CHAPTER - I

THE SENSE DATUM THEORY OF PERCEPTION.

A BRIEF RESUME

The common-sense view of perception is that what is given in perception is nothing but particular physical objects or material substances like chairs, tables etc. But many philosophers do not accept such a simple theory. Those who do not are of the opinion that perception comes through a combination of two different kinds of mental operations. The first they have called direct or immediate awareness, and the second, interpretation or inference or construction. Corresponding to the perception resulting from both these mental operations together are the objects we are familiar with, chairs, tables, trees etc. But what we are immediately aware of are not physical objects, but a certain type of entities which are variously called 'ideas', 'impressions', 'sense-representations' or as in more recent usage, "sense-data". However, this sense-datum theory of perception has now-a-days become a controversial one, and the enthusiastic reception it had got till the thirties of this century has now yielded place to indifference, and even, from some quarters, open hostility. Our purpose in this thesis is to evaluate some of the modern criticisms of the sensedatum theory, and then to attempt an evaluation of
the theory itself in the light of those criticisms.

But, first of all, we have to know what exactly is meant by sense-data. Russell's original definition of 'sense-data' ran as follows:— "The things that are immediately known in sensations, such things as colour, sounds, smells, hardness, roughness, and so on". (1) Broad defines sense as "objects of which we are 'directly aware' in a perceptual situation", "under certain conditions I have states of mind called sensations. These sensations have objects, which are always concrete particular existents, like coloured or hot patches, noises, smells etc. Such objects are called sensa". (2) According to Moore also sense-data are things presented by the senses. Sensation or the experience by means of the senses is the most primitive sort of acquiring knowledge, other kinds of knowledge e.g. memory, inference etc., being based upon sense perception. Now, sensation is the experience which consists in apprehending certain sense-data which are the basis of material objects. By "Sense-data" Moore means the things which we actually see. "I propose to call these things, the colour, and size and shape, sense-data, things given or presented by the senses....." (3) Sense-data are thus generally defined by reference to the way in which we become conscious of them.

(2) Broad, Scientific Thought, London,1923,P.239.
They are what we feel, sense, intuit or immediately observe or they are what is given to us, or what we are immediately aware of, in perception. Physical objects are perceived, but they are not the objects of direct awareness.

(a) **Physical Objects and sense-data**:

The exact nature of sense-data might be clearer if we compare them with physical objects and try to enumerate the distinctions between the two types of entities.

In the first place, it may be said that physical objects are enduring. This obviously is not to say of course, that physical object is eternal. What is meant by "enduring" is that every physical object exists for a certain time, every physical object has a history of its own. It was in the past, continues to persist now and will continue to exist in the future also. But the sense-datum is momentary. It exists so long only as one senses it. The smell, for instance, emerges when the suitable bodily and mental conditions are present and when these come to an end, the sense-datum also vanishes at once. This is certainly unlike any physical object known to us. The physical object continues, or atleast may continue to exist whether anyone perceives it or not. Perception may be called an accident to it. But perception is an essential condition for the existence of a sense-datum.
Then again, physical objects always remain more or less the same in the midst of their changing perspectives, aspects or appearances. But the sense-datum varies with variations of perspective. The table, for example, in every important sense, remains the same, but it seems to have different colours or shapes for different persons or for the same person under different circumstances.

From this it is argued that whereas the physical objects are public i.e., the same object can be perceived by many, sense-datum is private to the observer, it is peculiar to the individual percipient. But this contention does not seem to be valid. Is it not possible for two persons to see the 'redness' of the rose or smell the same odour? Of course, it is true that there are some data e.g., mental images, dreams etc., which are exclusively one's own. But we cannot, on that account, make the general contention that all sense-data are always private. Hirst gives another argument. He points out, "in the first chapter of his book - The Problem of Perception" that though different persons can have the same sense-datum qualitatively alike, they can never be physically identical, being in different persons. But this assertion may be extended to physical objects as well. The same physical object of course may be perceived by different persons, but the perception takes place in different persons and consequently the perception differs even when perceived from the same standpoint.
The truth seems to be that in the case of physical objects there is always a distinction between appearance and reality; there always remains something hidden, something unknown in it e.g. when perceived from one angle. Thus when we look at the front part of the table the back-side is hidden from our vision. The whole reality of the thing is never perceived, all the time only this or that part appears to us. But in the case of sense-datum no such distinction can be made. A sense-datum is what it appears to be; the sense-datum can never remain hidden. For, if it does not appear, there would be no sense-datum at all. No sense-datum can appear in part; either it should be presented in full perception and in its entirety or not at all. Price thus says about a red-patch, "it is a particular existent having a perfectly specific nature. It is of just exactly this shade of colour and has just this shape and no other." (4)

Whether sense-data are really the surface of a physical thing is controversial. Leaving apart the question of the relation between sense-data and physical objects, it may only be said that there are many kinds of sense-data presented to different senses. The physical object might have other properties than the sense-data, but the group of different sense-data make one physical object. It is the same physical object which presents different sense-data.

