SENSE DATA AND THE PERCEPT THEORY

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During the past fifty or sixty years the traditional concept of sense-datum, which has been referred to, frequently because of epistemological or ontological considerations by many other names ("impression", "idea", "quale", "image", "sensum", "phenomenon", etc.) has been subjected to a type of phenomenological criticism which seems to threaten the foundations of a number of contemporary philosophical systems. Considering the fact that this criticism has been ably developed, and formulated by such distinguished men as William James, Edmund Husserl, John Dewey, and the leading psychologists of the Gestalt School, it is rather surprising to discover how much of the current literature on epistemological problems is entirely unaffected by it. Such lack of concern with vital phenomenological issues may be merely a reflexion of ignorance on the part of epistemologists, but it is probably better construed as a manifestation of the widespread belief that epistemological problems, if they are truly epistemological, not only can but should be stated and solved in abstraction from all issues which might be classified as "psychological".

Although this lack of interest in the phenomenology of perception seems to be quite widespread among philosophers, there is a small but respectable group of epistemologists who have taken a very different stand. They have maintained, in effect, that the traditional epistemological and ontological distinctions between sense-data and physical objects have been so completely annihilated by the criticism of James, Husserl, Dewey, the Gestalt Psychologists, and others, that most of the epistemology of the last three centuries is now entirely outdated. Some of them have asserted, as I shall show later, that it is no longer possible even to believe that there are any sense- data in the traditional meaning of the term; others have said, perhaps more conservatively, that although sense-data do indeed exist, it is no longer possible to distinguish their epistemological status from that of physical objects. Despite such important differences of opinion concerning the precise implications of the new phenomenology of perception, however, epistemologists who belong to this second school of thought are in complete agreement that these implications (whatever they may be) are of revolutionary importance for theory of knowledge.

It may be presumptuous to attempt to reconcile two schools of thought which have existed side by side for so many years and which have so long resisted the various forces which might have been expected to increase mutual understanding and appreciation. But the attempt is surely worth the effort, and there are grounds for believing that the differences are to a large extent the result of terminological confusions. On the one hand the critics of the traditional concept of sense-datum have frequently expressed themselves in an esoteric vocabulary which is either quite misleading or quite incomprehensible to the epistemologists. Many of the latter, on the other hand, firmly convinced that the traditional phenomenology of perception is completely adequate for the formulation and solution of philosophical problems, have not taken the trouble to seek for truth in statements of their critics which they correctly recognise to be either meaningless or absurd when interpreted in terms of the traditional vocabulary of epistemology.

In view of the nature of these obstacles to mutual understanding, I shall undertake two tasks in this paper. I shall attempt in the first part to state as clearly as possible the phenomenological theory of perception which has served as a basis for most of the recent criticism of the traditional concept of sensedatum. I shall refer to this theory as the "Percept Theory of Perception" to distinguish it from the traditional "Sense-datum Theory", and I shall limit my description of it to what I take to be the bare essentials that distinguish it from the Sense-datum Theory. To overcome the linguistic obstacles I shall make an effort to describe the Percept Theory in terms of the concepts and vocabularies of contemporary epistemologists who do *not* accept it, and I shall similarly illustrate the theory, when possible, by examples drawn from the writings of these same epistemologists. I shall then attempt, in the second part of this paper, to evaluate the claims of some of the philosophers who believe that the Percept Theory is of revolutionary importance for epistemology.¹

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 $^{\underline{1}}$ Much of Part I and several sections of Part II are based upon the author's doctoral dissertation, Harvard University Library.

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Roderick Firth, <u>Sense Data and the Percept Theory</u>, 1949-50.

PART I THE PHENOMENOLOGICAL BASIS OF THE PERCEPT THEORY

1. THE NATURE OF SENSE-DATA

(a) The Definition of "Sense Datum"

To understand the position of those who reject the Sense-datum Theory in favour of the Percept Theory, it is necessary to consider, at least briefly, the manner in which the term "sense- datum" is customarily defined. It must be recognised, first of all, that in order to define this term philosophers have always found it necessary to refer to a certain kind of perception or awareness. Sometimes, for example, sense-data are defined as the objects of *direct* perception or of *immediate* perception. Thus at the outset of Berkeley's *Three* Dialogues, Philonous defines what he calls "sensible things" as "those only which are immediately perceived by sense'² Broad defines sensa as objects of which we are "directly aware" in a perceptual situation".³ Price defines sensedata as those things "directly present to consciousness" in perception.⁴ And Moore defines sense-data as the objects of "direct apprehension", citing as an example of such apprehension the having of an after-image.² If, however, a philosopher wishes to speak without contradiction of *unsensed* sense-data, he may define sense-data as entities which *could be* directly or immediately observed. And if he wants to distinguish between a sense-datum and sense-field, he may define sense-data as the distinguishable *parts* of whatever could be observed in this manner. But in any case he makes some reference to a particular kind of observation or awareness, which he usually describes as "direct" or "immediate".

This does not mean, of course, that sense-data cannot be defined without using the *word* "observation" or the *word* "awareness"; in fact some philosophers are content to define sense-data as entities which are (or could be) sensed, or even as entities given to sense, and these definitions are merely verbal analyses of the term "sense-datum". The important point is simply that sense-data are defined not by an enumeration of their *kinds* but rather by reference to the manner in which we become *conscious* of them. We do not say that sense-data are patches of colour, rough things and smooth things, hot things and cold things, etc., for we could never be sure of exhausting the denotation of "sense- datum" in this way. Moreover, according to some theories, the surfaces of *physical objects* can likewise be described as "patches of colour", "rough", "smooth", etc., and the question whether or not some sense-data *are* surfaces of physical objects should not be prejudiced or confused by our definitions. Sense-data must be defined, therefore, by reference to the manner in which we become conscious of them: they are what we feel, sense, intuit, or immediately observe, or they are what is given to us, or what we are directly aware of, in perception. And once we understand the meaning of "sense-data" as so defined, we can presumably decide to some extent by empirical observation just what kinds of entities are properly called "sense-data".

(b) The Denotation of "Sense-Datum"

Nevertheless -- and here we come to a matter of the greatest importance in understanding and evaluating criticisms of the Sense-datum Theory -philosophers have always found it impossible to explain the meaning of such terms as "direct awareness" and "immediate perception" without mentioning at least a few examples of the *objects* of such awareness or perception, namely, sense-data. This fact has been noticed and emphasised by Ayer and Moore. In The Foundations of Empirical Knowledge, Ayer points out that the terms "direct awareness" and "sense-datum" are correlative and that "since each of them is being used in a special, technical sense, it is not satisfactory merely to define one in terms of the other". "In order to show how one or the other of them is to be understood", therefore, it is necessary to use some other method of definition, "such as the method of giving examples".⁶ Moore makes the same point. That special sense of the word "see", he says, "which is the visual variety of what Berkeley called 'direct perception' . . . can only be explained by giving examples of cases where 'see' is used in that sense'⁷ It follows, therefore, that in order to understand what philosophers mean by the term "sense-datum", we must supplement our analysis of whatever explicit statements they may have made on the subject, by a careful examination of the examples which they have given.

Now such an examination of the examples which contemporary philosophers have given to illustrate the meaning of the words "sense-datum" and "direct awareness", will make it quite clear that all of them who are using these words in anything like the traditional way, are in agreement on two important points. They agree, in the first place, that the sense-data directly observable by any *one* sense are quite limited in their qualities. With respect to visual perception, for example, they agree with Berkeley that it is false to say that "we immediately perceive by sight anything beside light, and colours, and figures".⁸ Thus our sense-datum when we look at a dog, according to Russell, is "a canoid patch of colour".⁹ And when we look at a penny stamp, according to Broad, our sensum is "a red patch of approximately square shape".¹⁰ And when we look at an apple, according to Lewis, what is given is a "round, ruddy \dots somewhat".¹¹ And when we look at a tomato, according to Price, our sense-datum is "a red patch of a round and somewhat bully shape".¹² Thus it seems to be agreed by all these philosophers that when we gaze, for example, from a warm room at a distant, snow-capped mountain, our awareness of whiteness may properly be described as "direct", whereas our awareness of coldness may not. One of our sense-data is a white patch shaped like a mountain peak but our sensation of temperature, if we are aware of any at all, is one of warmth rather than coldness. In colloquial English, to be sure, we might say that the mountain "looks cold" or "appears cold", just as we might say that it "looks white" or "appears white", but such language is generally supposed to be unsatisfactory for theory of knowledge because it obscures the fact that the manner in which we are conscious of whiteness in such a case is very different from the manner in which we are conscious of coldness. The distinction in question is the very one that has traditionally been drawn by the use of such pairs of words as "impression" and "idea", "sensation" and "perception", "the given" and "the conceptual", "sense-datum" and "image", etc., and philosophers who use the term "direct awareness" in the traditional way must agree, therefore that the sense-data directly observable by any one sense are quite limited in their qualities.

In the second place, all philosophers who use the term "direct awareness" in the traditional way will agree on a still more important point, viz, that we are never directly aware of physical objects. It may seem, on first thought, that philosophers who accept the theory of perception called "direct realism", or some other more or less sophisticated variation of naive realism, are exceptions to this rule. Closer examination of their positions will probably show, however, that what these philosophers actually maintain is that some visual and tactual sense-data -- though not, of course, data of the other senses -- are literally the *surfaces* of physical objects. But these "surfaces" it should be noted, are not themselves physical objects: they are *surfaces*, and differ from physical objects in that they do not occupy a volume of space. And since these direct realists admit that it is only the *surfaces* of physical objects which we can perceive directly (*i.e.*, that our sense-data are surfaces and not physical objects) we may conclude that their theory is not distinguished by any special propositions concerning the psychology of perception.

To emphasize the fact that physical objects are not accessible to direct observation, it has long been customary among philosophers and psychologists to reserve the verb "to perceive" for those cases in which the observation in question is *not* direct. According to this convention, which I shall adopt, the observing of physical objects is called "perceiving". Thus this second point of agreement among philosophers who use the correlative terms "sense-datum" and "direct awareness" in their traditional meanings, may be stated as follows: Physical objects are *perceived* but they are never the objects of *direct awareness*.

(c) Criticism of the Traditional Concept

Now in view of the necessity for defining the term "sense-datum" by the method of giving examples, it is clear that not only the truth but the very *meaningfulness* of the traditional Sense-datum Theory depends on the possibility of making the distinctions involved in these two points of agreement just formulated. Yet it is precisely these distinctions which have been denied by philosophers who accept the Percept Theory. They have sometimes developed their criticism in a rather haphazard manner, but I believe that their rejection of the Sense-datum Theory has always been based on objections to one or both of these two points of agreement.

The first objection consists in denying that there is any discoverable kind of observation or awareness which is present in every perception, and which takes as its objects *only* the kinds of things which have traditionally been offered as examples of sense-data. And this is not a trivial objection, for most advocates of the Percept Theory would go so far as to say that the experience of a man looking at a distant mountain from a warm room might comprise both whiteness and coldness, each in precisely the same manner, and neither in any other manner -- a statement which, as I have pointed out, has been either explicitly or implicitly denied by all philosophers who use the term ''sense-datum'' in its traditional meaning.

The second objection to the Sense-datum Theory is one which is not entailed by the first but which many psychologists and philosophers regard as an essential part of the Percept Theory. This objection consists in maintaining that in fact *physical objects themselves* are observed as directly as patches of colour, odours, tastes, and other so-called "sense-data". The direct and immediate experience of anyone who looks at the world about him, according to this interpretation of the Percept Theory, always consists of a number of fullbodied *physical objects*. And this, of course, is flatly to deny the distinction between perception and direct awareness which is essential to the Sense- datum Theory.

Now even the first of these two objections, if valid, is sufficient to necessitate a reformulation of most of the epistemological theories in the history of modern

philosophy. Just how radical that reformulation would have to be, is a question which I shall discuss later. But the second objection to the Sense- datum Theory has implications which are even more serious, especially for those theories which maintain that physical objects are all, in some more or less literal sense, "composed of" sense-data (or of possible sense-data). Not only Berkeley and other subjectivists, but many more modern philosophers including Bergson, James, Russell, the new realists and many of the pragmatists and logical positivists, have supported the view that physical objects are knowable just because they are reducible to objects of direct awareness. But if sense-data are defined as the objects of direct awareness, and if, as some advocates of the Percept Theory have maintained, the objects of direct awareness may be *physical* objects, then physical objects are in some sense "composed of" sense-data is either false or tautological, of course, if it is understood that physical objects are *themselves* sense-data.

