III.—MR. RUSSELL'S THEORY OF THE EXTERNAL WORLD.

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IN his recently published *Analysis of Mind* Mr. Russell reiterates the neo-realistic or phenomenalist theory which he first developed in *Our Knowledge of the External World*, but now in the setting of a sensationalistic psychology and metaphysics. As I am in complete sympathy with such a psychology, and have myself tried to work out a metaphysics which finds the type of the real in sensation, my observations in the following article will be made from a near and friendly point of view. If he will allow me to say so, I admire his psychology immensely; but I have some reserves to make in regard to his theory of knowledge.

I.

Mr. Russell agrees with the neo-realists in holding that matter and mind represent two different ways of arranging a single stuff, 'experience' or 'sensation'—namely, in perspectives of physical objects and in biographies. He differs from them, first, in admitting that those perspectives which are appearances to us human beings are immediately dependent on events inside our bodies, and more or less distorted by the medium of nerves and brain through which they are perceived; whereas other neo-realists hold, I think, that the perspectives are accurate visions of things as they exist outside us. We may be sure that, if Mr. Russell makes this admission, it is because the facts have been too much for him; his natural tendency is to think that the colours we see actually exist, as they seem to, in things outside us.

What are the facts which necessitate this admission? They are, first, the time and space relations of visual appearances—the fact that they show us events as occurring, not at the moment when they do occur, but at the moment when the report of them reaches the body; the fact that they show us objects, not in their true shape and dimensions, but as

they must appear from the point of view of the body, *i.e.*, with a certain amount of perspective distortion. They are, secondly, such exceptional visual phenomena as after-images and *muscae volitantes*, which show that an appearance, due in reality wholly to causes within the body, may yet be seen outside it, just as if it existed there. These facts prove that objects and events outside the body are conditions of what is seen and heard *only indirectly*, and that the one and only immediate condition is the event in the nervous system.

This state of things, of course, gives rise to the *crux* of realistic theories, namely, to explain how a sensation that varies directly only with one physical object, the nervous system, can yet vary with another physical object sufficiently to give knowledge of it. The commonest answer is that it varies with the nervous system only as to its occurrence or non-occurrence, but that as to what it shows us, *i.e.*, the qualities and their spatial arrangement, it varies directly with the object. The trouble with this answer is that it is in conflict with the facts. The sensation does vary with the object, in all those cases where it gives correct knowledge of it, but it does not do so directly; it varies directly only with the brain-process, and with the object *in case* the brain-process varies with it. If the brain-process does not vary with the object—as, for instance, when we have taken a dose of *santonin*—the sensation will give false knowledge of it, *i.e.*, all visible objects will be tinged with yellow. And, in all cases, we may say, the sensation is better adapted to give knowledge of the brain-process than to give knowledge of the external object.

The other common answer is that you must not pay any attention to physiological facts when you are discussing such deep questions as the nature of knowledge, for, if you do, you get into difficulties with your intuitive theory of knowing and are tempted to believe in things which you cannot logically prove. Mr. Russell deserves credit for recognising the facts and seeking to square his theory with them; though I am not sure that he makes any attempt to explain *why* reality should be tied into so peculiar a knot. Yet a rounded and adequate theory of perception should explain not only how this function is related to the object, but also how it is related to the brain; it should account for both these relations of the mind to matter. Mr. Russell, I think, contents himself with the fact that perception is connected with the brain, and lets it go at that.

He agrees with the neo-realists, again, in holding that objects continue to exist when we no longer see or touch

them; indeed, he would of course not be a realist at all if he did not hold this. But other neo-realists, I think, suppose objects when not perceived to be exactly like what they are when perceived, and to retain the very colours and the very spatial arrangement which we perceive them to have. Mr. Russell cannot admit this, since the nature of what we perceive is determined at least in large part by the medium of nerves and brain through which we perceive them; and he therefore maintains that those perspectives which are not given to human beings or animals are very unlike those perspectives which are. They are still perspectives, *nota bene*, but they are very unlike.