Another important difference between physical objects and sense-data is that while the former possess causal characteristics, the latter do not have any such causal efficacy. A place is said to be physically occupied when it does not allow anything to pass through it or resist the attempt of any thing to pass through it. Now, this means that a physical object had certain causal powers or characteristics, like resistance or impenetrability. Price emphasizes this difference and says, "by a material thing we mean something which has causal characteristics: and the different kinds of material things (as diamonds, cats, hydrocloric acid) are classified by their different causal characteristics - the power of cutting glass, or catching mice, or dissolving chalk. The most fundamental of these causal characteristics is 'impenetrability' i.e. the power of keeping other things out of the space one is in." But the sense-datum does not possess this causal efficacy. A material thing may act causally even when totally unobserved and so presenting no sense-data.

We may, therefore, provisionally describe sense-data as the sense-qualities which are given directly or immediately by our own sense-organs differing from the physical objects in their relative transitoriness, complete definiteness and entirety, and in their lack of causal efficacy.

(5) Price, loc.cit.P.146.
(b) Arguments for the Sense-Datum Theory: 

Now, we may briefly consider the reasons which have led philosophers to refute the common-sense view that things are directly perceived and to introduce the theory that what we perceive directly are the sense-data, not the physical things? The fundamental question is: why has it been supposed that when we perceive a material object, what we are immediately aware of cannot be parts of the surface of the material object? What necessitates the introduction of these sense-data into our account of the perceptual process?

One reason is that the philosophers, especially since the time of Descartes, have always tried to get at some absolutely certain starting point. We have to start from some point of which we could possibly have no doubt at all. Now, what we are absolutely certain of in perception is the awareness of certain the sense-data. For, in describing physical objects we may doubt many things and may even fall into error and illusion. Only statements about sense-data are indubitable, if we exclude cases of deliberate lying, slips of the tongue and misuse of language. Statements about physical objects could only be probable in various degrees and never certain, owing to the ever-present possibility of illusion and hallucination. As Price says, "When I see a tomato there is much that I can doubt. I can doubt whether it is a tomato that I am seeing, and not a
cleverly painted piece of wax. I can doubt whether there is any material thing here at all. Perhaps what I took for a tomato was really a reflexion; perhaps I am even the victim of some hallucination. One thing, however, I cannot doubt, that there exists a red patch of a round and somewhat bulgy shape, standing out from background of other colour-patches, and having a certain visual depth and that this whole field of colour is directly present to my consciousness. It is clear that there can be no real error except in the use of language if we describe our perceptual experience in terms of sense-data. Therefore, it is argued that in all perception what is directly given is the sense datum and not the physical object.

There are other arguments also which are more or less variations of this main argument to support the sense datum theory.

The most prominent among these is perhaps provided by the problem of perspective or the relativity of perception, a special case of which is traditionally called the Argument from Illusion. It is a common experience that things appear differently to different observers, or to the same observer under different conditions. As a consequence, one is said to have an illusion when instead of taking the thing as it really is, one is deceived by its false appearance without being conscious of the fact that he is deceived.

(6) Price, Perception, P. 3.
The person under illusion believes, for the moment at least, that what he perceives is the real thing. Now, the question is, what is this that is presented in an illusion? Among the different shapes and sizes of the same thing presented from different positions, one only might be true, for a thing cannot possess conflicting shapes and sizes. So what are presented in the remaining instances? Surely it cannot be that real thing. Hence the objects of those illusory perceptions must be something else i.e. sense-data. Now, as the nature of the two cases of perceptions, illusory and vertical, is the same (for otherwise deception would not occur), it would be natural to suppose that the physical object is not directly perceived in the vertical cases also. The conclusion is reached thus, that even granting that physical objects may be perceived as they really are in certain cases, what is directly perceived is always something else - the direct and immediate objects of our perceptions are not the surfaces of the material objects themselves, but the sense-data or different sense-qualities.

The traditional argument from illusion is sometimes criticised by many philosophers. It is said, for instance, that if an object appears to me differently from what it is, then I am still entitled to say that it is the object itself which I perceive. The illusion occurs only due to some intervening factor or factors. Hence Ayer
states the argument in a different way. His starting point is the concept of seeming in the special sense of seeming to perceive. If one says, "I see a cigarette case", one is claiming more than one's present experience strictly warrants for it implies the physical existence of the object. So the more cautious statement would be to say that "It seems to me that I am seeing a cigarette case". The next step would be to convert this statement into a more suitable one, viz. "I am now seeing a seeming-cigarette case". Every perception, whether there is any physical object or not, must at least be the perception of some seeming-object. These seeming-object are sense-data, and the conclusion may be more simply expressed by saying that it is always sense-data that are directly perceived." 