In recent years, moreover, the view that physical objects can be observed as directly as the entities which have traditionally been called "sense-data", has been used by a number of philosophers as a basis for criticizing one or more of these very epistemological positions. Wild, for example, has maintained in an article entitled "The Concept of the Given in Contemporary Philosophy", that what is actually given in perception is a "world of things". He quotes with approval a statement of Lewis that "it is indeed the thick experience of the world of things . . . which constitutes the datum for philosophical reflection", that "we do not see patches of colour, but trees and houses; we hear not indescribable sounds, but voices and violins". But then he goes on to criticize Lewis for abandoning this "classic view of the given" for the more restricted one of Berkeley and other modern empiricists. Modern empiricism, Wild asserts, "abandons the aim of classic philosophy to describe the *thick* experience of the world of things *as it is given*. Instead of this, it singles out a certain portion of the given as peculiarly accessible or *given* in some special sense". ¹³

Reichenbach, in his *Experience and Prediction*, has also declared that physical objects are immediately given in perception and has used this as an argument against positivistic theories of "reduction". Reichenbach's position, however, is much more extreme than Wild's. According to Wild, those things that are called "sense-data" by modern epistemologists are *part* of what is given; what he objects to is the view that "the immediately given alone is given". According to Reichenbach, however, such sense-data (what he calls "impressions") are not given *at all*. "What I observe", he says "are things, not impressions. I see tables, and houses, and thermometers, and trees, and men, and the sun, and many other things in the sphere of crude physical objects; but I have never seen my impressions of these things".¹⁴

Many statements of this kind have appeared in philosophical literature in recent years, and in most cases they appear to be based on the Percept Theory. The central thesis of this theory now seems to be accepted by most psychologists who are interested in the phenomenology of perception, although there are, as we shall see, differences of opinion concerning the implications of the theory. The central thesis was stated by William James in his *Principles of Psychology* as concisely, I believe, as it has ever been stated. A perception, he said, "is one state of mind or nothing"; *if does not contain a sensation*.

"We certainly ought not to say what is usually said by psychologists, and treat the perception as a sum of distinct psychic entities, the present sensation namely, *plus* a lot of images from the past, all 'integrated' together in a way impossible to describe. The

perception is one state of mind or nothing."¹⁵

We may look at a physical object in such a way, James admitted, that what we apprehend approaches "sensational nudity"; thus by turning a painting upside down, or looking at it with a purely aesthetic attitude, "we lose much of its meaning, but, to compensate for the loss, we feel more freshly the value of the mere tints and shadings, and become aware of the lack of purely sensible harmony or balance that it may show".¹⁶ Nevertheless, the fact remains that sensations do not occur as *constituents* of perceptions, but at most only as complete and independent states of mind.

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² Berkeley, *Three Dialogues*, in *Works*, Oxford, 1891, Vol. I, p. 381.

³ C. D. Broad, *Scientific Thought*, p. 239, Kegan Paul, London, 1923.

⁴ H. H. Price, *Perception*, p. 3, McBride, New York, 1933.

⁵ G. E. Moore, *Philosophical Studies*, p. 173 *et seq.*, Harcourt Brace, New York, 1922, and "A Reply to My Critics", *The Philosophy of G. E. Moore*, p. 629, Northwestern U. Press, Chicago, 1942.

⁶ A. J. Ayer, The Foundations of Empirical Knowledge, p. 61, Macmillan, New York, 1940.

⁷ "A Reply to My Critics", in *Philosophy of G. E. Moore*, p. 628.

⁸ Principles, in Works, vol. I, p. 282.

⁹ Bertrand Russell, *Inquiry into Meaning and Truth*, p. 174, Norton, New York 1940. Quine has pointed out that Russell's word "canoid" means not "dog-shaped" but "basket-shaped". (Review of Russell's *Inquiry into Meaning and Truth*, $p > \frac{10}{2}$ Scientific Thought, p. 119

¹¹ C. I. Lewis, *Mind and the World-Order*, p. 119, Scribners, New York, 1929.

¹² *Perception*, p. 3. We may overlook for the moment the disagreement among these philosophers concerning the number of spatial dimensions possessed by visual sense-data.

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¹³ John Wild, Philosophy and Phenomenological Research, pp. 70-71, September, 1940.

¹⁴ Hans Reichenbach, *Experience and Prediction*, p. 164, U. of Chicago Press, Chicago, 1938. It is interesting to observe that in *The Unity of Science*, Kegan Paul, London, 1934, pp. 45-48, Carnap himself had questioned what Reichenbach calls "the positivist dogma" that impressions are given. There is a view, Carnap said, that "material things are elements of the given", and although "it is not often held to-day, it is . . . more plausible than it appears and SENSE DATA AND THE PERCEPT THEORY

deserves more detailed investigation".

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Roderick Firth, Sense Data and the Percept Theory, 1949-50.

2. THE SENSE-DATUM THEORY

This description of perceptual consciousness differs sharply, of course, from the traditional Sense-datum Theory, which is based on a supposed distinction between *two* constituents of perceptual consciousness. (1) direct awareness of a sense-datum and (2) mediated "perception" of a physical object. There are, however, two versions, of the Sense-datum Theory itself which must be distinguished in order to understand precisely what is asserted and denied by the Percept Theory: I shall refer to these two versions as the "Discursive Inference Theory" and the "Sensory Core Theory".

(a) The Discursive Inference Theory

The Discursive Inference Theory is most easily illustrated by turning to some of the great epistemological works of the British empirical school. In the Essay concerning Human Understanding, for example, Locke seems to maintain that perception is a discursive process which begins with awareness of a sensedatum and ends with the "idea" of a physical object. According to this analysis the perception of a physical object always involves a sensation and a subsequent act of judgement; every perception, therefore, includes awareness of a sensedatum as a *temporally distinct* act or state of consciousness. When we look at an alabaster globe, for example, the idea thereby imprinted on our mind is that of a flat circle. But knowing from experience that the cause of this appearance is a convex body, "judgment frames to itself the perception of a convex figure".¹⁷ Locke admits that the transiting from sense-datum to judgement "in many cases by a settled habit ... is performed so constantly and so quick that we take that for the perception of our sensation which is an idea formed by our judgment; so that the one, viz. that of sensation, serves only to excite the other and is scarce taken notice of itself".¹⁸ But he does not doubt that both the sensation and the idea of judgment always occur when we perceive a physical object and that they always occur one after the other.

Berkeley's analog as of perception in his New Theory of Vision is almost identical with Locke's. Perception is described as a process of discursive inference in which a sensation "suggests" a physical object to the observer. The mind no sooner perceives a sensation, Berkeley says, "... but it withal perceives the different idea of distance which was wont to be connected with that sensation". Thus, "having of a long time experienced certain ideas perceivable by touch . . . to have been connected with certain ideas of sight, I do, upon perceiving these ideas of sight, forthwith conclude what tangible ideas are like to follow".¹⁹ Berkeley recognises that there are times when "we find it difficult to discriminate between the immediate and mediate objects of sight.... They are, as it were, most closely twisted, blended, and incorporated together".²⁰ But he does not seem to doubt that in every act of perception there are two successive events: the occurrence of a sense-datum and the occurrence of an idea which it suggests. Like Locke, in short, he maintains the Discursive Inference Theory, although frankly admitting that the successive components of perception may sometimes be hard to distinguish.

(b) The Sensory Core Theory

Almost all contemporary epistemologists who accept the Sense-datum Theory, however, have rejected the discursive inference version in favour of the Sensory Core Theory. Whereas Locke and Berkeley found it merely difficult to distinguish a temporally distinct state of direct awareness in every perception, most contemporary psychologists and epistemologists have found it quite *impossible*. In fact many of them have concluded that perceptual consciousness is never a discursive process involving a preliminary state of direct awareness. An observer might report, to be sure, that on a certain occasion he was aware of a mere noise and then subsequently judged it to be an air-raid warning; but his report would probably be more accurate if he said that he first heard (in the sense of "perceived") a siren or "some sort of whistle" and then subsequently refined his judgement. The fact that a series of perceptions may become increasingly refined or determinate, in short, does not constitute proof of the existence of separate states of direct awareness. "If the content of perception is first given and then, in a later moment interpreted", says Lewis, "we have no consciousness of such a first state of intuition unqualified by thought, though we do observe alteration and extension of interpretation of a given content as a psychological temporal process".²¹

The many philosophers who support the Sensory Core Theory, therefore, do so because they believe that direct awareness of a sense-datum is a constituent of perceptual consciousness even though perceptual consciousness is not a discursive process. They believe that perceptual consciousness is a twofold state consisting of (1) direct awareness of a sense-datum and (2) an element of interpretation (variously described as "belief", "acceptance", "expectation", "judgment", etc.) and they believe that these two parts exist *simultaneously*. In perceiving an apple, for example, the sense-datum -- perhaps a round, red patch -- is *one part* of what is before our minds; the element of interpretation which distinguishes the perception of an apple from the perception of a tomato, is the *other*. The distinctive feature of this theory, in short, is that it regards awareness of a sense-datum as literally a *part* of perceptual consciousness, but not as a part temporally distinct.

I have called this theory of perception the "Sensory Core Theory" because it asserts that there is, in some more or less literal sense, a core of sense-data in every perception. Psychologists of the Titchenerian School are sometimes said to have believed quite literally that sense-data form a core or nucleus within every perception,²² but it is possible to accept the Sensory Core Theory, as I have defined it, without committing oneself to any such topographical analysis as Titchener's. Thus Price nowhere suggests that perceptual consciousness is strictly a nucleus of sensation surrounded by a fringe of images, but he does explicitly endorse the Sensory Core Theory. Perception involves no inference, he says, nor any discursive process whatsoever: "The two states of mind, the acquaintance with a sense datum and the perceptual consciousness [of the object] just arise together."²³ Broad also accepts the Sensory Core Theory, for with certain important qualifications concerning the nature of perceptual belief, Broad is willing to say that "in a perceptual situation we are acquainted with an objective constituent which sensuously manifests certain qualities, and that this acquaintance gives rise to and is accompanied by a belief that the constituent is part of a larger spatio-temporal whole of a specific kind".²⁴ Lewis has also endorsed the Sensory Core Theory by emphasing the fact that awareness of a sense-datum does not precede but accompanies the other constituent of perception. "Immediate awareness", he says, "is an element in knowledge rather than a state of mind occurring by itself or preceding conceptual interpretation" $\frac{25}{25}$ All these philosophers, and indeed the vast majority of contemporary epistemologists, believe that sense-data are distinguishable constituents of perception, and this, of course, is the view that is specifically rejected by James and other advocates of the Percept Theory.

It must be clearly understood that both the Percept Theory and the Sensory Core Theory are theories about the nature of ordinary *perceptual* states -- in which we are in some sense "conscious" of physical objects. Neither of these theories implies anything whatsoever concerning the existence of *pure* states of direct awareness -- states in which we are directly aware of sense-data but not conscious of physical objects in the manner characteristic of ordinary perception. Contemporary philosophers seem to disagree about the frequency and even the possibility of such non-perceptual sensory states, but their opinions on this subject seem to be independent of their conclusions concerning the validity of the Percept Theory and the Sensory Core Theory. Lewis calls such states "states of pure esthesis", and doubts whether there are any. James says that "pure sensations", which he defines as the objects of direct acquaintance, "can only be realised in the earliest days of life. They are all but impossible to adults with memories and stores of association acquired." $\frac{26}{2}$ Price believes that it is possible on rare occasions only, "in a moment of intense intellectual preoccupation", to "pass over into the state of pure sensing, where there is not even the vaguest and most inattentive acceptance of anything material at all".²⁷ Other philosophers, and many psychologists, however, seem to believe that pure states of sense-datum awareness are more easily obtainable, and have even said that they *must* be obtained for certain psychological and epistemological purposes. $\frac{28}{5}$ Since the disagreements may be partly verbal, and since the issue is in any case not strictly relevant to an analysis of ordinary perceptual consciousness, I shall henceforth speak as though it were agreed that pure states of direct awareness are obtainable, but with the understanding, that "pure" may be interpreted to mean "approximately pure".

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¹⁵ William James, *The Principles of Psychology*, Vol. II, p. 80, Holt, New York, 1896. Italics mine except for "*plus*".

¹⁶ Ibid., Vol. II, p. 81.

¹⁷ John Locke, An Essay Concerning Human Understanding, Vol. I, pp. 185-186, Oxford, 1894.

¹⁸ Ibid., p. 186.

¹⁹ New Theory of Vision, in Works, Vol. I, p. 148.

²⁰ *Ibid.*, p. 151.

²¹ Mind and the World-Order, p. 66.

²² "A typical perception", Titchener said, "resolves to begin with unto a number of sensations . . . - the part that we may conveniently call its core or nucleus". Around this nucleus, is the context which carries the meaning, "the fringe of related processes that gathers about the central group of sensations or images" (*A Beginner's Psychology*, pp. 114, 118, Macmillan, New York, 1922.)

²³ *Perception*, p. 151. Italics mine.

²⁴ C. D. Broad, *The Mind and Its Place in Nature*, p. 153, Harcourt Brace, New York, 1929. Italics mine.

²⁵ Mind and the World-Order, p. 276.

²⁶ The Principles of Psychology, Vol.II, p. 7.

²⁷ *Perception*, p. 165.

28 This point is discussed more fully in Part II of this paper.

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Roderick Firth, Sense Data and the Percept Theory, 1949-50.

3. THE PERCEPT THEORY

(a) The Unity of Perceptual Consciousness

The thesis that ordinary perception is, as James puts it, "one state of mind or nothing", has been systematically defended by advocates of the Percept Theory. They have tried to show that perceptual consciousness is not a twofold state by proving that all those things which are in any way present to consciousness in perception are present in exactly the same way. Or, to describe their method more precisely, they have tried to show that it is impossible to discover within perception the two types of consciousness which are essential not only for the truth but for the very meaningfulness of the Sense-datum Theory. The Gestalt psychologists, in particular, deserve credit for the patient and methodical manner in which they have presented evidence against this distinction; they have begun by showing how artificial it is and have ended by presenting arguments to destroy it completely.