We shall perhaps not misrepresent him if we say that, at the points of space which are reached by light from an object, there is something, of the nature of sensation, but as unlike what we see as the physical process occurring there is unlike the process occurring in the brain. Let us, for convenience, describe this something as a 'sub-sensation'. Now, I have a difficulty with the notion that a sub-sensation is a perspective. The formation of a perspective seems to be impossible without a lens, to draw the light-rays coming from each point of an object together into a corresponding point on a retina or plate, thus forming an image. In discussing sub-sensations Mr. Russell has mentioned the plate, but he has not mentioned the lens; yet, without it, *all* the points of the object (*i.e.*, on this surface of it) would send light-rays to *each* point of the plate, and all the light-rays would be confused together, and there would be no image or perspective. Indeed, when we consider that there are light-rays entering that point from all quarters of the heavens, it is evident that, apart from such a process of analysis as the lens permits, what exists there is only a synthesis of effects, and not anything like the stars from which the rays proceeded. I can hardly suppose that Mr. Russell, with his competent knowledge of physics, has overlooked this point, and yet it appears plainly inconsistent with his description of the sub-sensations as perspectives or appearances.

Since, however, the perspectives can by analysis be separated out, let us assume, for argument's sake, that they are there, and that things existing unperceived are still perspectives; and let us come to the central point of the theory, the definition of the physical object as 'a system of perspectives'. A table, on this view, is not a single thing, existing separately from all the perspectives which you might have if you examined it from different points of view, but is simply a name for the sum of these perspectives. They alone are ultimate

constituents of reality. A star, in the same way, is a name for all the perspectives of it, as seen, photographed, or not even photographed, that are disseminated throughout the universe. And I suppose that the nuclear part of an atom is not a bit of matter, but a name for the perspectives that would appear to a physicist who should invent a super-microscope sufficiently powerful to reveal it.

What first strikes one in this theory is the curious reversal of the spatial position of objects which it seems to involve—objects being apparently everywhere except in the place where we see and feel them. Thus, as you approach a table, you get a better and better perspective of it until you are quite near, and then confused perspectives, and after that there is nothing. (If the perspectives were *views* of the table, not constituents of it, it would be quite intelligible that we should get them only from points outside itself.) But we must remember that, on Mr. Russell's theory, space has no existence except as an internal character of the perspectives: the continuous 'public' space, in which common sense supposes all objects to exist, is only a mental construction. So that what I have been saying is not that there is a real place with no perspectives in it, but only that no perspectives exist which are views of the table from that place. It is not the less a paradox that light should have to proceed from a place, in which there is no constituent of the object, as a condition of the arising of a perspective of it, and yet that the place (and, I suppose, the light too, with its velocity) should have no existence apart from this or some other perspective.

But the greatest paradox is that which arises with reference to time. To fix the object at a definite instant, we must take as our example of an object an *event*. There is a game played in England, of which I regret to say I have no personal experience, called cricket, in which the principal event is, I think, the batting of a ball. Let us take this event, happening at 12 o'clock on Thursday, as our example. It breaks up, on Mr. Russell's theory, into a great number of perspectives, partly in (or at least closely connected with) the bodies of the players and spectators, and partly in the air. Now each and every one of these perspectives is 'late,' by the time required for the light-rays to pass from the batsman's bat to the eyes of the spectators or to the points in the air. They therefore all happen after 12 o'clock. The paradox, then, is that a multitude of events, all happening after 12 o'clock, should be the constituents of an event happening at 12 o'clock.

It is no use pointing out that 12 o'clock is the mathematical limit of all the perspectives, to which we are necessarily led when we consider them as a system: that does not make the event at 12 o'clock any the more real. Of course Mr. Russell may escape from the difficulty, with all honours, by holding, as before in the case of space, that time is only an internal characteristic of the perspectives, and that they are not really themselves in time: but I am not sure that he wishes to be as transcendental as this. Doubtless his theory, as thus interpreted, would be an accurate transcript of the phenomenal facts; but solipsism is that. And it would be a strange realism, surely, that maintained both that the perspectives are not in time, as they appear to be, and that the event at 12 o'clock did not really happen.

