logical Priority of Premisses over Conclusion—of Ma over Me— that the truth of the Premisses in an "explicit deduction" need not imply that of the Conclusion—the truth of Ma need not imply that of Me; *i.e.*, that the Conclusion can be false while the Premisses are true. On the other side, in showing the Logical Priority of Consequent and Conclusion over Antecedent and Premisses, the appeal was to the ordinary rule of Formal Logic, that truth of Premisses or Antecedent implies that of Conclu-

sion or Consequent, *i.e.*, that if Conclusion or Consequent is false Premisses or Antecedent cannot be true.

Here the traditional rule embodies only what seems the minimum essential to the existence of inference. If any nexus or inferential relation is to survive at all, implication must be admitted to hold from Premisses to Conclusion in an explicit deduction.

The fault or difficulty must be in the requirement opposed to the common rule. Yet it obviously embodies something that has a certain vraisemblance; and, indeed, the main point of the doctrine of *logical priority* as such. It does seem as if you could start with self-evident premisses, and get down by deduction, without strictly false premisses,[1] to questionable conclusions—as is here asserted of Ma and Me respectively. Obviously the explanation lies in the difference between premissses which are bare conjunctions of empirical fact, and premisses which are restricted to facts analysed in respect of their conditions and scientifically mediated by conditioned affirmations. For the latter, the traditional rule—and something more as we shall see—remains true in the letter and in the spirit. The truth of the Premisses in the deduction warrants the Conclusion; and the falsehood of the Conclusion involves a falsity in the Premisses used in deduction. But if bare Conjunctions—unanalysed statements of so-called fact—are admitted as Premisses, the matter becomes ambiguous,

1. These are forbidden by the argument of note 1, p. 64.

and we see the vraisemblance of the new rule which is to support the logical priority of the premisses. Without a formal break in the deduction, without an assignable falsity in any premiss, we may have got from a region of self-evidence—say of arithmetical truth—to one of questionable results in any concrete science. And we may express our sense of what has befallen us in the extraordinary statement that the falsity of Conclusions in such a deduction would not involve the falsity of the Premisses—and so the truth of the Premisses does not involve the truth of the Conclusion. We must be testing the Conclusion by the ideal of science, and the later Premisses only by the standard of empirical fact. Bare Conjunction is thus introduced into the very nerve of inference,[1] and not merely made the object of a precaution, as in the traditional

1. The point that a rational nexus is everywhere assumed by science as in principle possible would seem too obvious to be insisted on, were it not that some theorists seem inclined to accept the survival of bare conjunction in the outskirts of knowledge as representing a feature of the universe. This, I take it, is Mr. Spaulding's view (p. 220). It is, is it not? the doctrine of contingent truth. But can it be made consistent with the other part of his view? (see Digression, p. 70). I therefore cite from an authority who shares in many ways our authors' tendencies some evidence of the need which science recognises to postulate rational nexus, in principle, under every empirical observation. "The peculiarity of Geometry is that it became a purely rational science earlier and by more rapid stages than could be the case with other departments of physical

rule which prohibits the retrospective inference from truth of Conclusion to that of Premisses, or of Consequent to that of Antecedent.

2. Then we have the further contradiction. In supporting the Logical Priority of Ma over Me it is laid down that falsehood of Premisses—of what comes first in an "explicit deduction," here Ma—involves falsehood of Conclusion, Me —of what comes last in the deduction; in other words, that truth of Conclusion implies truth of Premisses. The ordinary rule of course[1] is that falsehood of Antecedent or Premisses does not affect truth of Consequent or Conclusion either way; in other words, that truth of Consequent or Conclusion implies nothing either way about Antecedent or Premisses.

1. This rule, we must remember, was relied on to establish the Logical Priority of the Consequent (and Conclusion) over Antecedent (and Premisses).

---

investigation which have not yet emerged from the stage in which empirical observations form an essential element in the process of furthering our knowledge." "Geometry may be regarded as the type to which every science may be expected to conform at the distant time when it has become completely rational." "Just as Geometry has no need of further empirical fact, completely rationalised Physics and Chemistry, as ideal schemes, would contain within themselves every element which could be supplied by physical observation; and would no longer be dependent for their further progress on the work of experience." Professor Hobson's Address to Mathematical and Physical Society of University College, London, 1912.