The Sense-datum Theory has been made particularly vulnerable to such criticism by a shift of opinion among its supporters concerning a certain phenomenological question -- the question namely, whether or not we are ever directly aware of depth in visual perception. There are still a few contemporary epistemologists who seem to believe, along with Locke and Berkeley, that depth is a conceptual or interpretational element in visual perception; they regularly speak of visual sense-data as "patches" of colour and describe their shapes in the language of plane geometry. But among contemporary psychologists who are investigating perceptual phenomena, there seems to be general agreement that there is no phenomenological justification for making this traditional distinction between visual depth and the other two spatial dimensions. And Price, an epistemologist whose analysis of perceptual consciousness is extremely acute, says specifically that our sense-datum when we look at a tomato has "a certain visual depth"²⁹

From the point of view of those who defend the Percept Theory, the important fact about this shift of opinion within the older school of thought is not the manner in which the area of direct awareness is now delimited within perceptual consciousness. The important fact is that this shift of opinion represents a first step towards the recognition that in perception we are conscious of many qualities and relations which do not differ in their phenomenological status from those few which have traditionally been attributed to sense-data. Thus it is but one small step, as the Gestalt psychologists have shown, to the recognition that such qualities as simplicity, regularity, harmoniousness, clumsiness, gracefulness, and all the innumerable so-called "shape qualities" can also have the same phenomenological status as colour and shape. $\frac{30}{10}$ And it is but one small additional step from this to the recognition that the same holds true of qualities fittingly described by such adjectives as "reptilian", "feline", "ethereal", "substantial", and perhaps most of the adjectives in the dictionary. And this, of course, finally forces the admission that the qualities belonging to objects of direct awareness cannot be thought of as limited in the manner traditionally assumed, by the use of one or another particular organ of sense. For it may sometimes, indeed, be quite correct to say that the experience of a man looking at a distant mountain from a warm room comprises both whiteness and coldness, each in precisely the same manner, and neither in any other manner.

John Dewey has discussed some of these phenomenological facts in his *Art as Experience* and has pointed out that they do not clash in any way with our knowledge of physiology. The organic processes which condition perceptual experience are not limited to processes in a particular sense organ; the eye or the ear, as Dewey puts it, is "only the channel *through* which the total response takes place". Hence it should not be very surprising to discover that the so-called "visual qualities" do not always occupy a unique or central place in visual perception. "When we perceive, by means of the eyes as causal aids, the liquidity of water, the coldness of ice, the solidity of rocks, the bareness of trees in winter, it is certain that other qualities than those of the eye are conspicuous and controlling in perception. And it is as certain as anything can be that optical qualities do not stand by themselves with tactual and emotive qualities clinging to their skirts."³¹

Dewey's primary objective in the discussion from which these sentences are quoted is to refute what I have called the *first* point of agreement among philosophers and psychologists who accept the Sense-datum Theory; his primary objective, in other words, is to show that we cannot find within ordinary perceptual consciousness a limited set of qualities having the unique phenomenological status which has been thought to distinguish the objects of direct awareness. But Dewey's description of perceptual experience also contains an implicit criticism of the *second* point of agreement among those who accept the Sense-datum Theory, and thus serves as an introduction to the final, and perhaps most important step, in the development of the Percept Theory.

(b) the Consciousness of Ostensible Physical Objects

The final step in the development of the Percept Theory consists in showing that the qualities of which we are conscious in perception are almost always presented to us, in some obvious sense, as the qualities of physical objects.³² We are not conscious of liquidity, coldness, and solidity, but of the liquidity of water, the coldness of ice, and the solidity of rocks. Dewey has pointed out this phenomenological fact more explicitly in a number of other places by insisting that ordinary perceptual experience is the experience of physical nature. In Experience and Nature, for example, he says: "It is not experience which is experienced, but nature -- stones, plants, animals, diseases, health, temperature, electricity, and so on. Things interacting in certain ways are experience: they are what is experienced."³³ Other philosophers and psychologists have preferred to express this fact in somewhat different terms; it is quite common, for example, to find them asserting that what is presented in perception is a "substantial whole", or a "whole physical object". Whatever the manner of expression, however, the phenomenological fact is simply that in perception we are *conscious*, in one sense of the word, of physical objects, without at the same time being conscious, in another sense of the word, of the entities which have traditionally been called "sense-data". Perception, in short, is not a twofold state; and since we are conscious of physical objects we cannot possibly be conscious of sense-data in the distinctive manner required by the Sense-datum Theory.

It must not be inferred, however, that James and others who deny that perception is a twofold state would not admit that there are certain types of disposition of the perceiving organism, or possibly even certain types of conscious experience, which invariably accompany our perceptual consciousness of physical objects. Such possibilities must be considered in determining the epistemological implications of the Percept Theory and will be briefly discussed in Part II of this paper, but they are irrelevant to the central thesis of the Percept Theory. For the duality denied by those who accept this theory is a duality of what we may perhaps call the *sensuous* aspect of consciousness at the moment of ordinary perception. At that moment, they maintain, we are conscious in a certain manner of a physical object which is somehow presented to us completely clothed in sensuous qualities. These qualities are presented as qualities of the object; indeed they are in no sense abstracted or otherwise distinguished from the presented object; and they are not limited to the qualities which have traditionally been mentioned in descriptions of sense-data. And finally, according to those who accept the Percept Theory, the sensuously clothed object is the *only* sensuous content of consciousness during ordinary perception. Sense-data, of course, if they exist as the objects of *pure* states of direct awareness, may properly be described as having sensuous qualities; but sense-data do not occur as constituents of perceptual consciousness.

There is, of course, considerable disagreement about the proper way to express this conclusion. The traditional Sense-datum Theory is based on a supposed distinction between the direct awareness of sense-data and the mediated consciousness or "perception" of physical objects; those who reject this distinction, therefore, are rejecting not only the traditional concept of sensedatum but also the theory that ordinary perception is *mediated* in some manner or other,³⁴ by the presence of sense-data. Since both aspects of the traditional distinction must stand or fall together, there is no unambiguous way in which the traditional terminology can be used to express the positive conclusions of those who accept the Percept Theory. On the one hand it is probably misleading for advocates of the Percept Theory to assert bluntly, as they frequently do, that in perception we are directly aware of physical objects. For in addition to suggesting the very distinction which the Percept Theory rejects, the word "directly", when used in such a context, may have certain epistemological connotations which are not relevant to the phenomenological issue. $\frac{35}{2}$ On the other hand it would create an unnecessary paradox if advocates of the Percept Theory were to assert that in ordinary perceptual experience we are not directly aware of *anything*; and this too might have confusing epistemological connotations. Consequently, even though either of these two modes of expression would be adequate if it were carefully explained, I shall avoid both of them in the following pages.

William James sometimes used the word "percept" to refer to the content of consciousness during perception; it is this fact which has made the name "Percept Theory" seem to me appropriate for the particular theory of perceptual consciousness which he himself supported. If we were to adapt this terminology to satisfy our present need we could say that according to the Percept Theory we are presented in ordinary perception not with a sense-datum but with "object-percept" only, and we could speak more specifically, when necessary, of "cat-percepts", "mountain percepts", etc.

For the problems to be discussed in the following pages, however, the terminology used by Price is even more convenient. Price uses the term "ostensible material object" to refer to that part of the content of perceptual consciousness which is not a sense-datum; it is thus possible to express the fact that in perception we are conscious in a certain manner of a physical object, by saying that we are presented with an ostensible physical object. Price himself does not accept the Percept Theory, but those who do may describe their position by saying that in ordinary perception we are presented with ostensible physical objects but not with sense-data.³⁶ The following passage from Price, as a matter of fact, provides a fitting conclusion for this section of the discussion, for it aptly describes the unmediated character of perceptual consciousness to

which supporters of the Percept Theory have tried to draw attention. That Price could write a passage like this and still accept the Sense-datum Theory, is a mystery of the kind which the next section is intended to solve

"Somehow it is the *whole* thing, and not just a jejune extract from it, which is before the mind from the first. From the first it is the complete material thing, with back, sides, and insides as well as front, that we 'accept', that 'ostends itself' to us, and nothing less; a thing, too, persistng through time both before and after . . . and possessed of various causal characteristics. . . . Already in this single act, even in a momentary glance, we take all these elements of the object to be there, all of them, as Mr. Joseph has said in another connection, we must not suppose that because there is only a little definite before the mind, therefore there is only a definite little."³⁷

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Notes

²⁹ Perception, p. 3

³⁰ See W. Köhler, *Gestalt Psychology*, ch. vi, Liveright, New York, 1929.

³¹ John Dewey, Art as Experience, pp. 122-124, Minton Balch, New York, 1934.

³² The word "physical" is not used here, of course, in any technical sense which would limit physical objects to entities like electrons and protons which constitute the special subject-matter of physics.

³³ P. 42, W. W. Norton, N.Y., 1935.

³⁴ The nature of this mediation is discussed in Part II of this paper.

³⁵ This matter is discussed at length in Part II of this paper.

³⁶ This terminology is not intended to commit the Percept Theory to an "actobject" analysis of sense-experience. See Author's Note at the end of this essay. [Footnote revised in 1964. Ed.]

³⁷ Perception, pp. 151-152.

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Roderick Firth, <u>Sense Data and the Percept Theory</u>, 1949-50.

4. METHODOLOGICAL PROBLEMS

To most philosophers and psychologists who have rejected the Sense-datum Theory as incompatible with the real nature of perceptual consciousness, it is probably a matter for endless amazement that there is still so much resistance to their position. Contemporary epistemologists, in particular, seem to be quite unaffected by criticism of the Sense-datum Theory, although the extent of such criticism in the last fifty years has been considerable. But what makes this resistance especially difficult to understand is the fact that it has not usually taken the form of reasoned argument, but complete indifference.

If this indifference is not to be attributed to ignorance or perversity, it is likely to suggest that there are certain fallacies or prejudices which prevent many people, and perhaps epistemologists in particular, from examining perceptual consciousness with complete objectivity. Köhler says that the Sense-datum Theory (which he calls "the meaning theory") "seems to correspond to a very natural tendency in human thinking",³⁸ and indeed some some such explanation seems unavoidable to those who believe, as I do, that the Sensedatum Theory is simply not compatible with the empirical facts. In the pages immediately following, therefore, I shall discuss a number of possible errors which might account, at least in part, for the popularity of the Sense-datum Theory. Such a procedure seems likely to be more fruitful, considering the history of this issue, than further efforts to review the phenomenological evidence for the Percept Theory or to seek for more felicitous ways of describing perceptual consciousness.

(a) The Physiological Fallacy

It has been frequently suggested, first of all, that some of the philosophers and psychologists who accept the Sense datum Theory have committed what is sometimes called "the physiological fallacy".³⁹ The physiological fallacy consists in assuming, *a priori*, some particular type of relationship between physiological facts and phenomenological facts. It is empirically demonstrable, for example, that the nature of particular states of perceptual consciousness is determined partly by the direct physiological effects of the stimulus, and partly by the past experience and present interests of the perceiver. But to conclude from these facts alone that there must be at least two constituents in every state of perceptual consciousness, one of them (the sense-datum) corresponding in some simple fashion to the direct physiological effects of the stimulus, would be to commit to the physiological fallacy and obscure the actual character of perceptual consciousness.

In reply to this fallacious form of argument, if made explicit, it would be sufficient to point out that the only way to decide a question of this sort is by direct inspection of perceptual consciousness itself. But Dewey and others have also shown that so far as our present knowledge of physiology is concerned, the Sense-datum Theory is not even favoured by considerations of elegance.⁴⁰

Some philosophers have complicated the matter by actually defining a sensedatum as that constituent of a perception which is caused by the physical stimulus. Russell does this in his *Philosophy* although elsewhere he accepts the conventional definition in terms of direct awareness. A sense-datum, he says in *Philosophy*, is "the core, in a perception, which is solely due to the stimulus and the sense-organ, not to past experience."⁴¹ But even if we were to accept this definition, it would still remain an open question whether there *are* sense-data as so defined, and it is still true that this can be decided only by direct irispection of perceptual consciousness.

(b) The Sense-l)atum and the Ostensible Object

It seems quite unlikely, however, that the popularity of the Sense-datum Theory among contemporary epistemologists can be accounted for as the result of the physiological fallacy. Most epistemologists are entirely too sophisticated to commit such a fallacy, and many of them assert specifically that the Sensedatum Theory is supported by direct inspection of perceptual consciousness. It is possible, however, that some of them have committed another error by failing to distinguish clearly between a sense-datum and the *front surface* of an ostensible physical object. This possibility deserves careful consideration, for it is not uncommon to find supporters of the Sense-datum Theory, especially in conversation about this subject, attempting to localise visual sense-data on the surfaces of ostensible objects, and they do this even though they have previously maintained that sense-data may have qualities which are quite different from the surface qualities of the ostensible physical objects which accompany them.