Another aspect of the argument from illusion is the so called causal argument. It states that our perception is always the effect of a causal process. Every perception depends amongst other things on the factors intervening between the observer and the object, especially on the observer's sense-organs and nervous system, and varies with the variations of these media. We experience a sensation only when certain changes occur in the nervous system. When, by means of such sensations, we perceive an object, the sensations are the end-results of a long chain of physical causes starting at the object and ending in the

nervous system. Thus, the findings of neuro-physiology suggest that we never perceive a physical object directly as it is and necessitate the adoption of some form of sense-datum theory; what is directly perceived, being dependent for its existence on the state of the observer's nervous system, may be held to be a sense-datum.

Moreover, it is argued that, since in perceiving we are dealing with a chain of causation which takes time, we must always perceive an object at a time later than that at which the series of physical events which causes the perception starts from it. Hence it is argued that the knowledge about the object is only the after-effect of perception, the information given must always be about the past state of the object perceived. This makes no practical difference in everyday life because the objects with which we deal change so little from moment to moment that no appreciable distinction is made between two subsequent perceptions. But this time-factor is of predominant importance in the perceptions of distant object. Thus, if the light-waves from a distant star take several thousands of years to reach us, we cannot say that we are seeing the star precisely as it is now. In fact, the star might have become extinct several hundred years ago. But if once it be proved that what we perceive is not the physical object itself, but something else, then this conclusion must also be
extended to those cases where the interval of time is negligibly small, since the comparative length of the interval makes no difference to the character of our experience. This causal argument which is supported by the facts of science thus proves that physical objects are not directly perceived.

The acceptance of the sense-datum theory has also been greatly encouraged by the Argument from Hallucination. Hirst explains hallucination as "an experience subjectively indistinguishable from genuine perception, but one in which what a person takes to be a physical object has no public existence or cannot plausibly be identified with any public object." (8) In plain language it may be said that in hallucination one 'perceives' a physical object, where there is no physical object at all. Now, one thing which is common to the real and the hallucinatory perceptions, apart from the specific sensible characteristics, is the fact that we experience both, and therefore the only way in which we can define whatever is common to both experiences is in terms of its givenness. But as the character of the two experiences is alike, these also can be explained in the same way. So if we are bound in one case to say that what is seen is a sense-datum, it is reasonable to hold that this is so in all other cases. The difference between the two is that hallucinations present 'wild sense-data' unlike normal ones, and do not belong to any material object in whatever sense one may interpret this relation of 'belonging to'.

The most perplexing question about the sense-data is to determine their exact nature and status. Price points out, first, that "sense-data are not universals; what I sense is not redness, but a red something, an instance of redness." What is meant by this "red something" is not a physical object that is red, but a sense quality, a particular concrete existence like coloured or hot patches. The next question is, if sense-data are concrete particular existents what is their exact status? There are mainly five views with regard to this question about the nature and status of sense-data.

(a) Some philosophers, specially the Realists, hold the view that sense-data are literally parts, or states, of the physical object which they manifest, and, therefore, are physical.

(b) Others (e.g. idealists like Berkeley) are of opinion that sense-data are states of the parciipient's mind i.e. have a sort of mental existence.

(c) Some philosophers again maintain that sense-data are neither physical nor mental, but neutral particulars. Russell was, at one stage, an exponent of this view.

(d) The critical Realists uphold the view that sense-data are not particulars but universals essences or characters.

(e) It is also held by some that these are neither physical nor mental, but psychophysical or cerebral, depending on the mind/body constitution as a whole for their origination and being.

(9) Price, loc.cit., P.101
The Realists describe the process of perception as a direct contact of the mind with the object perceived. Things are directly presented to our minds. All the qualities and relations which we perceive are in the things themselves and we perceive them just as they are. The neo-realists also admit that when an object is known, it somehow gets within our consciousness, so that the contents of knowledge are the contents or parts of the object itself. It is clear therefore that all data of our perception belong to the physical object and hence themselves are physical.

This commonsense view seems to be very clear at first sight. But, unfortunately, such a simple theory cannot stand the test of scrutiny.

A physical object may be presented to two different persons at the same time. It is quite reasonable to say that the same table is perceived by two persons at the same time. If all sensedata are literally parts of the physical object, then we have to take upon ourselves the almost impossible task of accommodating the most diverse and conflicting data in the same surface. We have to find room even for the so-called 'wild' data. Those who have tried to do so have completely abandoned or revised the commonsensenoion notion of physical object (e.g. Whiteheads' theory of multiple location) so much so that on their theories naive realism hardly retains its ordinary sense.
Science seems to teach us that sense-data cannot be parts of physical objects, but that they are the results or messages sent out by those objects. The Generative Theory thus holds that sense-data depend for their origin and properties on processes in the nerves and brain. What finally happens in my nervous system at the moment when I perceive either an external object or my body is physically quite unlike the initial change which causes it. (This has already been emphasised in the causal argument for sense-data). Physical objects are perceived, but they are never the objects of direct awareness. The object produces certain sensations through the operation of the brain and the nervous system in us, as a result of which the sense-data are immediately presented. As this chain of events requires time, should we not conclude from this that our sense-data cannot be identified with the physical object which excites them?