We may draw one inference from these paradoxes, and that is that the object, as physical science conceives it, is not correctly defined as the *system* of all the perspectives (even of the 'regular' ones, *i.e.*, those undistorted by the intervening medium), but is rather their mathematical limit. This is evidently true as regards its time; and its shape and size are not those of any of the perspectives, since these are all distorted, but are the shape and size of *that* object which, situated in the place where the object is seen, would produce the perspectives on the retinas and in the minds of observers, according to the laws of perspective. The physical object is the *implicate* of all the perspectives; its relation to them is somewhat like that of a Platonic idea to the particulars which constitute its exemplification. This is why the object is felt to be given, whole and entire, as it were, in each perspective.

This antithesis between the one physical object and the many perspectives exists alike, whether we regard the former as a real existence, or, with Mr. Russell, as only a mental construction. It may still be (so far as we have yet gone) that the only existences and, so to speak, metaphysical supports of the object are the appearances.

In any case, the appearances upon which an object depends for its reality cannot be the visual ones. For, if they were, what would happen to a table when you turned off the electricity and left it in the dark? The absence of light has suppressed not only the perspectives in human minds, but also those inferior perspectives upon which we relied to give continued existence to objects. And yet the table, according to common sense, exists just as truly and just as completely as when the light was on. Are we then to be realists for the sunshine and the electric light, but idealists for the dark?

But, of course, there are still the tactile appearances for us to fall back upon.

These suffice to maintain the table in existence so long as we actually touch it. But what happens if we take our hands away? What becomes of a penny when you put it in your pocket? Are there tactile appearances in immediate contact with it—for it is only there that tactile sensations are produced—and is it to these tactile sub-sensations that it owes its continued existence? Mr. Russell has not worked out his theory in detail for the case of tactile appearances, and I am obliged to proceed by surmise. But, if there are such tactile sub-sensations, then apparently the penny exists by producing tactile sub-sensations in the pocket, and the pocket in its turn by performing the like service for the penny. We have here another instance of that curious reversal of the spatial position of objects which seems to be involved in Mr. Russell's theory.

But, surely, these tactile phenomena in the penny and the pocket are *effects*, and they imply, each on its side, preceding causes in the pocket and in the penny respectively, which may also be of the nature of sub-sensations. Suppose what touches the penny is not the pocket but my hand. And let the penny be warm. Now, physically, any warmth that passes from the penny into my hand and produces sensations there is a gradual process, beginning in the penny and ending in my hand. One of two things, then. Either this process, so long as it remains in the penny, has no real existence, and the penny, when I put it back in my pocket, wholly ceases to be. Or else it pre-exists to my sensations, as their cause, and then, if we adopt Mr. Russell's metaphysical hypothesis, it will consist of sub-sensations.

It will be seen that I have accepted this hypothesis, and simply put the sub-sensations in a different place: not *beside* our own sensations, as something bearing a similar relation to the object, but *beyond* them, as that in which the being of the object consists. Or, to put it differently, I have conceived them, not as *other appearances*, but as *that which appears*.

II.

This, of course, is something that a philosopher who respects himself must not do. Sub-sensations, so conceived, are things in themselves, and things in themselves are unknowable. You cannot go beyond your own sensations, or the world as they present it to you. Moreover, if you did,

you would have *two* kinds of objects on your hands, the objects of experience and these objects of fancy, and you could not possibly explain how these two worlds of objects were joined into one.

The ultimate ground of this judgment is the assumption that sensible appearances are themselves the objects seen and touched, that they are existences, and that there is no accompanying element of belief, referring them to something other than themselves.

I shall try to show (1) that appearances are not existences, but only sensations *in so far as they are used as signs*; (2) that they are always (in cases where they give knowledge) accompanied by belief; (3) that the belief is to the effect that an object exists, having the characters which the appearance shows us. This belief is not a formulated one; it is only expressed in our acting as if the appearance showed us an object. The object is thus not inferred from the appearance, but directly known through it.

Mr. Russell accepts the phenomenalistic principle—as we may call the denial of the legitimacy of transcendence—and his theory is, in the main, the application of it to perception. Does he adhere to it strictly everywhere? The question is pertinent; for a principle which you can disregard when it becomes inconvenient is perhaps only a prejudice.