Now if it should turn out that what a philosopher *does* mean by a visual sensedatum is nothing more nor less than the front surface of an ostensible physical object, it would follow by definition that whenever we are visually conscious of a physical object we are conscious of a sense-datum; but in that case it would no longer be correct to say that sense-data are the objects of *direct awareness*. Direct awareness is supposed to be a distinctive mode of consciousness which, as Price puts it, is "utterly different" from our consciousness of physical objects; it "arises together with" our consciousness of physical objects and is not merely a part or aspect of it. The front surface of an ostensible physical object does, to be sure, have a special status which enables us to distinguish it as the front surface rather than the back; it is characteristic of our perceptual consciousness that it involves, so to speak, an intrinsic "point of view". $\frac{42}{2}$ But the Sense-datum Theory could no longer be distinguished from the Percept Theory, of course, if the assertion that perceptual consciousness includes direct awareness of a sense-datum were interpreted to mean merely that perceptual consciousness involves an intrinsic point of view.

Almost all the philosophers who accept the Sense-datum Theory, moreover, have made statements which are incompatible with the proposition that visual sense-data are the front surfaces of ostensible physical objects. Thus to clarify the relationship between sense-data and the interpretational or conceptual element in perception, they say that the latter may vary with our past experience and present attitudes even though the former remain unchanged, and that the former may change even though the latter do not vary at all. $\frac{43}{43}$ As naive children, for example, our awareness of a purple sense-datum when we look at a distant mountain might be accompanied by the perception of a purple mountain, whereas an exactly similar sense-datum, occurring at a later age, might be accompanied by the perception of a green mountain. And for similar reasons the sense-data produced by tomatoes in a dark cellar might vary from light grey to dark grey with changes in the illumination, although the ostensible tomatoes might at the same time remain uniformly red. According to those who accept the Sense-datum Theory, in short, the qualities of sense-data and the qualities of ostensible physical objects can vary independently to some extent, and this implies, of course, that sense-data cannot be identified with the front surfaces of ostensible objects.

If the Sense-datum Theory were true, indeed, it would rarely it ever, he correct to apply the same determinate adjectives both to an ostensible physical object and to the sense-datum which is presented along with it. Thus we should have to maintain that whenever we are perceiving a physical object with a surface which is ostensibly red and circular, we are also directly aware of a sensedatum which is probably elliptical in shape and which may very well be orange or purple or grey in color. We should have to maintain, in short, that even when we look at a single physical object we are almost always conscious, though in different ways, of two colours and two shapes. To those who support the Percept Theory it seems so clear that ordinary perception is not characterised by any such duality, that they may perhaps be excused for suspecting that their opponents, when they actually *examine* a state of perceptual consciousness, contradict their own theory by identifying visual sense-data and the front surfaces of ostensible physical objects.

If this fallacy is committed by any of the philosophers and psychologists who accept the Sense-datum Theory, it is probably committed chiefly by those whose conception of the perceptual consciousness of physical objects is over intellectualised. Such philosophers and psychologists are likely to conceive of perceptual consciousness as a twofold state consisting of direct awareness of a sense-datum and a *purely* intellectual or *purely* conceptual "interpretation" of this sense-datum. Our consciousness of a particular physical object in perception is consequently thought of as nothing more than a state of *belief that there exists* a physical object of a particular kind, and the special *sensuous* character of this mode of consciousness is completely overlooked.

It is easy to see that such a conception could blind one to the very phenomenological facts which would correct it, and lead to the fallacy of identifying sense-data and the front surfaces of ostensible physical objects. For even if we should decide that it is appropriate to describe our perceptual consciousness of physical objects as a kind of belief,⁴⁴ it is surely as very special kind of belief -- the kind, namely, that is characterised by the presence of an ostensible physical object. But an ostensible physical object, as supporters of the Percept Theory have tried to point out, is presented, or appears, or ''ostends itself'' fully clothed in sensuous qualities. If, therefore, a philosopher or psychologist were to suppose, because he accepted *a priori* an over-intellectualised conception of perceptual consciousness, that *only* the traditional objects of direct awareness can have sensuous qualities, he could very easily fall into the error of believing that the front surface of an ostensible physical object is a sense-datum.

It is difficult to believe, however, that this error could explain the acceptance of the Sense-datum Theory by those philosophers and psychologists who show quite clearly that they are fully aware of the sensuous character of ostensible physical objects. Price, for example, has made a characteristically acute analysis of what he calls the "pseudo-intuitive" features of our perceptual consciousness of physical objects.⁴⁵ He criticizes those whom he calls "Rational Idealists" for their over-intellectualised conception of this mode of consciousness, and points out that it is actually very similar to direct awareness of sense-data. He quots with approval Husserl's statement that the object of perception is "leibhaft gegeben", and adds that it "just comes, along with the sense-datum: it just dawns upon us, of itself".⁴⁶ In fact Price's only reason for refusing to say that our consciousness of physical objects.⁴⁷

There is little doubt, therefore, that Price is fully aware of the sensuous character of ostensible physical objects. He seems to recognise that a ripe tomato hanging on a vine in the sun is "leibhaft gegeben" with all its sensuous qualities of redness, and smoothness, and warmth, and sweetness. Yet he would also maintain that when we look at the tomato we are ordinarily presented with *another* entity, a sense-datum, which may have qualities quite unlike those of the ostensible tomato. For those who support the Percept Theory it is difficult to see how there could be *room*, so to speak, for such conflicting sets of sensuous qualities in one and the same state of perceptual consciousness, and even Price says that in ordinary perception we "fail to distinguish" between the sense-datum and the ostensible object.⁴⁸ He does not seem to doubt, nevertheless, that there is a sense-datum in every perception, and a sense-datum which can be distinguished from the front surface of an ostensible physical object.

(c) Explicit and Implicit Consciousness

This brings us finally to what is probably the most interesting explanation for the resistance which contemporary epistemologists have shown to the Percept Theory. For although it seems unlikely that careful phenomenologists like Price have committed either of the two fallacies so far discussed, Price's comment that in ordinary perception we "fail to distinguish" between the sense-datum and the ostensible physical object, does suggest that he, and perhaps others, are accepting a methodological presupposition which supporters of the Percept Theory would wish to reject. Our state of mind in perception, Price says, "is, as it were, a dreamy half-awake state, in which we are unaware of a difference between the sense-datum and the ostensible physical object".⁴⁹ And this naturally raises the question: How can anyone claim to *know* this particular fact about perceptual consciousness and at the same time believe that there is evidence to support the Sense-datum Theory? If it be admitted, in other words, that in perception we are *not aware* of any difference between the sense-datum and the ostensible physical object, what possible evidence could there be that both of them *are present* to consciousness during perception?⁵⁰

The importance of this question is also indicated by certain passages in Broad's discussion of perceptual consciousness in *Scientific Thought*.⁵¹ To illustrate what I have called "the Sensory Core Theory", Broad draws an analogy between sense-data and printed words. In reading a familiar language, he says, "what interests us as a rule is the meaning of the printed words, not the peculiarities of the print. We do not explicitly notice the latter unless there be something markedly wrong with it, such as a letter upside down... In exactly the same way", he explains, "we are not as a rule interested in sensa". We ordinarily notice them only when they are queer, as when we see double, though "even in a normal case, we generally can detect the properties of sensa . . . provided that we make a special effort of attention". These statements raise the same methodological question: If it be admitted that in perception we ordinarily do not "explicitly notice" sensa, what possible evidence could there be that we are actually conscious of them?

Now it is quite possible that statements like these just quoted from Broad and Price are the results of careful phenomenology; it is possible that these philosophers can actually discover within a single perception the two levels of consciousness suggested by their statements -- a level of "explicit awareness" and a level of "implicit awareness". In that case the evidence for the fact that we are implicitly aware of sense-data in perception can be obtained by *direct inspection* of perceptual consciousness, in the very same manner, indeed, in which we would proceed to obtain evidence for the fact that we do *not* "explicitly notice" such sense-data or that we "fail to distinguish" them. And in that case it might be argued that the difference between the Sense-datum Theory and the Percept Theory is little more than a difference about the meaning of such expressions as "present to consciousness"; for perhaps in the limited sense designated by the word "explicitly", most of the philosophers and psychologists who accept the Sense-datum Theory would be quite willing to admit that sense-data are not ordinarily present to consciousness during perception.

(d) Perceptual Reduction

Most supporters of the Percept Theory, however, have made it quite clear that their opposition to the Sense-datum Theory could not be mitigated by rephrasing the issue in terms of any such verbal distinction. They have said that direct inspection of perceptual consciousness convinces them that sensedata as traditionally described are not present *at all*, thus implying that perceptual consciousness simply does not manifest the levels suggested by the use of such expressions as "explicitly notice". There are, to be sure, various interpretations of "explicit" and "implicit" which would make these words applicable to the content of perceptual consciousness; indeed it would be surprising if there were not in view of the complexity of perceptual phenomena. But those who support the Percept Theory seem to be unanimous in their belief that direct inspection does not reveal the presence of *sense-data*, either explicitly or implicitly, within the ordinary perceptual consciousness.

It is understandable therefore, that supporters of the Percept Theory should look elsewhere for an explanation of the fact that some philosophers and psychologists still cling to the Sense-datum Theory even though they seem to be admitting that we are not actually aware of sense-data at the moment of perception. And the explanation which naturally suggests itself is that these philosophers and psychologists would in fact admit the truth of the Percept Theory if they limited themselves to *direct inspection* of perceptual consciousness, but that they also employ *another* method, wittingly or unwittingly, in which they have greater faith.

This possibility is easily illustrated by referring to the statements I have quoted from Broad. Broad asserts, as an empirical fact, that in perception we do not explicitly notice our sense-data, just as in reading a book we do not explicitly notice the print. If this is an empirical fact, however, then Broad presumably discovered it by direct inspection of perceptual consciousness; he inspected his consciousness while reading and found that he was not explicitly noticing the print, and he inspected his consciousness during perception and found that he was not explicitly noticing sense-data. Nevertheless, Broad explains, we *can* detect the properties of the printed words by attending to the print "as in proof-reading", and we can similarly detect the properties of sensa by making "a special effort of attention".

Now it is clear that the special act of "attending" by means of which we explicitly notice the print and the sense-data must be at least somewhat different from the act of direct inspection which, Broad admits, does not reveal the presence to consciousness of either the print or the sense-data. Any other conclusion would be self-contradictory, for if the act of "attending" were *identical* with this act of direct inspection, it would obviously be impossible for any one to discover that we do *not* explicitly notice either the print or the sensedata. And this suggests the possibility that some of the opposition to the Percept Theory can be explained on methodological grounds. It suggests that some of the contemporary philosophers and psychologists who accept the Sense-datum Theory may believe that there is a better method of discovering phenomenological facts than the method of examining the phenomenon directly. A good deal has been written on this subject, but it is still interesting and important, and deserves further attention.

The method of settling phenomenological questions which has sometimes been regarded as better than the method of direct inspection, involves a unique operation which I shall call "perceptual reduction". This operation is familiar to everyone who has participated in discussions of the traditional problems of perception, because in such a context there is a certain use of the expression "really see" such that what we really see can be determined only by performing this operation, and not by direct inspection alone. Thus if I were asked simply what I *see* right now, I should probably reply: "A sheet of white paper"; but if I were asked what I *really* see, especially in the context of psychological or epistemological discussion, I should probably answer; "A patch of pale yellow". In the latter case I should assume that I was being asked to perform the operation of perceptual reduction *first* and *then* to describe my state of consciousness as revealed by direct inspection. And since this paper happens at the moment to be illuminated by artificial light, the answers to the two questions would, for physical and physiological reasons, be different.

The operation of perceptual reduction has two rather distinct effects when it is performed on a state of perceptual consciousness. The first of these two effects is to make the ostensible physical object progressively less and less determinate. If I were to perform the operation while looking at a tomato, for example, the ostensible tomato which is present to consciousness would, so to speak, become less specifically distinguished as an individual. Starting as a tomato with worm holes it might be reduced to a tomato with "some sort of holes" in it, and then to a tomato with spots on its surface, and so on. It might eventually become "some sort of globular object", or even just "some sort of physical thing".

But when this last stage is reached, or perhaps even before, there is a second effect: a radical cue takes place and a *new* object of consciousness appears and grows more and more determinate. Our state of consciousness is approaching a pure state of sense-datum awareness, and this new object is therefore not an ostensible physical object at all but the kind of thing which is corriectly called a sense-datum; and it is not until this second stage in the process has begun that we are able to describe what we "really see" and to report, for example, that we are presented with "a red patch of a round and somewhat bulgy shape". In fact the properties which we attribute to this new object of consciousness are usually incompatible with those which characterised the original ostensible physical object.

This description of the effects of the operation of perceptual reduction is undoubtedly over-simplified. Some psychologists and philosophers would probably insist that in the final stage, when we become aware of a sense-datum, we are also conscious of an extremely indeterminate physical object -- that there are, in other words, no pure states of direct awareness. Others might maintain that the process by which the final stage is reached varies considerably from one occasion to another. But so far as the present issue is concerned, the only relevant fact is that the operation of perceptual reduction *destroys* the state of perceptual consciousness on which it is performed; it is an operation, to be precise, which has the effect of *replacing* a state of perceptual consciousness by a state in which we are aware of sense-data.