That sense-data cannot be parts of material objects is thus shown by Moore in defense of what he calls "The accepted view" (which to be sure is not Moore's own view). He takes the example of actually seeing something e.g. an envelope and points out that in seeing this envelope we perceive three kinds of sense-data: colour, shape, size. No one can be sure that colour, size and shape are real qualities of the envelope. For everyone has his own sense-datum, and no two sense-data can be qualitatively identical. And

it would be difficult to assume that ever so many different colours occupy the same surface. Similar is the case with regard to shapes and sizes. Yet all see the same envelope. Now, if it be granted that sense-data are parts of physical objects, then it also should be assumed that several contrary and even contradictory qualities, corresponding to the differences in position, light and other conditions, belong to the same object at the same time. But this is certainly not possible. That is why an overwhelming majority of philosophers have held that sense-data are not parts of physical objects. The cases of illusion also suggest this conclusion. For if sense-data really belong to the actual physical object there would be no illusion at all. In the cases of hallucinations also, where we have "wild sense-datum", it can never be part of a physical object.

There is an attempt by some neo-realists to solve this difficulty by making a distinction between the sense-data which have existence and those which have subsistence. While the real character of the thing exists in the physical space, its unreal or illusory characters only subsist in the world of being. This means that unreal or illusory sense-data somehow are, but do not exist in the physical thing to which they are referred to.

But if we once admit that there are some sense-data which are not parts of physical objects, we can never call them physical and may also extend the same contention to all sense-data.
So we come to the next alternative viz. that sense-data are mental. This view is mainly supported by the idealistic philosophers. According to them the mind can be directly conscious only of its own states or ideas. Berkeley goes to the extreme and reduces physical objects to ideas. According to him, to be, for a physical object, is to be perceived, that is to say, to be in the mind. The objects of perception, therefore, whether these be called 'ideas', 'impression' or 'sense-data' are nothing but mental. In Indian philosophy, the Buddhists are also of this opinion. So realists like Locke who support the representative view hold that we have direct perception only of our own ideas which, however, represent the external object. Therefore the immediate objects of our perceptions are mental in character. Some philosophers again regard sense-data as mental in another sense also. Sense-data are sense-data only for some mind. A sense-datum is a sense-datum to a person only so long as he apprehends it. Its existence depends upon its apprehension. Moreover, no sense-datum which any one person directly apprehends, as said before, ever is directly apprehended by any other person. Two persons may perceive the same physical object, but they can never have the same sense-datum. This shows clearly that sense-data are mental.

Now, it is true, as Price points out, that sense-data are in some part at least, dependent on the mind, that
there would be no sense-data if there were no mind. "But this is not the same as saying that they are mental or inhere in the mind. The becoming liquid of the wax depends upon the fire, but does not inhere in it."(11) Moore also is of opinion that sense-data can be said to be in the mind only in the sense that they are apprehended by me. "They are, so far as I can see, not in my mind in the sense in which my apprehension of them is in my mind. My seeing of it is, it seems to me, related to my mind in a way in which this which I see is not related to it."(12) The sense-data are no doubt related to the mind and dependent upon it in a most intimate sense. But, this is not obviously the same to regard them as mental. It would be proper to say that they are never 'in' the mind, but before it. It is ridiculous to say that the mind has become red when we perceive a red object.

If sense-data were really mental in the sense in which our mental processes like thoughts and feelings are, we could carry, and even create, them at our will. Since we cannot do all these, it is proved that they are not mental.

There is another grave difficulty. If sense-data are mental and we are directly conscious only of these sense-data, it is impossible to know whether the ideas truly represents the external object; not only that, it would be extremely difficult to know whether any such object exists at all.

(11) Price, loc. cit., P. 118;
(12) Moore, Some Main Problems of Philosophy, P. 43.
The American Neo-Realists introduce the theory that sense-data are neither physical nor mental, but neutral particulars of which both mind and matter are composed. William James propounded such a view. To him the raw materials out of which the world is built up are not of two different types, material and mental but the same set of particulars are arranged in different ways, according to different principles, and some arrangements may be called material while others may be regarded as mental. Russell also accepts this view with regard to sensations, though not with regard to images. As he says, "The stuff of which the world of our experience is composed is, in my belief — neither mind nor matter, but something more primitive than either. But mind and matter seem to be composite, and the stuff of which they are compounded lies in a sense between the two, in a sense above them both, like a common ancestor" "what is heard or seen belongs equally to psychology and physics".