(1) Mr. Russell admits that we know the existence of other minds. Now other minds, on his view, are groups of sensations lying wholly beyond those that compose our minds. They are thus exactly in the position which I have suggested for the sub-sensations constituting physical objects. Yet he holds that they can be known. It is true that they are known, in his opinion, by inference; that he does not attribute to the inference complete logical rigour; and that he generously helps it out with a dose of irresistible belief. Now I do not understand the status of such belief in a phenomenalistic philosophy. I should argue, either that the belief was unjustified (and Mr. Russell does seem to retain it with a certain apologetic air), or that the philosophy was false.

(2) Mr. Russell's account of memory represents a complete departure from the phenomenalistic principle. If he were to follow here the pattern set by his account of perception, he would say that when we remember an event on a number of later occasions, as we often do, what is present to our minds is a series of images—or 'retrospectives,' as we might call them; that the past event is the temporal limit of these 'retrospectives,' a mere mental construction; and that to

suppose it was anything more, or ever really happened, involves the fallacy of things in themselves. Instead of this, he admits that the past experience or sensation lies wholly beyond the present memory-image, and can yet be known by means of it. What is more, he does not regard the knowledge as inferential, but as direct. But, if a present image can give knowledge of a past sensation, why cannot a present sensation give knowledge of a present or just preceding sub-sensation?

(3) Mr. Russell holds, I think I may say, that physical things are known to exist when they are no longer seen or touched. Is such knowledge really consistent with the phenomenalistic principle? He will again be obliged to eke out his logic with irresistible belief. For how is it possible that perception, which by its nature can only inform us of the existence of objects while we perceive them, should give us the slightest logical ground for inferring their existence when they are not perceived? Their reappearance is no proof; for it might be a re-creation. But if, when we see or touch them, the visual or tactile appearance is accompanied by a belief that something having those characters exists, then it is natural that its existence, which is independent of its appearing, should continue when the appearance ceases. Thus the continued existence of objects follows intelligibly from anti-phenomenalism, but not from phenomenalism.

Mr. Russell believes, as we have seen, that the perspectives which are not appearances to human beings or animals are quite unlike those which are; and I have given a reason for thinking that they are not even perspectives. If so, sub-sensations *behind* the visual appearance could hardly be more unlike it than these sub-sensations *beside* it. And they have the advantage that an act of cognition (cognition as I have above analysed it) is directly brought to bear upon them: so that we have means of knowing their existence. That the substance of things—though still of the nature of sensation—must be somewhat unlike their appearances, is evident from the fact that the visual and tactile appearances are unlike. Now we cannot suppose that objects persist in the two separate forms of perspectives and, so to say, contacts—that the same object consists, when unperceived, of these two different kinds of sub-sensations: on the contrary, there must be but one kind of sub-sensations, and the difference between visual and tactile appearances must be relative to us.

What is even more important, we cannot suppose that there are two different kinds of space existing externally,

one visual and the other tactile, but must assume that the space we see is the same space as that which we touch. We thus reaffirm what is, to my mind, the most vital tenet of common sense—the unity and continuity of space. And the same argument leads us to the unity and continuity of time. I cannot get over my surprise at Mr. Russell's singular contentment with a world that is discontinuous.

Now let us compare the metaphysics I have sketched with his metaphysics, from the point of view of economy of thought. At first sight his system might seem to be the simpler—since he assumes only appearances, while I assume appearances and things that appear. (My appearances, as I have said and shall soon explain at greater length, are only sensations in so far as they are used as signs.) But Mr. Russell assumes for each object an infinite number of perspectives, all of which are actual; and as the world contains (we may say) an infinite number of objects, that makes the total number of actual perspectives infinitely infinite. Whereas, on my theory, the only actual perspectives are those which appear to some man or animal, all the others being merely possible; and, apart from perspectives, what exists is simply the sub-sensations constituting the object. If *entia non sunt multiplicanda præter necessitatem*, as Mr. Russell insists, it seems to me that my theory has the advantage.

III.

I have now dealt pretty completely with Mr. Russell's theory so far as it concerns the relation between appearances and objects; and I turn to the relation between appearances and sensations. I believe that, as he fails to make a necessary distinction, or at least fails to conceive correctly the distinction, between appearances and the things that appear, so he fails to make a necessary distinction between appearances and the sensations which convey them; and that the whole situation becomes very much clearer when this distinction is properly made.