It would be difficult to exaggerate the importance of the reduction throughout the history of modern philosophy and modern psychology. This operation reached the height of its importance in the psychological methods of Wund, Titchener, and their followers, who declared it to be the very essence of the experimental technique of introspective psychology. They interpreted it, however, as a procedure for *cleansing* perceptual consciousness of its nonsensory constituents. They believed, as Köhler says in criticizing them, that "as psychologists our task is to separate . . . 'meanings' from the seen material *as such*, the manifold of simple sensations". They admitted that "it may be a difficult task to effect this separation and to behold the net sensations which are the actual data"; but the ability to do so, they maintained, "is precisely the special talent which transforms the layman into a psychologist". 52

Now whether or not it is misleading to say that the operation of perceptual reduction is a technique for "cleansing" perceptual consciousness, it is quite certain, I believe, that this operation differs from direct inspection. And it is also quite certain that it destroys the state of perceptual consciousness on which it is performed, for when we reach the final stage in which we are aware of a sense-datum, we are no longer presented with the fairly determinate ostensible physical object which originally existed. If, therefore, any of the philosophers and psychologists who accept the Sense-datum Theory have simply failed to notice the difference between direct inspection and perceptual reduction, it is fair to say that they have committed a very serious fallacy, and one which might explain the resistance which they offered to the Percept Theory. This fallacy is one particular form of what James called the "psychological fallacy *par excellence*" -- the fallacy of reading into a state of consciousness the characteristics of something(in this case *another* state of consciousness) which is externally related to it.⁵³

(e) The Exposure Sypothesis

But perhaps there are some philosophers and psychologists who believe that perceptual reduction is a legitimate method for discovering the content of perceptual consciousness, and who are nevertheless fully aware of the difference between this method and the method of direct inspection. If they recognise this difference and the fact that the two methods yield incompatible conclusions about the nature of perceptual consciousness, and if they sincerely believe that perceptual reduction is the more trustworthy method, then it is perhaps not accurate to say that they have committed a *fallacy*. They are, however, accepting a debatable hypothesis which ought to be carefully formulated and examined. I shall call this hypothesis the ''Exposure Hypothesis''.

According to the Exposure Hypothesis, the operation of perceptual reduction does not produce a state of consciousness which is simply *other than* the original state of perception on which it is performed. It produces, on the contrary, a state of direct awareness which was contained in the original perception. To put the case very simply, indeed, we might say that according to this hypothesis the only difference between the two states is that the sense-datum of which we are aware is obscured in the earlier one by the presence of an ostensible physical object. The method of perceptual reduction, therefore, is a method designed to expose the sense-data which are presumed to be contained in ordinary states of perceptual consciousness. This exposure is achieved, according to the hypothesis, by destroying the consciousness of physical objects which accompanies and obscures the sense-data, so that the bare sense-data themselves become accessible to subsequent acts of direct inspection.

Now to grasp the full import of the Exposure Hypothesis, it should be recognised that it grants a unique and privileged epistemological status to the particular attitude (the "reducing attitude") which we adopt in order to initiate the process of perceptual reduction. This attitude of "doubt" or "questioning" is, to be sure, an attitude of special importance to the psychologist and perhaps to the artist, but it is, on the other hand, only one among a seemingly infinite number of attitudes which we can adopt in the presence of an ostensible physical object. There are mercenary attitudes and pedagogical attitudes and martial attitudes and so on indefinitely, and each one is capable of affecting the content of perceptual consciousness; thus even though the visual stimuli are similar, for example, the qualities of a tomato as seen by a hungry child will surely be very different from the qualities of a tomato as seen by someone looking for a missile to throw at a candidate for political office. And sometimes, moreover, such changes in attitude are consciously solicited -- as for example when we revisit some favourite childhood scene and try to recapture something of its former meaning. Yet it would scarcely occur to anyone to suggest that by forcing such changes of attitude we can find, in the resulting state of perceptual consciousness, the *real but previously unobservable* content of the original state. The two states would be regarded as related to one another, to be sure, by the fact that they are caused by the same external stimulus, but the one would scarcely be takers to be a *constituent* of the other.

Those who accept the Exposure Hypothesis, therefore, have singled out one particular attitude from among the multitude which we can adopt in the presence of an ostensible physical object, and have attributed to this attitude the rare epistemological power of exposing otherwise unobservable characteristics of perceptual consciousness. And there does not appear to be the slightest empirical justification for this. If the truth of the Sense-datum Theory were assumed *a priori*, and it were *also* assumed that there is *some* procedure for discovering the sense-data within ordinary perceptual consciousness, then, indeed, it might be inferred that the reducing attitude *must* have the unique epistemological power attributed to it by the Exposure Hypothesis. But in that case, of course, the Exposure Hypothesis could not in turn be used as part of an argument to support the Sense-datum Theory. Whatever the *empirically* distinguishable features of the reducing attitude may be, they do not indicate that the operation of perceptual reduction is anything more than one method among many of substituting one state of consciousness for another.

The only argument for the Exposure Hypothesis, so far as I know, which might have some appeal to an empiricist, is the argument that to deny this hypothesis is to cast suspicion on all intellectual analysis. It is possible that Price is employing this argument, for example, when he criticizes the view " that just as dissection destroys a living organism, so intellectual analysis destroys that which is analysed, and substitutes something else in its place". According if to this view, he continues, "since all thought may be regarded as analysis, we are forbidden to think"⁵⁴ Lewis suggests the same argument when he writes: "The given is *in*, not before experience. But the condemnation of abstrction is the condemnation of thought itself. Nothing that thought can ever comprise is other than some abstraction which cannot exist in isolation."⁵⁵

To infer, however, that the rejection of the Exposure Hypothesis casts suspicion on intellectual analysis, or that it implicitly denies the possibility of thought, is to overlook the very distinction which criticism of the Exposure Theory is intended to clarify -- the distinction, namely, between introspective reduction and direct inspection. For there is, of course, no inconsistency at all in asserting that introspective reduction is merely a process of substitution, and at the same time maintaining that there is *another* process -- *i.e.*, direct inspection -- which is quite compatible with genuine intellectual analysis and which does *not* destroy the very thing which is to be analysed. "In intellectual analysis", says Price, "I do not *do* anything to the object before me. I *find* relations with it. I *discover* that it possesses various characteristics But those relations and characteristics were there before I discovered them. The only change that has occurred is a change in myself. I was ignorant and now I know."⁵⁶ And surely there is no reason why one who rejects the Exposure Hypothesis must deny the possibility of such a process as this.

As a matter of fact the supporters of the Percept Theory have been especially interested in *describing* the nature of perceptual consciousness, and such description requires analytical thought. The very assertion that perceptual consciousness is not a twofold state is itself the result of a kind of analytical process, and so is the more specific assertion that I am presented with an ostensible tomato clothed with certain sensuous qualities. But these assertions describe perceptual consciousness itself, as revealed by direct inspection, and not the substitute provided by the operation of perceptual reduction.

Those who accept the Sense-datum Theory have made similar distinctions in explaining their own position. They have pointed out that we cannot learn more about a particular sense-datum by changing the physical conditions of observation, for we merely frustrate ourselves if we try by such means to "get a better look" at a sense-datum. By moving our bodies, by putting on spectacles, and by turning on the light, we may indeed learn more about the stimulusobject, but if we perform these operations in order to dissect our sense-data, then indeed "we murder to dissect". And those who reject the Exposure Hypothesis are arguing analogously that we frustrate ourselves if we perform the operation of perceptual reduction in order to describe perceptual consciousness. In neither case does the argument imply that analysis is impossible.

But if the rejection of the Exposure Hypothesis does not imply the impossibility of analysis, it is difficult to see what argument could possibly be advanced to support it. Yet the hypothesis has apparently been accepted by many philosophers and psychologists in the past, and the history of the conflict between the Sense- datum Theory and the Percept Theory suggests that it will continue to be accepted for some time to come. There may, of course, be unexpressed arguments which have not been uncovered; and it is even possible that the three errors discussed in this section cannot account for more than a small part of what Köhler calls the "natural tendency" to favour the Sensedatum Theory. But if this is the case then those who support the Percept Theory will naturally hope that their opponents may soon provide them with a full explanation of the phenomenological or epistemological basis of the Sensedatum Theory.

The next and final section of this paper is devoted to an examination of some of the epistemological implications of the Percept Theory. For many philosophers it is only the possible implications of this Theory which can give importance to the phenomenological issues which we have been discussing; and it is not impossible that the revolutionary nature of some of the supposed implications of the Percept Theory can account in part for the resistance which it has encountered among epistemologists.

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³⁸ Gestalt Psychology, p. 83.

³⁹ The Stimulus-error and the Constancy Hypothesis are particular forms of this fallacy. See Köhler, *Gestalt Psychology*, pp. 90-97.

⁴⁰ "See *e.g.*, *Art as Experience*, pp. 123-126.

41 B. Russell, *Philosophy*, p. 204, Norton, New York, 1927.

⁴² 42 For a careful analysis of the meaning of "point of view" *cf.* Price, *Perception*, p. 252 *en seq.*

⁴³ Lewis, for example, says: "The same quale may be . . . the sign of different objective properties and different qualia may be the sign of the *same* objective property". *Mind and the World-Order*, p. 122.

⁴⁴ On the suitability of this term, see Broad, *The Mind and Its Place in Nature*, p, 153 and p. 215, and Price, *Perception*, 139-142.

⁴⁵ Perception, pp. 150-156.

46 *Ibid.*, p. 153.

47 *Ibid.*, p. 156.

48 *Ibid.*, p. 145.

⁴⁹*Ibid.*, p. 168.

⁵⁰ This way of posing the problem avoids the difficult questions concerning the possibility of transcendent states of mind and unnoticed characteristics of conscious states. For three different answers to these questions, see Broad, *Scientific Thought*, pp. 244-246, Lewis, *Mind and the World Order*, p. 64, and Ayer, *The Foundations of Empirical Knowledge*, pp. 69-72, Macmillan, New York, 1940. See also Chisholm "The Problem of the Speckled Hen", Vol. LI, N.S. No. 204, p. 370.

⁵¹ Pp. 247-248

⁵² Gestalt Psychology, p. 72.

⁵³ Principles of Psychology, pp. 196-197

⁵⁴ Perception, p. 15.

⁵⁵ Mind and the World Order, p. 55.

⁵⁶ Perception, p. 15.

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PART II THE EPISTEMOLOGICAL IMPLICATIONS OF THE PERCEPT

THEORY

The most revolutionary inferences which philosophers have drawn from the Percept Theory are probably those which concern the epistemological status of physical objects; we have already seen, for example, that in recent years some philosophers have used the Percept Theory as a basis for attributing to physical objects the same epistemological status that has traditionally been attributed to sense-data. But there is another possible implication of the Percept Theory which deserves prior consideration because our decision concerning its validity will necessarily influence our analysis of almost all other epistemological issues.

1. THE GIVEN AND ITS INTERPRETATION

We might wonder, specifically, whether acceptance of the Percept Theory can force us to deny completely a fact the recognition of which Lewis has called "one of the oldest and most universal of philosophic insights", the fact, 'namely, that "there are, in our cognitive experience, two elements; the immediate data, such as those of sense, which are presented or given to the mind, and a form, construction, or interpretation, which represents the activity of thought".⁵⁷ The distinction to which Lewis refers is, in one form or another, so fundamental to most philosophical and psychological systems, that to reject it entirely would necessitate, at the very least, a complete reformulation of these systems. And despite the phenomenological evidence for the Percept Theory, there are undoubtedly many philosophers and psychologists who would find that theory quite incredible if it could be shown to imply that the distinction between what is given, and the interpretation or construction put upon it, is entirely invalid.

But there are, I believe, three rather different senses in which this familiar distinction can be recognised even by those who accept the Percept Theory; and there is only one traditional sense in which the distinction must be denied.

(a) The Given as the Ostensible Physical Object

In the first place it must not be forgotten that the Percept Theory is a theory about perceptual *consciousness* and that the evidence for it is entirely phenomenological and gathered by direct inspection of many single states of perception. If, therefore, the terms "construction" and "interpretation" are defined *dispositionally* -- by reference either to a tendency towards bodily behaviour of a certain kind or to a tendency to have certain kinds of conscious experience under certain conditions, or both -- then the validity of the distinction between "the given" and its "interpretation" is entirely independent of, and hence compatible with, the truth of the Percept Theory. Thus for those who accept the Percept Theory the things that are given in perception would be ostensible physical objects, these being the only sensuous constituents of ordinary perceptual consciousness; and the manner in which these are interpreted would be determined by discovering the dispositions which accompany them. In many contexts, moreover (e.g., in most discussions of learning) the philosophers and psychologists who have distinguished between the given and its interpretation have intended to say nothing that is incompatible with such a theory of the given; to recognise a distinction of this

kind, therefore, is to admit the validity, in one historic and important sense, of what Lewis has called "one of the oldest and most universal of philosophic insights".