This neutral theory, though it seems to avoid the disadvantages of categorising sense-data as either physical or psychological, has difficulties of its own. The most obvious difficulty is: how to judge which of these sense-data is physical and which mental unless we have previous knowledge of matter and mind? If there be only one ultimate stuff which is neutral we should have no idea of matter and

(14) Russell, Ibid., P.25.
mind at all. So the logical conclusion would be that there should never be two spheres - mental and material. Again, the assertion that this neutral stuff taken in one context form matter and in another context mind seems to be self-contradictory. How can we sensibly speak of context or system with reference to entities which have no physical or mental character? And if there is but one neutral-stuff, there cannot be any context or system in it, nor can any arise out of it. Even if it be possible to differentiate the two contexts, it is difficult to understand how the neutral entities can retain the distinctive characteristics of sense-data. Sense-data are certainly different both from mind and from matter. But if the ultimate stuff be composed of both, it would not be possible to determine the exact nature of sense-data.

But if the sense-data are neither physical nor mental, nor even neutral, what are they? The critical realists contend that sense-data are nothing but the universal essences or character complexes of physical objects not the physical objects themselves nor their parts nor any of our mental states. They seem to think that the essences or data are logical entities like platonic ideas which subsist eternally in the universe and are only to be discovered by our mind and if the perception be correct these character-complexes or universal essences are to be identified with the real attributes of the object; if not, not.
The critical Realists explain error, by saying that just as truth consists in assigning the character-complexes to an object which really possesses them so also error arises when we assign some essences to an object which really does not possess it.

This view seems to be quite plausible at first sight. But if we directly know only the universal essences and never the physical object, how can we know that the physical object exists at all? Then again, if we know only the qualities, how can we know that these qualities are possessed by the physical object in true perception and are not possessed in error? Not only that, the very question is whether the data are at all universal? Further, if they are universal, so they belong to particular objects, and if so, in what sense? The critical Realists claim that there is a logical neatness in taking the object of perception, e.g. red, as a universal and numerically one and the corresponding particulars as the functions of this one universal. But to this it may be said that the theory goes against our immediate experience "We immediately feel that the red that is perceived is not a universal, not numerically identical with another like red perceived elsewhere". What we experience is never mere red, but a red patch. A mere red is only an abstraction which can neither exist nor even subsist. A concrete physical object cannot be described, even inadequately, by universals; because as Whitehead has

insisted other actual entities also enter into the descrip-
tion of any one actual entity. It is clear therefore that
the immediate data of our experience cannot be universals;
not only that, every so-called universal is in a sense
particular as it is always exemplified in some particular
instance.

There is still another view to be considered,
namely that sense-data are cerebral. This suggestion seems
very peculiar at first sight. But the implication should be
understood properly. There are two points which should be
clear from the beginning. First, the brain should not be —
taken in the materialistic sense, as a mere piece of matter
subjected to the physico-chemical process, but as the organ
of a living being, having a vital aspect as well. In the
second place, sense-data should also be regarded as having
a vital function. The sense-data are vital in the sense in
which breathing and digesting are regarded as vital, that
is to say, sense-data are indispensable in the life of the
higher animals. Now if sense-data be vital, there must be
some organ in which such vital processes inhere, and the bra
in its vital aspects should be considered as such an organ.
As Price asks about such data, "Might it not be said that
they are neither physical nor mental but vital, in the sense
in which breathing and digesting are vital? And, if so, is
there any reason why they should not inhere in one of the
organs of the living organism? And is there any reason why
the brain should not be this organ?"

This view also has a special difficulty. If the brain be the centre then in the cases where both the visual and tactual sensations occur simultaneously, we have to assume that the brain is at the same time in two places. For these expanded sense-data always are constituents of the surface of the external thing which is generally long away from the brain. Hence if the process inhere in the brain, then the brain has to be present in both the spaces. But this is sheer absurdity. Moreover, "if sense-data are literally inside the brain we are committed to the conclusion that sense-data are always smaller than the things to which they belong (it ought to be possible to say how much smaller) and that our own head is very much larger than it appears from touch to be". (17) Further, if sense-data are spatially inside the brain, we would be quite unconscious of their existence. For if they were literally inside the brain, we should have to fall back upon the causal theory of inference to justify our beliefs about the material world (brains included). But as the brain cannot be spatially outside, we cannot be informed about the sense-data which inhere in it.

Of course it cannot be denied that the sense-data depend on the organism as a whole. At the same time it is to be admitted that there would be no sense-datum if there were no mind to perceive it. Hence it seems to be correct to say that sense-data are psycho-physiological. The mind and

(17) Perception p. 128.
the brain, or in otherwords the total organism, reacts in certain specific ways to the influences of a reality outside and manifests it as having certain sensible qualities like colours, sounds, smells, tastes and touches. Thus the substantial compound of mind-body possesses the power of generating sense-data though neither of them can alone produce them.