We should note first, by way of digression, the relation of the two requirements of Logical Priority as applied in this same case. *In the same* "explicit deduction," falsehood of Conclusion is not to involve falsehood of Premisses, and falsehood of Premisses is to involve falsehood of Conclusion; in other words, the truth of the Premisses is not to imply the truth of the Conclusion, and the truth of the Conclusion is to imply the truth of the Premisses. Is not this very hard to believe? The explanation of the two rules being maintained together is surely that indicated above, p. 67. The former rule contemplates the admission of bare empirical conjunctions into the deductive chain. The latter implies the admission of only such precisely conditioned and exclusive Premisses as are rightly held—we shall see—*to be implied in the Conclusions drawn from them.* Thus we can at least see a meaning in denying the normal implication of truth of Conclusion in that of Premisses, if the former, as emanating from a bare conjunction, gives more than a scientifically conditioned inference would warrant. And we can also justify, in a limited sense, the implication from truth of Conclusion to truth of exclusive minimum Premisses. This is a new proposal, which I welcome.

But, returning from this digression, we have to note the contradiction with the ordinary rule, as stated in the last paragraph but one.

Here I make no doubt that the ordinary rule is wrong, in so far as it denies all implication of Premisses in Conclusion. Of course you may have the same Consequence implied by a number of alternative Antecedents and the same Conclu-

sion proved by a number of alternative pairs of Premisses; and it may therefore be argued that it is impossible for the truth of the Consequent to imply that of any one Antecedent, or of the Conclusion to imply that of any one pair of Premisses. But this argument forgets that the appearance of non-reciprocal implication is here due to superfluous elements—bare conjunctions—in the numerous alternative Antecedents and pairs of Premisses, and that there most certainly is in every case some Antecedent, common to all the number, and some pair of Premisses, underlying all the alternative pairs, the truth of which is implied in the truth of the Consequent or Conclusion. In "If he is poisoned he is dead"—death does not imply poisoning, but it most certainly implies the features of poisoning which are essential to death, and common to all its modes. The appearance here of non-reciprocal implication is simply due to the fact that we take our rules from unscientific thought. In every Conclusion there is some pair of Premisses implied, in every Consequent some Antecedent; and reciprocally, as we saw, there is a strictly conditioned Conclusion implied in every explicit deduction in respect of every actual Premiss that can enter into it, and if there seems to be an opening for falsehood from true Premisses, it is because bare conjunction, that is, facts inadequately conditioned, have been admitted into the chain of reasoning. I therefore agree with Mr. Spaulding's account of the matter (pp. 225-6) except that what he takes as occasional fact, appears to me to be a truth of principle.

The strange contradiction between these rules

by which the definition of Logical Priority is applied to different cases, is only to be accounted for when we observe that in each case there is in the proposition, admitted *pro hac vice* to be "the implier," superfluous matter, by which the true reciprocal implication is disguised, and tends to pass unnoticed. But through this implication, in principle always present, an element of the so-called implier—and that its operative element —is implied as well as implier.

And thus we see why our authors' tenets force upon us the curious result that Conclusion is logically prior to Premisses *and also* Premisses to Conclusion.

It is true, of course, as commonly taught, that the Premisses or Antecedent imply the Conclusion or Consequent, which is therefore a necessary condition of the others' truth, and so far logically prior to them. But it is also true, as is not commonly taught, that there must be in principle for every Consequent or Conclusion a common, minimum, and exclusive Antecedent or pair of Premisses, which the Conclusion or Consequent implies as a necessary condition of its truth, and therefore as so far logically prior to it. Here we see the relative justification of the puzzling doctrine which our authors appeared to maintain—that Antecedent and Premisses on the one hand, and Consequent and Conclusion on the other, are logically prior to each other, each to each. For each has in fact, with reference to the other, one of the two alleged features of logical priority, viz., that it is implied by the other, and is consequently a necessary condition of the other's truth. But the other and negative feature

of logical priority, the total non-implication of the implier[1] by the implied,[2] is of course irreconcilable with the implication which appears on analysis to exist in both the cases we have discussed and which therefore must be reciprocal. It is this alleged negative feature (depending on the admission of irrelevancies into the implier[3]) which is the cause of the contradiction between the two parts of our authors' doctrine. Without it, this doctrine I believe is both sound and consistent; and all that is necessary to bring its parts into explicit harmony is to substitute logical reciprocity, which can be ascribed to both sides in the antithesis, for logical priority which obviously cannot. The effect of such a modification on the theory of bare conjunction and a loose-knit universe I cannot here discuss.