But that is not all that can be admitted, for it should be remembered that the Percept Theory as I have described it, is a theory limited not only to perceptual consciousness but to the sensuous aspects of perceptual consciousness. It is a theory, to be more precise, about the phenomenological status of the ostensible physical object and the sensuous qualities which clothe it, and it is incompatible with the Sense-datum Theory, as we have seen, precisely because it denies the phenomenological duality of any of these sensuous qualities. If, therefore, a philosopher or 'psychologist happens to believe that the ostensible physical object usually does not exhaust the content of the consciousness during perception; if, for example, he believes that the ostensible physical object is presented together with certain bodily feelings, or with an "ostensible self" or with an "ostensible perceiving self", or with phenomenologically irreducible "beliefs" or "judgements" or "expectations", or indeed with any other possible constituents of consciousness whatsoever, and if, at the same time, he does not believe that any of these constituents are sense-data as traditionally conceived, and is therefore able consistently to admit that sensuous qualities are presented as the qualities of the ostensible physical object and not of any other entity; such a philosopher or psychologist so far as I can see, does not believe anything that is incompatible with the Percept Theory. It might consequently be possible, by defining "interpretation" and "construction" in terms of some of these other constituents of perceptual consciousness, to give a purely phenomenological meaning to these words so that the given (the ostensible physical objectl could be distinguished from its interpretation by direct inspection of perceptual consciousness. Thus the historical distinction could be recognised in another sense, and a sense which would probably represent the principal point that Lewis himself has in mind when he says: "That present datum of experience which is interpreted as 'activity of thought' is just as objective and intrinsically observable a kind of datum as is the phenomenal apearance of an external object''. $\frac{58}{58}$ Whether or not direct inspection of single states of perceptual consciousness *can* validate such a distinction is a difficult question, and one which is not strictly relevant to the basic issue under discussion, but there is nothing in the Percept Theory to imply that it cannot.

Some of the examples which Lewis gives to illustrate the distinction between the given and its interpretation, however, require that this distinction be recognised in another sense, quite different from the two so far discussed; and in this other sense the distinction is not compatible with the Percep Theory. Lewis points out the fact that our perceptual experience varies not only with changes in the physical conditions of observation but also with changes in interest, and he illustrates this by showing that the perceived qualities of a fountain pen differ for a child, a writer, and a savage. This *fact*, of course, is quite compatible with the Percept Theory, for the characteristics of ostensible physical objects do indeed vary with the attitude of the perceiver. But Lewis uses this fact to illustrate the difference between the given and its interpretation, and the distinction in this instance is drawn in a manner which is incompatible with the Percept Theory.

The distinction is drawn between a "presentation", which is supposed to be the constant and given element in the various perceptual experiences of the pen, and its "meaning" or interpretation. Speaking, for example, of the fountain pen in his hand, Lewis says: "It might happen that I remember my first experience of such a thing. If so I should find that this sort of presentation did not then mean 'fountain pen' to me."⁵⁹ But since by the expression "this sort of

presentation" Lewis means a complex of qualia or sense-data⁶⁰ which are to be distinguished from the qualities of the ostensible pen, it is clear that this expression, for those who accept the Percept Theory, simply has no designatum at all within these states of perceptual consciousness. According to the Percept Theory there simply is no common core of sense-data to "mean" one thing at one time and another thing at another time. It is possible, to be sure, that the ostensible physical object presented in childhood might have had certain properties (*e.g.*, a particular shape ans color) in common with the ostensible physical object presented at the time of writing; in fact this is probably what it would ordinarily mean to say that the two presentations were "of the same sort"; but the particular distinction which Lewis has in mind, and which is essential to the Sense-datum Theory, is not one that can be defined by reference solely to the properties of the ostensible physical objects.

The problem, therefore, for those who accept the Percept Theory, is whether in rejecting this distinction between the given and its interpretation they must also reject as meaningless all the epistemological and psychological principles whose formulation presupposes that the distinction is valid. In view of the historical importance of the Sense-datum Theory it is clear that this problem cannot be lightly dismissed. Whatever one may think, for example, of the ultimate value of the introspective psychology of Wundt and Titchner, it will stretch the credulity of those who are familiar with their experimental work to suggest that the principles which they formulated concerning the relationship between sensation and "meanings" are completely *meaningless*.⁶¹ The conception of the sensory core, moreover, appears to have a certain methodological value, for differences and similarities among sensory cores have been supposed to provide psychologists with phenomenal criteria for deciding just what characteristics of perceptual consciousness can and cannot be explained by reference to physical processes in the sense-organs; it has been supposed, for example, that the fact that two perceptions have similar sensory cores guarantees that all differences between these perceptions must be explained by reference to attitudes (broadly interpreted) and the physiology conditions of attitudes. And it might not be easy, even for those psychologists who accept the Percept Theory, to dispense entirely with such methodological principles.

(b) The Given as the Product of Perceptual Reduction

It seems to me, however, that the solution to this problem is not so difficult as it may appear, for I believe that we can find for these particular psychological purposes, a completely satisfactory substitute for the sensory core as traditionally conceived. We can do this by applying the pragmatic maxim and asking ourselves just how psychologists have actually decided whether or not two perceptions are to be called "interpretations of the same sensory core". And if our methodological analysis in the previous section is correct, this has been decided, of course, by subjecting the two perceptions to the operation of perceptual reduction and comparing the resulting states of direct awareness. If, to use Lewis's example, two different perceptual experiences of a fountain pen are perceptually reducible to direct awareness of similar sense-data -- perhaps long tapering patches of black -- then it would be concluded, no matter how different the ostensible physical objects, that the two perceptions are different interpretations of the same given". For those who accept the Percept Theory, therefore, this "method of verification" can be used define the term "sensory core" in a way which will provide a substitute for the traditional concept. We can say that the statement "These two perceptions are different interpretations of the same sensory core", should be understood to mean: "If these two perceptions were perceptually reduced exactly similar states of direct awareness would be produced in the two cases". And to understand this second

statement, of course, we do not need any concepts which are incompatible with the Percept Theory.

Ayer has called such pragmatic definitions as this "definitions in use". "We define a symbol *in use*", he says, "not by saying that it is synonymous with some other symbol, but by showing how the sentences in which it significantly occurs can be translated into equivalent sentences which contain neither the *definiendum* itself, nor any of its synonyms".⁶² By means of this definition in use, then, philosophers and psychologists who accept the Percept Theory can translate into an empirical language statements about the given which would otherwise be verifiable only if the Exposure Hypothesis were valid. In preferring this definition, moreover, they do not necessarily belittle the importance for psychology of either the operation of perceptual reduction or the concept of the sensory core which is defined in terms of it. To deny the existence of the sensory core as traditionally conceived, therefore, is not necessarily to discredit the empirical science erected by psychologists who have assumed its existence, nor even to disparage their method.

Thanks to the definition in use, therefore, there is a third sense in which those who accept the Percept Theory may recognise what Lewis has called "one of the oldest and most universal of philosophic insights". And once a philosopher or psychologist has carefully defined "the given" in this third sense, he might, in some contexts, find it convenient to speak of the sensoy core as if it were literally a constituent of perceptual consciousness. This policy was recommended, as a matter of fact, by Josiah Royce, who, like James, specifically rejected the Sense-datum Theory. Royce recognised the error of confusing direct inspection with any other procedure, such perceptual reduction, in which we merely substitute a new state of consciousness for the one we are supposed to be describing; states of consciousness, he says, contain only those elements which on direct inspection they appear to contain. When we say that a mental state consists of elements which we ourselves do not distinguish in it, he says, we may be confusing the mental state with a physical object, with the brain, with the meaning of the state in a logical process, "or else, finally, we are referring to a more sophisticated state of mind which the psychologist, by his devices for analysis, has substituted for the original and naive consciousness''.⁶³ Nevertheless, he suggests, it may be convenient to speak of this "sophisticated state" as if it were part of tthe original and naive consciousness. Such a linguistic device, of course, is quite compatible with the Percept Theory, and may sometimes be very useful.

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⁵⁷ Mind and the World-Order, p. 38.

⁵⁸ *Ibid.*, p. 424.

⁵⁹ *Ibid.*, p. 49.

<u>60</u> *Ibid.*, p. 60.

⁶¹ See Titchner, A Beginner's Psychology, ch. 1.

⁶² A. J. Ayer, *Language*, *Truth and Logic*, p. 68, Gollancz, 1936.

63 J. Royce, Outlines of Psychology, pp. 109-110, Macmillan, New York, 1903.

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2. THE PHYSICAL OBJECT AND THE OSTENSIBLE PHYSICAL OBJECT

Assuming, then, that there are at least three senses in which the distinction between the given and its interpretation may be recognised by those who accept the Percept Theory, and that there is only one traditional sense in which this distinction must be denied, we are now in a position to consider some of the epistemological questions raised by the statement that *physical* objects are directly given in perception. This statement, as we have seen, has been made repeatedly in recent years by supporters of the Percept Theory, and in one natural interpretation its implications are indeed revolutionary, and probably incredible; I presume, in fact, that many epistemologists have dismissed it without further ado on the assumption that it is based on a simple confusion of physical objects with *ostensible* physical objects. But the issue is much more complex than such an explanation would suggest.

(a) The Epistemological Status of Ostensible Properties

If any of the philosophers who have said that physical objects are directly given in perception have simply failed to recognise the difference between a physical object and an ostensible physical object, then they have, of course, committed a fallacy of some magnitude. To demonstrate this fact with thoroughness by making an exhaustive catalogue of the common properties of physical objects, would lead us into metaphysical questions which are beyond the scope of this paper; and even an attempt at this point to find a minimum basis of agreement concerning the correct analysis of the term "physical", would distract attention from the principal issue. But anyone who accepts the Percept Theory must admit that there is at least one important fact about an *ostensible* physical object which serves to distinguish it sharply from a physical object -- the fact, namely, that some of its properties, if not all, can be discovered by direct inspection of a single state of perceptual consciosness.⁶⁴ Whether this is taken to be an epistemological fact or an ontological fact or both, will depend on one's general theory of the mind, but it is a fact which cannot be denied by those who accept the Percept Theory without rejecting the method of direct inspection and thus the very evidence on which that theory is based.

It is equally certain, on the other hand, that whatever we may mean by "physical object", a physical object is at the very *least* a thing which transcends any one of the states which might be called a perception of it. This is admitted, of course, even by Berkeley an contemporary realists who have defended various forms of epistemological monism; none of them, so far as I know, has maintained that to attribute a property to a physical object is *merely* to attribute that property to what is presented in some one state of perceptual consciousness. In order to confirm a statement about a physical object we may indeed require the information that can be obtained by direct inspection of a state of perception, but we also require other information -- information, for example, about the relationship between this particular state of perception and other experiences, either actual or possible. And if this point is obvious to those who defend epistemological monism, it is undoubtedly still more obvious to those who accept some form of epistemological dualism. Whether, therefore, our general concept of physical object is in some sense "derived from" the presentation of ostensible physical objects in perception, or whether it is in one or another sense "a priori", the indisputable fact remains that we do possess

two concepts corresponding to the terms "physical object" and "ostensible physical object". And the difference between these two concepts is sufficiently proved, for present purposes, by the fact that properties of ostensible physical objects can be discovered by direct inspection of a single state of perceptual consciousness, whereas properties of physical objects cannot.

The fact that the properties of these two kinds of object are designated by the same *names*, should not be allowed to obscure this difference in the epistemological (and, for most philosophers, the ontological) status of the properties. There is, of course, some relationship between the properties of physical objects and the properties of ostensible physical objects which accounts for the fact that the word "square", for example, which designates a property of physical objects. Philosophers disagree, of course, about the nature of this relationship, just as they disagree about the number of words in our language which can properly be used in both the phenomenal and physical contexts. But they all agree, so far as I know, that a distinction may be made between the phenomenal use and the physical use of certain adjectives, and that this distinction reflects an important difference in the status of the designated properties.

(b) The Ostensible Physical Object and Naive Realism

Now although it is very unlikely that a philosopher who asserts that physical or material objects are given in perception has committed the fallacy of confusing his concept of a physical object with his concept of an ostensible physical object, it is a good deal more likely that he has committed a fallacy somewhat similar to this. For he may have assumed that there is no difference at all between his own concept of an *ostensible* physical object and the *naive* or *popular* concept of a "real" physical object. He may believe, in other words, that what the man in the street means when he says that the paying stones are grey, is precisely what he, the philosopher, would mean if he said that the *ostensible* paving stones are grey. This possibility is suggested by the frequency with which advocates of the Percept Theory describe that which is given in perception as a "naive world", a "pre-philosophical world", a common-sense realistic world", etc. And it might help to explain, at least in some cases, what is meant by the statement that physical objects are given. For if the concept of an ostensible physical object were identified with the naive concept of a physical object, such a statement would mean simply that physical objects, in the *popular* sense of the word "physical", are the directly presented objects of consciousness in ordinary perceptual experience.

If such a statement is made by a philosopher who accepts the Percept Theory, and is intended to express one of the important implications of that theory, it cannot be lightly dismissed as true in any trivial sense. There are some possible interpretations of the word "given", of course, according to which it may be quite obviously true that physical objects, as popularly conceived, are given to the man in the street during perceptual experience. Thus it is not unlikely that there is some sense of the verb "to believe" such that the man in the street may correctly be said to *believe*, whenever he is perceptually conscious, that there exists a physical object of a certain kind; and the word "given" might accordingly be interpreted to mean "believed to exist". This cannot be the interpretation desired by supporters of the Percept Theory, however, for the Percept Theory, as we have seen, is a theory about the *sensuous* aspects of perceptual consciousness, and not about the beliefs which may accompany the presentation of an ostensible physical object. Indeed the obvious fact that the man in the street has perceptual beliefs about physical objects, is quite compatible with the rival Sense-datum Theory, whereas the statement that

physical objects are *given* in perception is intended to be a criticism of that theory.