But we have to say here that although it is true that sense-data must depend for their origination, existence and continuation both on our mind and the brain or the nervous system, it would be utterly mistaken to hold that they are in the organism or inhere in the psycho-physiological constitution of the percipient.

This explanation of sense-data is an explanation of how the sense-data originate. This can hardly be considered as a true account of the nature of sense-data, as to what qualities they possess. Indeed it seems extremely difficult to say with absolute certainty that sense-data possess this or that nature, that they are mental or physical or psycho-physiological, or anything else. The real fact is that the traditional categories do not apply to sense-data. Sense-data cannot be classed under any system, either physical or psychical; they are phases of no substance at all. The only characteristic of a sense-datum which may be asserted with certainty, is its givenness. What other properties it may have, whether it persists before and after
it is perceived, whether it belongs to the surface of the physical object or whether it is a property of the perceiver's mind — all these are dubious questions. But one thing that cannot be doubted is that the sense-datum must be given or presented, if it has to have any existence at all. There are many misconceptions about this concept of givenness. We must guard against those from the very beginning, though we hope to discuss this concept at greater details in the concluding chapter of this thesis. Though the sense-datum philosopher, e.g. Price, have based their theories on the concept of givenness, it would be shown that a proper analysis of the notion of givenness would lead to the collapse of that theory. For the present, we may only point out, rather provisionally, that it has been a mistake to identify the given either with what is analytically the simplest, or with what is indubitable, or with what is complete in itself. These are deeply rooted philosophical prejudices, and we have to go a long way before we could lay our hands on them.

(d) Passage from Sense-Data to Physical Objects:

We now come to the last of the problems, to be faced by any version of the sense-datum theory. The question is, how to pass from sensation to real existence, from subjective to objective, from what is supposed to be given to what we believe we perceive. This problem of justifying
the claim to know how physical objects are on the basis of how they seem to be, is a traditional one, and philosophers have given different types of accounts of this passage from sense-data to material objects.

The theory of causal inference is the most important answer given. The Lockean view about perception may be said to be the foundation of such a theory. According to this theory, the mind cannot be aware of the objects directly, but only of its own mental states or “ideas” which are copies of objects, and we can infer the existence of the latter as causes of the former. Thus the move from statements about experience to statements about things is justified in terms of the causal principle to the effect that things cause our experiences. Russell in an attempt to reformulate the causal account distinguishes between two types of knowledge - knowledge by acquaintance and knowledge by description. We have direct knowledge or immediate acquaintance with the sense-data that make up the appearance of a thing - the colour, shape, hardness, smoothness, etc. But the thing itself is known not directly but by description. "My knowledge of the table is of the kind which we shall call 'knowledge by description'. The table is the physical object which causes such-and-such sense-data. This describes the table by means of sense-data." The fact that different persons

(18) Russell - Analysis of Mind, PP. 46-47.
might have similar sense-data makes us suppose, according to his opinion, that "over and above sense-data there is a permanent public object which underlies or causes the sense-data of various people at various times." Moore also supports some kind of causal connection between the sensibles and the physical objects. He of course, is of the view that the physical objects do not cause the experience of the sensibles for the "events which happen between the half-crown and my eyes, and event in my eyes and optic nerves, and brains are just as much cause of my experience as the half-crown itself." Yet the half-crown may be said to be causally related to the sense-experience in a different way....the half-crown has some particular kind of causal relation to my experience... a kind which may be expressed, perhaps by saying that it is its 'source'. We do not know the physical object, we can know only the sense-data by direct apprehension and the physical objects indirectly as the source of these sensibles.

The causal theory of perception owes its attraction to the fact that it is generally supported by science. Science teaches us that as there is an interval of time, a thing cannot be perceived immediately; what is presented in perception is its effect. "Now it seems that if all that is being claimed by the causal theory be that we are entitled to postulate a world of 'external' object as a means of

(20) Moore - Philosophical Studies, London, 1922, P. 192
explaining our perceptual experiences, it seems innocent enough.  

But the theory signifies much more and consequently faces several well-known difficulties. Most obviously, it introduces into our perceptual consciousness an inferential element which is quite foreign to it. Do we reason from what is given to something else that is not? Surely when we perceive anything we do not infer and are not aware of any process of arriving at conclusion from premises. Inference takes time, but the functions of perception are instantaneous: when we look at a house at a distance, the sensation does not come first, and the awareness of a house after it. The perception arises along with the sensations. Hence to say that the one is perceived and the other is only inferred or imagined is to evade the real problem of perception. What we ought to do is not to reduce perception to sensation, but to explain how along with the sensation we have the perceptions of objects.