1. Say "poisoning." See p. 31
2. Say "death."
3. It was pointed out above, p. 67, how Mr. Marvin can maintain on this ground with some vraisemblance (p. 46) that the truth of the Conclusion need not be implied in that of the Premisses; just as it is commonly held on the same ground that the truth of the Premisses is not implied in that of the Conclusion.

Publications of the Manchester University

EDUCATIONAL SERIES

No. I. CONTINUATION SCHOOLS IN ENGLAND AND ELSEWHERE. Their place in the Educational System of an Industrial and Commercial State. By MICHAEL E. SADLER, M.A., LL.D., Vice-Chancellor of the University of Leeds. and late Professor of the History and Administration of Education in the University of Manchester. Demy 8vo, pp. xxvi. 779. 8s. 6d. net (Publication No. 29. 1907.)

No. II. THE DEMONSTRATION SCHOOLS RECORD. No. I. Being Contributions to the Study of Education from the Department of Education in the University of Manchester. By J. J. FINDLAY, M.A., Ph.D., Sarah Fielden Professor of Education. Demy 8vo, pp. viii. 126. 1s. 6d. net. (Publication No. 32, 1908.)

No. III. THE TEACHING OF HISTORY IN GIRLS' SCHOOLS IN NORTH AND CENTRAL GERMANY. A Report by EVA DODGE, M.A., Gilchrist Student. Demy 8vo, pp. x. 149. 1s. 6d. net (Publication No. 34, 1908.)

No. IV. THE DEPARTMENT OF EDUCATION IN THE UNIVERSITY OF MANCHESTER, 1890-1911. Demy 8vo, 146 pp., with 12 plates. 1s. 6d. net, paper; 2s. 6d. net, cloth. (Publication No. 58, 1911.)

Published in commemoration of the twenty-first anniversary of the Education Department.

No. V. OUTLINES OF EDUCATION COURSES IN MANCHESTER UNIVERSITY. Demy 8vo, pp. viii. 190. 3s. net. (Publication No. 61. 1911.

Published for Manchester University by SHERRATT & HUGHES

LECTURES.

No. VIII. ON THE LIGHT THROWN BY RECENT INVESTIGATIONS ON ELECTRICITY ON THE RELATION BETWEEN MATTER AND ETHER (Adamson Lecture). By Sir J. J. THOMSON, O.M., D.Sc., F.R.S. 6d. net.
(Lecture No. 8, 1908.)

No. IX. HOSPITALS, MEDICAL SCIENCE, AND PUBLIC HEALTH (A Lecture). By Sir CLIFFORD ALLBUTT, K.C.B., M.D. (Cantab.) 6d. net. (Lecture No. 9, 1908.)

No. X. ENGLISH POETRY AND GERMAN PHILOSOPHY IN THE AGE OF WORDSWORTH (Adamson Lecture). By A. C. BRADLEY, Litt.D. 6d net.
(Lecture No. 10, 1909.)

No. XI. THE EVOLUTION OF SURGERY (A Lecture). By WILLIAM THORBURN, F.R.C.S. 6d. net.
(Lecture No. 11, 1910.)

No. XII. LEIBNIZ AS A POLITICIAN (Adamson Lecture). By A. W. WARD, Litt.D., F.B.A. 6d. net.
(Lecture No. 12, 1911.)

Nos. XIII and XIV. OLD TOWNS AND NEW NEEDS, by PAUL WATERHOUSE, M.A., F.R.I.B.A., and THE TOWN EXTENSION PLAN, by RAYMOND UNWIN, F.R.I.B.A. (Warburton Lectures 1912). 1 volume. Illustrated. 1s. net.
(Lectures Nos. 13 and 14, 1912.)

No. XV. UNIVERSITY EDUCATION FOR WOMEN (A Lecture). By Mrs. HENRY SIDGWICK, Litt.D. 6d. net.
(Lecture No. 15, 1913.)

No. XVI. THE DISTINCTION BETWEEN MIND AND ITS OBJECTS (Adamson Lecture). By BERNARD BOSANQUET, M.A., F.B.A. Paper 1/- net, cloth 1/6 net.
(Lecture No. 16, 1913.)