I say he does not make it; but, in point of fact, he has made it, though not, I think, with all the desirable clearness, in his analysis of memory. After explaining that a memory consists of an image, accompanied by a belief, to the effect that 'this occurred,' he says that of course the 'this' does not refer to the image as a present existence; and adds that the belief confers upon the image something called 'meaning'. Now I do not wish to be over-critical, and urge that

the 'meaning,' being *that which* is believed, is at least logically prior to the belief, and presumably is not conferred on the image by the belief but by some other mental function. Let it suffice that Mr. Russell has here explicitly recognised that cognition, at any rate in the case of memory, involves a category which is distinct from the image as a present mental state, without being on that account identical with the object. And what I shall now try to show is that a similar distinction requires to be made in the case of sensation.

When, for instance, an outer object acts on the body and calls forth a visual sensation, that is not the whole account of what happens: for (at least if the object is to be one distinctly perceived) we turn our attention, *i.e.*, fix our gaze, in the direction of the object, and accommodate the eye-muscles to it in such a way that it is seen as at a certain distance. Sensation and motion, in other words, converge upon the object, and the datum of vision is not simply the sensation, but the sensation as referred to that spot—it is not the sensation as an existence, but the 'meaning' which the sensation conveys. Suppose the thing I look at is a grate-fire: the datum is not the mere quality light, but something luminous situated at a certain distance. And if at the same time I hold out my hands, there are not two data, the heat and the light, but one, a hot and luminous thing, a grate-fire. There are not two spaces given, one that I see, and one in which I hold out my hands, but the one space in which the grate-fire appears at a certain point. In short, the datum is not restricted to one sense, but is the datum of all the senses that are brought to bear upon the object; and it is not in its nature really a sensible thing, but something grasped by means of sense, something understood or 'meant'.

To this it may be objected that what is meant is the object itself. What need of erecting an intermediate category between the sensation which means and the object which is meant? The answer is that we sometimes mean, in this sensible way, objects that do not exist—as in the hallucinations of the insane, or in dreaming—and that a distinction has to be made between these dream objects, which are unreal, and yet present to the mind, and the sensations conveying them, which are real. It follows that, even in normal perception, the appearance presented by the use of a sensation in order to mean an object is not the object itself; but is only its presentment to a mind.

But an opposite objection may be made. What we have called *data* of sensation may be admitted, but it may be

denied that there are any sensations, distinct from the data. Mr. Russell, on the whole, means by 'sensations' the data; he speaks of sensations and of appearances interchangeably. But surely you can, after looking at a grate-fire, turn your attention to the mere sensation of light, a thing that is a state of yourself in the same way that a pain is; or to the mere sensation of heat, which a moment ago was felt to be the heat of the fire. You can use these feelings as media of cognition, or you can consider them in themselves, and in the latter case what you consider is not a mere detached quality of the fire, for it is now recognised to be a state of yourself. In my opinion, such states constitute the ego, or at least the particular part of it that perceives. Such a state was what enabled the ego to remember. Either sensations, distinct from the appearances, must be admitted in perception, or else no present mental image can exist in memory.

Mr. Russell no longer believes in an 'act,' by which the appearance is apprehended; this is perhaps the most important change in his views announced in this book. If by 'act' he means a diaphanous awareness contemplating the appearance, or the deed of a punctiform ego that has the awareness, the change is to be applauded; for neither of these things is really observable. But things having the same functional relations reappear on the sensationalistic theory. For, if we admit that the object was perceived by the use of the sensation as a sign, then the sensation, being a state of the self, occupies the position of ego, and its use as a sign is the act of awareness. Mr. Russell holds that sensations, considered in themselves, are not cognitive. Quite so: they are cognitive only so far as they are used as signs.

The great defect of most thinking on the subject of perception is that, at the very outset, the sensations (*e.g.*, of light and heat, in the case of the grate-fire) are substituted for the true datum, the appearance—the object of introspection for the appearance in perception. Or, say, the two are confused and treated as one, and statements are made of the fused product which really apply, now to the appearance, now to the sensation. It is as if, in the case of memory, the image were treated as of course that which is present to the mind, as the primary datum, out of which by some subsequent process a memory is evolved. Whereas in truth we do not think of the image at all, but what is before our minds is the vision of the past. It is only by turning our attention away from this vision to the present state of the self which it involves that we become aware of the image.