Some philosophers argue that the inference involved in perception is not conscious and explicit, but only implicit and unconscious. Thus Blanchard says that the passage from what is actually given in sense to what is only thought "is a movement that may be described as implicit inference, in which neither what is sensed nor what is taken for granted is singled out for express attention." That is to


(22) B. Blanchard, Nature of Thought(Vol.I), London, 1939, P. 120.
say, we do infer but we are not conscious of inferring because we do it so quickly and without any effort. The essential thing in inference is the insight into the connection of ground and consequent, and this does not take time.

But this theory of implicit inference cannot be accepted. Inference, be it explicit or implicit, involves some time. But perception, as said before, is instantaneous. Moreover, to find judgement or inference in perception is, as Price says, to over-intellectualize it. There is no conscious intellectual effort in perceiving, it is automatic. Besides, if in perception we are not directly aware of objects, no inference (whether explicit or implicit) from sense-data can lead to any indirect knowledge about them. Against the causal theory, therefore, it is argued that given the sense-data it would be impossible ever to know that the logically distinct, unobservable transcendental causes existed. If nowhere in our experience we have a direct cognition of objects (i.e. cause) how could we possibly know that there is any object at all to be inferred? The unconscious inference is paradoxical. If we are not conscious of inferring, what evidence is there that we do infer at all? The Nyaya School in Indian Philosophy rejects the Buddhist account of perception of physical objects as an inference from the sense-data on the ground that we never perceive a bare patch of colour and only afterwards come to know the physical object that is so coloured, but always
perceive a coloured object. The perception of a quality (guna) is possible only through the via media of substance (Dravya). The Naiyayikas also urges that what is never perceived cannot also be inferred. For inference requires prior knowledge of Vyapti, and if the physical object is never perceived together with its marks, the marks could not possibly function as its marks.

The idea that in perception there is no intellectual effort leads to another theory, namely, the view that the passage in perception is rather association and reproduction than inference. Such a view has been popular since the time of Hume. We find an echo of Hume's view in the writings of Sully - "Perception is that process by which the mind after discriminating and classing a sensation or sensation complex, supplements it by an accompaniment or escort of revived sensations....." It is held that where there seem to be two judgements and a passage between them to hold that one judgement may be joined mechanically to another in consequence of habit, and be merely called up by it, that there is a process of unconscious reasoning, a clearly formed conclusion from an unconscious premise, is really gratuitous. What we actually have is an association and reproduction. Thus when we see the colour of a table (i.e. have a colour sensum), we recall at once the other sense-data (regarding the shape, size etc.) with which it was associated in our past experience of tables. That is, the present

sensation of colour revives in my mind the colour and touch sensations of its other parts in the form of images. The Buddhists regard an object as an aggregate of different parts or atoms, while to the Sankhya School the dravya or the object is nothing but an association or collection of such qualities as colour, shape, size etc. which are generally known as sense-data.

The inadequacy of such a theory becomes apparent if the actual process of perception be analysed. When we perceive an object, we do not first have the images of its unseen parts and then combine these together. Actually in perception "we simply do not recall a vast and various multitude of past sense-data which have accompanied the sense-datum in the past." (24) It is true that we may form such images, but the fact that we can make such image by conscious effort proves that they are not present in perception. There is another difficulty. Even if we admit the presence of images, that would not be enough. For "perception involves not merely the presence of something, but also the taking of something as present which is not actually sensed, and an image of juiceness is not a taking of juiceness as present. The depth of difference between the two is shown by the fact that in perception we sometimes err, whereas an image can no more be erroneous than can a sensation. Images themselves are neither true nor false". (25)

As the nature of perception and images are different, images cannot be said to be combined with perceptual evidence. Moreover, as the Nyaya points out, we never regard an object as a mere aggregate of parts, be it present or past, but always apprehend it as one object. Over and above the conception of an assemblage of parts or qualities, there is a sense of unity. So even if it be true that in perceiving a thing we have images of past sense-data along with a present one, we do not understand how this can explain our cognition of the thing. For the thing is not merely an aggregate of sense-data or sense-qualities, but an entity or being which has or is somehow related to those data or qualities of this entity or being.

There is another attempt of a different type to explain the relation between the given sense-data and the physical object. According to this view physical objects are nothing but logical constructions out of sense-data. These philosophers who are generally known as phenomenalists and are also sometimes called Reductionists deny the move from the one to the other as a substantial one by treating statements about physical objects as restatements about the sense-data. They do not deny that there are physical objects which are not directly observed, but according to them to talk about such unobservable entities is, in the end, to talk about sense-data. The connection between

experience and object is necessary, to speak of one is to refer to the other. There are not two worlds, an inner and an outer, but only two terminologies. Physical objects consist of nothing but groups of sense-data such as, colours, shapes, sizes, hardness etc., only one of which may be actual but all are obtainable at a time.