The question which now confronts us, therefore, is whether there is any reason to believe that the sensuous objects of perceptual consciousness (i.e., ostensible physical objects) are precisely what the man in the street thinks of as "real" physical objects. It is usually true, of course, that at the moment of ordinary perception the man in the street does not *consciously judge* that the ostensible physical object is *not* a "real" physical object, but for that matter neither does the philosopher. Nor, on the other hand, is it plausible to maintain that either of them at the moment of perception, *consciously judges* that the two objects are identical. Ordinary perception is simply not reflective in a sense which would permit either of these two conscious judgements, whether or not the necessary concepts are somehow available. The fact that the philosopher possesses two distinct concepts corresponding to the terms "physical object" and "ostensible physical object", is proved by his ability to distinguish them on reflexion; if an advocate of the Percept Theory wishes to show, therefore, that the man in the street does not possess two such concepts, he must do so by proving that the man in the street *cannot* distinguish them on reflexion.

When the issue is stated in these terms, however, it becomes quite clear that however naive the man in the street may be, his naivete does not consist in his failure to possess *some* concept of a physical object as distinguished from an ostensible physical object. To deny this, indeed, would be to deny that he possesses any concept of "illusion", and to imply, therefore, that he is a naive realist of a type incapable of understanding, even in some "popular" sense, what it means to say that an oar looks bent but is really straight. And perhaps it would be relevant to point out that the man in the street is usually credited with much more sophistication than this; many philosophers ranging from Berkeley to certain contemporary realists have professed to speak for him, and although they cannot all have described his views correctly in every respect, they have all agreed in constructing epistemological theories which admit the possibility of illusion. To possess the concept of illusion, however, is to recognise, at least implicitly, the very difference between a physical object and an ostensible physical object which would be most likely to impress a supporter of the Percept Theory -- the difference, namely, which is reflected in the fact that the properties of physical objects, unlike those of ostensible physical objects, cannot be discovered be direct inspection of a single state of perceptual consciousness.

It would be a mistake, therefore, to say that physical objects are *given* in perception, if the purpose of this form of expression were to imply that when the man in the street says that the paving stones are grey he is talking about what the philosopher would call *ostensible* paving stones. It might seem important to point out that there is some *similarity* between an ostensible physical object and a "real" physical object as popularly conceived -- that words which refer to the so-called "secondary" qualities, for example, can be used to describe both of them -- but it would surely be misleading to express this fact by saying that physical objects are *given*. There seems, therefore, to be no purely semantical fact about the meaning of the terms "physical object" and "ostensible physical object", which could justify the statement that physical objects are given in perception. There is, however, a *phenomenological* fact which might make such a form of expression seem appropriate to some advocates of the Percept Theory. Let us consider it briefly.

(c) The Ostensible v. the Apparently Ostensible

This phenomenological fact is the one suggested by Dewey's statement that "it is

not experience which is experienced, but nature", the fact, namely, that ostensible physical objects, as presented to us in perception, do not ordinarily *appear* ostensible. Or, to put the matter in a way which emphasises the linguistic difficulties which are always implicit in such discussions as this, ostensible physical objects are not *ostensibly ostensible*. The object of which we are conscious in perception, as Price has so aptly said, "just dawns upon us, of itself. We look and there it is."⁶⁵ Thus a tomato is perceptually presented *as* red, *as* solid, and perhaps even *as* edible, but it is not presented *as* ostensible. Nor, on the other hand, is it presented *as non*-ostensible. The terms "ostensible" and "non-ostensible" both refer to epistemological or ontological characteristics, and are properly applied to an entity, as we have seen, after considering such matters as its accessibility to direct inspection; they are *not* phenomenal qualities which ostensible physical objects wear on their faces.⁶⁶

It is difficult to find a terminology which will keep this distinction from becoming obscured, and which will at the same time be convenient for the discussion of problems which have both phenomenological and epistemological facets. Thus although it has been convenient, and I hope not misleading, to say that we are *presented* in perception with ostensible physical objects, even such a statement is not unambiguous. In a purely phenomenological context the word "ostensible" would have to be omitted from this statement, since otherwise it could be interpreted as implying that ostensibility is one of the *presented* characteristics of the object. And questions could also be raised about the word "physical" (or any substitute such as the word "material") for this too, as we have just observed, has epistemological and ontological connotations. But the full force of the difficulty is not felt until we try to dispense with the word "physical" and say instead simply that the objects presented in perception are solid and three-dimensional, persisting through time, possessing causal characteristics, etc. For it will then become evident that each one of *these* descriptive terms also has epistemological and ontological connotations. We have already seen that such terms, when used to describe physical objects, designate properties the existence of which cannot be determined by direct inspection of a single state of perceptual consciousness, and we surely do not want to suggest that in perception we are presented with properties of *this* kind. The pervasiveness of this terminological difficulty, as we have also seen, is a result of the fact that in a phenomenological context most, and perhaps all, of the adjectives in our language have a meaning which they could not possibly have if they were being used to describe physical objects.

It is possible, therefore, that the philosophers who have maintained, on the basis of the Percept Theory, that physical objects are actually given in perception, have used this form of expression in an attempt to solve, at least partially, the terminological problem just outlined. This form of expression, as we have seen, does not by any means solve the entire problem, but it might help to emphasise the fact that the objects which are presented in perception are not presented as ostensible. And some advocates of the Percept Theory have thought it important to emphasise this fact because the failure of epistemologists to recognise it may have been responsible for the generation of "pseudo-problerns".⁶⁷ Similarly, the statement that in perception we are "directly aware" of physical or material objects, which is often made by the same philosophers, can perhaps be accounted for as an alternative method of emphasising the same phenomenological fact. Indeed neither of these two forms of expression seems entirely inappropriate when considered in this light, although they may have been the cause, because of their traditional epistemological connotations, of more misunderstanding than they have prevented.

However this may be decided, the issues to be discussed in the following pages are primarily epistemological; and it is consequently impossible to restrict ourselves to forms of expression which would be appropriate in a purely phenomenological context. I shall continue to say, therefore, that the objects directly presented or given in perception are *ostensible* physical objects, recognising, however, that I can say this only because I am not attempting merely to describe the phenomenal properties of the objects of perceptual consciousness -- only, in short because I I have adopted the epistemological point of view. From this point of view it is clear that physical objects, because they are things the properties of which cannot be discovered by direct inspection of a single state of perceptual consciousness, cannot reasonably be said to be "directly presented" or "given" in such a state of perceptual consciousness.

In this particular respect, of course, the distinction between an ostensible physical object and a physical object is strictly parallel to one of the most important of the traditional distinctions between a *sense-datum* and a physical object; for sense-data have traditionally been conceived as observable by direct inspection, and physical objects as knowable only through some more complex process. In fact it should now be clear that the concepts of physical object and ostensible physical object are so independent of one another, from a logical point of view, that the basic distinctions will not be affected by the outcome of the conflict between the Percept Theory and the Sense-datum Theory. The questions which remain to be answered therefore, in any attempt to evaluate the epistemological implications of the Percept Theory, are questions about the epistemological *functions* of ostensible physical objects; and the most direct way to raise these questions is to ask whether ostensible physical objects are adequate substitutes for performing the functions which sense-data have traditionally been supposed to perform in the processes by which we acquire and confirm our beliefs about the physical world.

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⁶⁴ I say "some" because it is possible that a philosopher who accepts the Percept Theory might agree with Broad that things which are present to consciousness "cannot appear to have properties which they do not really have, though there is no reason why they should not have more properties than we do or can notice". Scientific Thought, pp. 243-244.

65 *Perception*, p. 153.

⁶⁶ It might be argued that an oasis may appear ostensible to an experienced desert traveller who knows that he is experiencing a mirage. But in that case the word "ostensible" has a phenomenal significance which could be absorbed by the statement that the traveller perceives a mirage of an oasis.

⁶⁷ See *e.g.*, K. Duncker, "Phenomenology and Epistemology of Consciousness", *Philosophy and Phenomenological Research*, June, 1947. I believe that Duncker is clearly mistaken, however, if he intends to imply that there is no genuine problem concerning the possibility of transcending consciousness.

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3. EPISTEMOLOGICAL FUNCTIONS OF THE OSTENSIBLE PHYSICAL OBJECT

(a) The Sign Function

I believe that there are two such functions, one of them perhaps more strictly psychological than epistemological. The first of these, the psychological function traditionally attributed to sense-data in the knowing process, is that of somehow *determining*, at least in part, the nature of the physical object which the perceiver in some sense "believes" to exist at the moment of perception. It is impossible to describe this function more precisely except in terms of some particular form of the Sense-datum Theory. Thus Berkeley, who accepted what I have called the "discursiv inference version" of that theory, was willing to say that the sense-datum given in perceptual experience serves as a "sign" of the existence of a certain kink of physical object (for Berkeley, of course, other "ideas"). Other philosophers who have accepted the Discursive Inference Theory have said that the sense-datum "causes" us to "make a judgement about" a physical object. Such forms of expression are intended to imply that perceptual consciousness is discursive.

Philosophers and psychologists who accept the more common Sensory Core Theory, however, have often found it more difficult to describe the relationship between a sense-datum and perceptual beliefs. Words like "sign", "clue", and "cause", do not seem appropriate for a sensory core which is conceived as occurring simultaneously with the perceptual beliefs. "The best analogy we can offer", says Broad, "... is to be found in the case of reading a book.... If there were no print we should cognise no meaning, and if the print were different in certain specific ways we should cognise a different meaning".⁶⁸ This analogy is not very good, however, for the print on the physical page transcends the entire state of perception and might therefore be said partially to "cause" the perception, whereas awareness of the sense-datum is regarded as a *constituent* of the state. and could not be said, in the same sense, to cause the beliefs which accompany it. Perhaps those who accept the Sensory Core Theory should restrict themselves, as Broad suggests, to the statement that the sense-datum and beliefs are functionally related in such a way that "if this sensum had different properties we should ascribe different properties to the physical ob ject".⁶⁹ Or perhaps they might say, just a little more specifically, that sensedata and the accompanying beliefs are both caused simultaneously by certain physical events within and without the perceiving organism.

Now the Percent Theory, as we have seen, does not admit the existence in ordinary perception, of a temporally distinct sensuous constituent; ostensiblt physical objects, therefore, cannot fulfil the function of a perceptual "sign" as conceived by Berkeley and other exponents of the Discursive Inference Theory. This is probably only a matter of academic interest to most contemporary epistemologists, however, for they have apparently rejected the Discursive Inference Theory in favour of the Sensory Core Theory. But if it is true, as those who accept this latter theory maintain, that there is *some* functional relationship between the sensuous constituents of perceptual consciousness and the beliefs which accompany them, this relationship can quite consistently be recognised by supporters of the Percept Theory. In whatever sense it is true, in other words, that consciousness of a sensuously clothed ostensible physical object is accompanied by beliefs about the existence of a real physical object of a certain kind, in that sense it is meaningful to say that the beliefs are function ally related to the characteristics of the ostensible physical object. And thus we could even say, directly paraphrasing Broad's statement about sensa, that perceptual beliefs are "based upon" ostensible physical objects in such a way that if a particular ostensible physical object had different properties we should ascribe different properties to the physical object. So far as the traditional psychological function of sense-data is concerned, therefore, the Percept Theory gives rise to no problems which are avoided by the Sensory Core Theory; and to carry the discussion beyond this point is unnecessary for the present purpose.

(b) The Function of the Ostensible Physical Object in Confirmation

The second. and more strictly epistemological, function traditionally attributed to sense-data, is that of serving as an important part of the evidence to which we must appeal in any attempt to *justify* our beliefs about the physical world. The statements which express these beliefs, according to one of the most familiar strains of traditional empiricism, can be divided into two groups: the first includes only singular statements about physical objects or events, and the second includes all other statements about the physical world. Statements in the second group, according to this theory, can be justified only by an argument the premisses of which include statements in the first group. And statements in the first group can in turn be justified ultimately only by an argument the premisses of which include statements about sense-data. Thus sense-data have been regarded by many philosophers as the very foundation stones of empirical knowledge, without which a rational construction of physical science would not be even theoretically possible.

For present purposes it is unnecessary to consider the points of disagreement within this well-known school of empirical thought. There has been disagreement about the proper analysis of the statements which refer to sensedata, about the necessity for additional premisses, about the number and variety of principles of inference required to draw conclusions about physical objects, and about the epistemological status of such principles of inference; but these differences may be disregarded without prejudice to questions about the general function traditionally attributed to sense-data. I shall say, for convenience, that all members of this empirical school believe that sense-data are ''epistemologicaily basic''; and the problem which immediately concerns us, therefore, is whether the Percept Theory has any implications for the theory that sense-data are epistemologically basic. This problem is sufficiently important to deserve careful consideration even by the many philosophers who are convinced that beliefs about physical objects cannot be justified except in some *relative* fashion by reference to *other* beliefs about physical objects.