I will illustrate this distinction by one more example. The

perspectives which play so large a part in Mr. Russell's theory are, I think, in his conception tridimensional; and there can be no question that the *datum* of vision includes three dimensions. But, when we look into the matter, we find that depth is not given in quite the same manner that length and breadth are—it is not strictly visual, it cannot be found in the visual field as a colour can, but is a feature of the datum brought before us by means of sensations in the muscles of accommodation and convergence. Thus all that is strictly visual is a coloured field in two dimensions. Mr. Russell is not right, then, when he speaks of the perspectives as sensations; they are appearances, and the sensations are the visual and muscular feelings that enable us to see them.

Nothing therefore could be further from the truth than the view that our visual sensations are a part of the object. They are in their nature impressions on us, produced by its action on our bodies, and when used as signs they enable us to see the object, but they are not even then a part of it. They are only visions of it, and as unsubstantial as visions proverbially are.

It will now be intelligible how I could maintain that appearances are not existences. The only existences are, in perception, the sub-sensations constituting the object and the sensations that enable us to perceive it; in memory, the sensation remembered and the image by means of which we remember it. The world consists entirely of sensations and sub-sensations (the former being, of course, a development out of the latter) arranged in space and time.

This distinction permits us to bring order into the perplexed question of causal relations in cognition. It is felt that the object cannot be the cause of the appearance; because the appearance is the revelation of the object, and thus bears an entirely different relation to it. And yet it is undeniable that perception is called forth by the action of the object on the body. Indeed, the eye is an organ specially evolved to produce a sensation, the parts of which have the same spatial arrangement as the parts of the object. Everything becomes clear if we consider that what the object calls forth is only the sensation, and that the appearance is due to the 'intentional' use of the sensation as a sign of the object. In the same way, a past sensation leaves behind an image, the relation between the two being causal, but the vision of the past is not the image itself but its intentional use for the past sensation.

The terms I have thus far used, 'appearance' and 'meaning,' are extrinsic designations, marking the thing referred to by

the fact that it appears to some one, or that some one means or thinks of it; but, considered in itself, this thing is an 'essence'—that is, an entity having the kind of being that anything must have in order that you may think of it. An essence is thus the entire concrete nature of a thing, in abstraction from its existence. It is easy to show that, if there is to be knowledge at all, it must be by means of essences.

I assume that the world is continuous in space and in time, that its parts are separately existent, and that it has no greater unity than this continuity. Now an animal that knows is confined in his existence to a certain place and a certain time. How then is he to know things in other places and at other times, whose existence is separate from his own—things, indeed, separated from him by the entire intervening distance or lapse of time, or both? One hypothesis is that his existence goes out to them, by a mysterious act of intuition. But this is contradicted by the fact that cognition rests on causality. Another hypothesis is that their existence obligingly comes to him—as in M. Bergson's theory that the past still exists in the present, or in Mr. Russell's theory that my visual sensations are an actual part of the star I see. In reality these views contradict the nature of space and time—since the past is what no longer exists, and yet M. Bergson says that it still exists; since the star is at a great distance from me, and yet Mr. Russell says that it is a part of me.

The utmost that cognition can do is to show me an essence, which is the essence of the object, and to lead me to act as if that essence were real, at the place or time indicated by my action.

I will not elaborate this theory, for it seems to me to follow so necessarily from what has gone before that the demonstration is now complete.

To sum up, Mr. Russell has given us a theory of the external world based on the phenomenalistic principle, and has worked it out with the greatest ingenuity. With that keen logical zest which characterises him, he has shown that a complete science of physics can be constructed simply upon the basis of appearances, without the assumption of anything that appears. But this achievement has the same value as that of a psychologist who should show that a complete science of the human mind can be constructed simply upon the basis of observations of human behaviour, without the assumption of any thoughts or feelings behind that

behaviour. Such a psychologist might believe himself to be proceeding according to the only truly scientific method, and he might draw his conclusions with exemplary logical rigour; but his conception of the object of his science would be a mistaken one, because pure phenomenalism as applied to the human body is false. I would ask Mr. Russell, and those who are tempted to agree with him, to consider whether phenomenalism as applied to other objects than the human body is not also false.