Phenomenalism thus claims to have avoided the difficulties of the causal theory; for according to this view there is no need of postulating a material world which is in whole or in part unobservable; hence there arises no problem of accounting for the passage from sense-data to physical objects. But a closer view of the matter shows that phenomenalism is false and the attempt to reduce the objects to sense-data is futile. If an object be composed of all actual and possible sense-data, how could the idea of an object be formed until all of them be presented to us? On the other hand, if some of the data be taken as the object, there is no reason why any one of them cannot be so taken. The most emphasized weakness of this view is that, if it were true, unobserved objects would have to arise from merely potential causes. For as the physical object unlike sense-data can exist without being perceived, the statement about sense-data into which statements about physical objects are to be translated should be predominately hypothetical, and it seems to be absurd that a categorical statement about
a physical object should be completely translatable into hypothetical statements about sense-data. On the contrary, sense-data sentences might be true and yet the material object statements be false, for we could not get absolute certainty, required for entailments, that the sense-data were not due to some hallucination or lack of all possible conditions. There is still another objection. A collection of sense-data cannot perform the functions assigned to it by the phenomenalist. A sense-datum is said to lack causal efficiency. How can it then be expected that these be causally efficient, and present themselves to the per- cipient and also resist other things in the way in which physical objects are found to do? So it should be admitted that physical objects and sense-data cannot be co-ordinated; the statements about one cannot be translated without remainder into statements about the other.

The consideration that over and above mere sense- data there is something or some reality which has the causal functions, led Price to think that an object or material thing is composed of a group of sense-data together with a physical occupant. He calls this theory the theory of collective Delimitation. The theory lays stress upon two important points: First, "that the primary relation is one between an entire family and a material thing, the relation between individual sense-data and thing being
derivative; and that the family is related to the material thing by delimiting or coinciding with the physical (i.e., physically occupative) portion of the thing. Phenomenalism identifies the material thing with the group of sense-data alone, while the causal theory with the physical object only. Sense-data do not have the causal characteristics, on the other hand, a pure physical occupant is something so shadowy that we can scarcely conceive of it at all. To avoid the defects of both Price proposes to call the complex object 'the complete thing' or the 'total object' which is a family of sense-data conjoined with a physical occupant.

Price's theory at first seems to be better than any other so far considered. But on further examination it is found to have certain difficulties. The theory shares the disadvantages of both the theories it seeks to combine. It is difficult to understand how the family of sense-data can coincide with the physical occupant which is, on his own view, so shadowy that we can hardly conceive it at all. Further, the two are quite different in nature, and the precise mode of their unity remains a mystery. Moreover, it is wrong to think that to have causal characteristics or to be impenetrable is necessarily to be a physical object. In actual cases of perception the material thing does not appear to be a combination of the two. When we perceive a

(27) Price, Perception, P.303.
tree it does not seem that we know a particular family of sense-data as coinciding with a physical occupant. As there is no conscious process of inference, there is no conscious activity of combination, be it the association of present with past sense-data, or be it the conjunction of sense-data with physical occupant.

It is quite evident from our discussion that no one of the different views gives a satisfactory account of the move from sense-data to physical objects. The question of the relation between the two is indeed a perplexing one, and it is an extremely difficult task to describe satisfactorily. However, it seems that there is never any conscious attempt on our part to pass from sense-data to physical objects. It is at best automatic. The acts of having sense-data and perceiving an object are simultaneous. Our psycho-physical organism reacts to the influence of some reality outside in certain specific ways and manifests it as having certain sense-qualities like colour, sound, touch etc. The object of perception or the material thing is this something apprehended in sensation as coloured, shaped and so on. Thus even if it be true that it is only the sense-data which are sensed or intuited directly, the whole thing i.e. the tree, is immediately known or perceived. There is, therefore, in perception an intuitive knowledge of what has not been actually sensed. It is called by Price the power o:
accepting the whole thing just when a sense-datum is sensed by us. This is an ultimate element in human nature. Broad also says that there is no conscious passage or way to move from sense to physical objects, it is instinctive. "The belief that our sensa are appearance of something more permanent and complex than themselves seems to be primitive, and to arise inevitably within us with the sensing of the sensa." (28)

We thus find that though the sense-datum theory was developed with a view to accounting for certain difficulties connected with attempts to understand perceptual experience, it nevertheless gave rise to serious difficulties of its own. It would even seem that it creates more problems than it is able to solve. It is then no wonder that the current philosophical mood has turned against this theory. The days are over when the sense-data theory was the most fashionable preoccupation of philosopher. Today philosopher of all persuasion, empiricists and rationalists, analytical philosopher and phenomenologists, have all taken it to task, exposed its assumption and inadequacies. We now turn to some of those major criticisms of the theory.

(28) Broad Scientific Thought, P.268.