Now among the singular statements which express our beliefs about physical objects, there are some which express *perceptual* beliefs, *i.e.*, beliefs which are entertained at a time when we are presented with an ostensible physical object, and which are, as we have said, in some sense "based on" the ostensible physical object; such beliefs are usually expressed by statements similar in form to the statement "This (or that) is a tomato".

Perceptual beliefs could probably be described dispositionally by reference to tendencies towards bodily behaviour or towards conscious experiences, or both; though perhaps, as we have already observed, some philosophers might wish also to make some reference to *phenomenal* events occurring simultaneously with the presentation of the ostensible physical object.

It is convenient, in considering the epistemological implications of the Percept

Theory, to begin by paying special attention to those singular statements which express non-perceptual beliefs about physical objects but which are commonly supposed to be justifiable by reference to *past* perceptual experience. Thus we might consider, for examp]e, the statement "There is a tomato behind me", with the understanding that it expresses the present belief of someone who has recently been presented with an ostensible tomato but who is now looking in another direction. Such beliefs, of course, constitute a considerable proportion of all our beliefs about the physical world.

Most philosophers who accept the Sense-datum Theory and who also believe that sense-data are epistemologically basic, would probably maintain that in such a case the belief expressed by the statement "There is a tomato behind me", could be justified to some extent by means of an argument based on the present memory of past sense-data. Indeed they *must* defend a position of this sort if they are to bring their theory even roughly into line with common-sense, for the fact that someone has recently had a perceptual experience of a kind that he associates with the existence of a tomato, is commonly regarded as epistemologically relevant to his present non-perceptual belief in the existence of a tomato. But if the Percept Theory is true, this non-perceptual belief about the tomato could almost certainly *not* be justified in this way. For assuming that the recent perception of the tomato had not been perceptually reduced for psychological or aesthetic purposes, it would simply be false to say that the observer had been aware of any sense-datum at all. The only sensuous constituent of that past perception would have been an ostensible tomato, which, as we have seen, is quite different from a sense-datum as traditionally conceived. If the present belief is to be justified by reference to *anything* that has been sensuously given, therefore, it must be justified by reference to the ostensible tomato. And it is just this phenomenal thing, indeed, that the normal observer would remember under such circumstances; he would remember that he had been presented with a full-bodied tomato with all its sensuous qualities of redness, smoothness, warmth, and sweetness, and not that he had been aware of a round red patch, or perhaps, depending on the lighting, a patch of some quite different colour.

The traditional analysis of justification by reference to sense-data is somewhat different, however, when the sense-data in question are conceived as *future* rather than *past* objects of direct awareness; and because of this difference it is not sufficient for those who support the Percept Theory to point out that sensedata do not occur in ordinary perceptual experience. According to the philosophers who believe that sense-data are epistemologically basic, the statement "There is a tomato behind me" could be justified to some extent not only by reference to past experience, but also by turning around and inspecting the new sense-datum which is thereupon presented. And in a procedure of this kind it might indeed be possible, by adopting the reducing attitude, to produce a pure state (or approximately pure state) of direct awareness. And the sensedatum which is thus presented might possibly be used as the basis of an argument to justify the original non-perceptual belief about the tomato. It would be presumptuous indeed, for those who support the Percept Theory to maintain that such a procedure is never followed in an attempt to justify a belief about a physical object.

It would be quite unrealistic, on the other hand, to maintain that such a procedure is *usually* or even *frequently* followed. The procedure which is usually regarded as confirming a belief about a physical object involves various operations (*e.g.*, manipulation of the object) but it does *not* involve the operation of introspective reduction. The usual procedure, as Price has aptly described it, is that of "specifying the unspecified". We look at the tomato, for example, from several points of view, turn it over in our hands, squeeze it, etc.,

and by these means produce a series of perceptual states. The ostensible physical object remains a tomato throughout the entire process, but the tomato becomes progressively more determinate, more specified, in each succeeding perception. And as the relatively unspecified tomato becomes more and more specified, so we at the same time become more and more convinced that our belief has been justified. There is obviously no need to refer to sense-data in describing this process, and if we were to formalise this common method of confirmation we should have to treat the series of ostensible physical objects, and not sense-data, as epistemologically basic.

There is also another fact which shows that if the Percept Theory is true, sensedata cannot be regarded as epistemologically basic without doing violence to commonsense. This is the fact that we are so often surprised, after we adopt the reducing attitude for psychological or aesthetic purposes, at the characteristics of the sense-data which are thereupon presented to us. The fact of the matter is that most of us are simply not prepared, in many cases, to predict the characteristics of the sense-data which we can produce by perceptual reduction; we are not prepared to say, for example, what the colour of our sense-datum will turn out to be if we are looking at a field of green grass on a cloudy day, or in the late afternoon when it is lighted by the rays of the setting sun. We are simply not familiar enough with the relationship between the physical stimulus and the conditions of observation on the one hand, and the sense-data which are the products of perceptual reduction on the other hand. Because of the psychological fact of object-constancy, however, the qualities of ostensible physical objects are more easily predicted; the ostensible grass, for example, is likely to be green whether the sky is clear or cloudy. However the epistemological relationship between physical objects and ostensible physical objects may be conceived, therefore, it is apparently better understood on the practical level than the relationship between physical objects and the relatively rare objects of direct awareness. This in itself seems to be a good reason for putting greater faith in a process of confirmation in which ostensible physical objects, rather than sense-data, are treated as epistemologically basic.

If the philosophers who believe that sense-data are epistemologically basic are not interested in bringing their theory into line with common practice in the justification of belief, they might still insist, to be sure, that perceptual reduction is necessary for "proper" confirmation of beliefs about the physical world. But it is difficult to see what could be said in support of such a position, unless an appeal were made to some ontological theory about the *constitution* of physical objects, in particular to a theory that physical objects are in some more or less literal sense "composed of" sense-data. Such theories, however, would lose whatever plausibility they may have if they were not themselves supported by epistemological considerations, and if the Percept Theory is true, indeed, these theories must themselves be revised if they are to retain the epistemological advantages traditionally attributed to them. To many philosophers this fact will undoubtedly seem to be one of the most important consequences of the Percept Theory, and we ought to consider it briefly before concluding our examination of the epistemological implications of the Percept Theory. Let us now do so.

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68 Scientific Thought, p. 66.

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Ibid., p. 247. *Cf.* Price: The ostensible object "is forced upon me by the character of the sense-datum . . . and no other ostensible object but precisely this one could ostend itself to me here and now, the sense-datum being what it is". *Perception*, p. 148.

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Roderick Firth, <u>Sense Data and the Percept Theory</u>, 1949-50.

4. THE PERCEPT THEORY AND EPISTEMOLOGICAL MONISM

Epistemological monists from Berkeley to many contemporary realists have used the theory that sense-data are epistemologically basic as a premiss in their attacks on epistemological dualism. Knowledge of physical objects is possible, they have said, only if statements about physical objects can be construed, in some more or less complex manner, as statements about sense-data -- or only, as some of them have preferred to say, if physical objects are somehow "composed of" sense-data. Their analysis of physical statements has not usually been based entirely on epistemological considerations, but in most cases their analysis was at least *suggested* by these considerations.

If the Percept Theory is true, however, the epistemological advantages traditionally attributed to monism can be retained only by reinterpreting statements about the physical world in terms of ostensible physical objects and events instead of sense-data. For one effect of the Percept Theory, as we have seen, is to change the denotation of the term "epistemologically basic". In whatever sense, therefore, a philosopher wishes to maintain that physical objects are "composed of" things that are epistemologically basic, in that sense he must say, if he accepts the Percept Theory, that physical objects are "composed of" objects. I do not propose to evaluate the results of such a reinterpretation but only to indicate what form it must take, and in particular to point out that ostensible physical objects can vary in ways that sense-data cannot, so that a new problem is uncovered as soon as we attempt such a reinterpretation.

To state this problem clearly let us say that according to the traditional forms of epistemological monism every physical object is a "family" of sense-data.⁷⁰ If we do not specify the ontological status of sense-data -- whether, for example, they can exist unsensed and whether they may be "hypothetical" -- this statement can be interpreted as expressing a point of agreement among epistemological monists whether they be called "idealists", "realists", or "phenomenalists". For a family of sense-data would simply be the class of all those sense-data, actual or possible, which would have to be mentioned in making a complete ontological analysis of a particular physical object.

Now according to the traditional Sense-datum Theory, as we have seen, the sense-data observable by any one sense are quite limited in their qualities; visual sense-data, for example, may vary only in shape and colour. If the shape and colour of a visual sense-datum remain unaltered throughout a given period of time, therefore, changes in the attitude of the observer during that period cannot be said to affect the sense-datum at all. In the case of ostensible physical objects, however, the case is quite different; the colour and shape of two ostensible tomatoes may be exactly similar although the ostensible tomatoes, because of changes in the attitude of the observer, are quite different in other respects. To a hungry man the tomato may be presented as warm and sweet and edible whereas to someone looking for a missile it may be presented as soft and juicy and just about as heavy as a baseball. Thus it is clear that a family of ostensible physical objects is even more numerous than a family of sense-data, and that the relations among its members are many times more complicated. As a matter of fact it might even be more appropriate to say that a physical object is nothing less than a nation of sense-data, the nation in its turn comprising as many famines as there are attitudes capable of affecting the content of perceptual experience. Thus the various perspective views of a

tomato which are obtained by walking around it, could be said to be members of one family provided that they are all determined by the same attitude. And by walking around the tomato a second time, but with a different attitude, the ob server could be said to become acquainted with members of a second family. And so on.

A philosopher who wished to maintain such a position, however, might not feel obliged to hold that members of all these families must be mentioned in an ideal translation of *every* statement about the tomato in question. He might insist, and with considerable plausibility, that what the hungry man means when he uses the word "tomato" is likely to be quite different from what the man in search of a missile means when he uses the same word, and that this difference in meaning must he reflected, in an adequate analysis, by the choice of families to be represented in the translation. Thus there might often be cases in which the meaning of the statement "This is a tomato", if used to express the limited belief of a particular observer, might be adequately translated into statements about ostensible physical objects which belong to very few families within the nation, or perhaps to only one. This is not the place to examine such possibilities more fully; it is sufficient for present purposes to point out that the Percept Theory creates a new problem for the epistemological monist, but that this new problem does not appear insoluble.

5. CONCLUSION

We may finally conclude, therefore, that there are at least four important epistemological implications of the Percept Theory:

- 1. The traditional psychological distinction between the given and its meaning or interpretation, must usually be construed as a distinction between the ostensible physical object and certain accompanying events, either phenomenal or physiological or both.
- 2. There is one traditional meaning of "the given", however, for which there is no simple substitute in terms of the Percept Theory; for this particular meaning a more complex substitute may be provided by means of a "definition in use".
- **3.** The denotation of the term "epistemic" must be understood to be ostensible physical objects rather than those things which have traditionally been called "sense data".
- 4. As a result of this fact all the traditional forms of epistemological monism must be reinterpreted to make physical objects "nations" of ostensible physical objects rather than than "families" of sense-data.

On the other hand the Percept Theory has no implications concerning the general epistemological or ontological status of physical objects. It does not imply that some form of epistemological monism must be correct, nor even that there is some reasonable sense in which it would be true to say, in an epistemological context, that physical objects are "directly presented" in perception. Those philosophers are mistaken, therefore, who have inferred from the Percept Theory that the traditional problems concerning the epistemology of perception are pseudo-problems, or that they must be completely recast to make them fit the phenomenological facts on which the Percept Theory is based.

The epistemological implications of the Percept Theory, we may conclude, are important but not revolutionary.

AUTHOR'S NOTE

Since this essay was written, the doctrine has become widespread among philosophers that it is a mistake (or, at the very least, misleading) to employ any form of "act-object" terminology to describe sense experience -- any terminology, that is to say, in which sense experience is represented as an act of perceiving, sensing, experiencing, having, or being aware of such "objects" as appearances, images, sensa, or sense-data; and with respect to this doctrine it is of course just as wrong to say that in perception we are aware of percepts or ostensible objects as to say that we are aware of sense-data. It is important to recog nize, therefore, that the phenomenological and epistemological issues discussed in this essay are entirely independent of the act-object terminology. They can be formulated in *any* terminology which allows us to describe a sensory constituent which may occur in hallucination as well as in "genuine" perception. If we agree, for example, to use the idiom "It looks as if I am seeing ----'' for this purpose, the phenomenological issues discussed in Part I, Section 3 of this essay can be construed as issues concerning the types of words which may properly be inserted in the blank. It may be true, when I gaze at a snowcapped mountain, that it looks as if I am seeing a triangular patch of white. Can it also be true in this same purely sensory use of "looks as if" that it looks as if I am seeing a mountain capped with snow? Or, as so many philosophers have traditionally maintained, are we confusing the phenomenology of sense experience with an "interpretation" when we use words like "mountain" and "snow", and thus failing to describe our sense experience as it is really given? All the phenomenological and epistemological issues discussed in this essay may be formulated in some analogous way, using whatever idiom is approved by those who want to avoid an act-object terminology.

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⁷⁰ The term, of course, is the one used by Price for a collection of sense-data unified in a certain way. See *Perception*, p. 227.

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