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PERCEPTUAL KNOWLEDGE

An Analytical and Historical Study

*Selections from Ch. 1
AK of Ch. 2*



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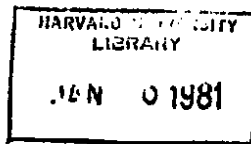
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For Keith Christopher Dicker

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A PHILOSOPHICAL PROBLEM CONCERNING
PERCEPTION AND KNOWLEDGE

It is obvious that there is a fundamental relationship between perception and knowledge. This is not to say that the two are identical. At any given time, we each know many things that we do not perceive. I know at this moment that there is ice at the North Pole, but I am not perceiving this to be the case. Further, at any given time we each know many things that we are not even thinking about. At this moment I know certain facts of history and geography, for example, which are in no sense present to my mind; and I shall continue to know these facts even while sound asleep. For these and other reasons, perception cannot be simply identified with knowledge.

The relationship between perception and knowledge, rather, is that perception is our basic way of *acquiring* factual knowledge about things that can exist outside the surfaces of our own bodies. (The qualification 'factual' is intended to exclude knowledge of conceptual relations; the phrase '*can* exist outside the surfaces of our own bodies' is intended both to exclude matters knowable only by introspection and to include physical objects that no longer exist or do not yet exist.) Such knowledge is always acquired, directly or indirectly, by sense-perception. For example, I know that De Gaulle was a tall man, though I am not now perceiving this to be so. But how could I know it unless I, or someone who informed me of it, or someone else who informed that person, etc., had originally come to know it by perception or inferred it from some other fact known by perception?

One way to impress upon oneself the fundamental role of perception in acquiring knowledge is to compare it with memory. Although memory is a way of knowing, it is not a way of acquiring knowledge. Suppose you ask someone if he knows your telephone number. The person concentrates for a few moments and then gives the correct number. If the person had no previous knowledge of the number, it would *follow* that this was not a case of remembering. In other words, if the person had somehow just come to know the number, then we could not correctly say that he had just remembered the number. This shows that unlike perception, memory is not a way of acquiring knowledge (which is not to deny, however, that memory is in some sense involved in acquiring knowledge by perception and, indeed, in any use of concepts).

This example also shows something about the status of the proposition that all factual knowledge about things that can exist outside the surfaces of our own bodies is ultimately acquired by sense perception. It shows that this proposition is not a necessary or a logical truth. For there is nothing logically absurd about the idea of someone's coming to have such knowledge in ways other than sense-perception — say by intuition, clairvoyance, telepathy, or whatnot. So the proposition that all such knowledge is ultimately derived from sense-perception is a very general contingent proposition, not a logical truth.

The basic relationship between perception and knowledge, then, is that perception happens to be ultimately our only way of acquiring factual knowledge about things that can exist outside the surfaces of our own bodies. (Anyone who believes in telepathy, clairvoyance or the like may substitute 'main' for 'only'.) The epistemological problem to be presented in this chapter arises when we attempt to understand this relationship. More specifically, it arises when we ask: under what conditions does perception yield knowledge? To formulate this question more clearly, let us put it in the formal mode, as follows: Under what conditions does 'S perceives x to be F ' imply 'S knows that x is F '? (where 'S' stands for a person, ' x ' for some object or event, and ' F ' for some property or relation).

I. WHY PERCEPTION DOES NOT AMOUNT TO KNOWLEDGE

We cannot claim that every case of perceiving x to be F is also a case of knowing that x is F , i.e. that the following conditional is true for any S , x , and F :

(A) If S perceives x to be F , then S knows that x is F .

This statement is false because there are cases where its antecedent is true but its consequent is false. To see this, one need only think of a case where S perceives x to be F but x is not F . In such a case, S does not know that x is F , for the elementary reason that x isn't F . Obviously, I am here assuming the correctness of the truth-condition for knowledge, i.e. of the general principle that one can know something to be the case only if it is the case. (If S knows that p , then p .) Given this fundamental requirement for knowledge and the existence of cases where S perceives x to be F but x is not F , it follows that (A) is false.

This may be illustrated as follows. Suppose that S has just come indoors after a walk on a cold winter's day. During the walk, S was not wearing gloves and his hands were exposed to the cold air. Upon coming indoors, S acciden-

tally drops his watch into a sink full of lukewarm water, and plunges a hand into the water in order to retrieve the watch. Ordinary language provides several ways to describe the painful experience that results for S . We can say, of course, that

The water feels (seems) hot to S .

We can also say, without deviating from ordinary usage, that

S perceives the water as hot.

Finally we can say, also without stretching the language, that

S perceives the water to be hot.

This last statement is especially relevant here, since it is an instance of our general schema, ' S perceives x to be F '. Yet in this case x is not F : by hypothesis, the water is not hot but only lukewarm. It follows, given the truth-condition for knowledge, that S does not know that the water is hot. S does, however, perceive it to be hot. Therefore, one can perceive x to be F without knowing that x is F ; the conditional statement (A) is accordingly false.

This shows that if we want to understand the relation between ' S perceives x to be F ' and ' S knows that x is F ', we need to qualify (A) in some way. Surely it must be possible to formulate a suitable qualification, since perception obviously does yield knowledge in many cases.

Before considering how to amend (A), however, let us make two observations. First, the example of the water is by no means a special or isolated case. Other cases of perceiving x to be F though x is not F can easily be given, not only for the sense of touch but also for vision, taste, smell, and hearing. In his *Meditations*, Descartes gives the example of perceiving a distant tower to be round though in fact it is square, and of perceiving a statue on top of a nearby tower to be quite small though in fact it is colossal. A sweet wine can be perceived to be sour if one has been eating candy, or to be almost tasteless if one has a bad cold. The deafening roar of a large waterfall can be perceived to be just a faint whooshing sound if one is a few hundred feet away. The strong, putrid smell of a meat-packing plant is perceived to be rather aromatic and appetizing if one is not too close to its source. In general, it is clear that simply by varying the external conditions of observation or the physiological state of the perceiver, a perceiver can be made to perceive things quite otherwise than they really are.

The second observation is that these are all examples of perception in a central, full-blooded sense of the term 'perceives'. This is because in all of

them, the person perceives something *to be* such-and-such. When we say that someone perceives something, we usually mean that he perceives it to be a certain kind of thing, that he takes it to have some characteristic(s) — if only basic ones like shapes, size and color. We do not usually mean only that the person's sense-receptors are functioning and are being stimulated by some object, which the person may not even notice. If the person does not notice the object, we hesitate to say that he perceives it at all. Such a case seems to be a peripheral or borderline case of perception. Cases of perceiving something to be such-and-such, on the other hand, are cases of perception in a central sense of the term 'perceives'. Now it is interesting to find that in cases captured by this central sense of the term — cases of perceiving x to be F — perception does not amount to knowledge. The reason is simply that one can perceive a thing to be such-and-such even though the thing isn't such-and-such.¹

Accordingly, it might be suggested that the condition under which 'S perceives x to be F ' implies 'S knows that x is F ' is, simply, that it be *true* that x is F . The following equivalence would then constitute the correctly amended version of (A):

- (B) (If S perceives x to be F , then S knows that x is F) if and only if (x is F).

But this will not do. For suppose that x is red and that S perceives x to be red. However, x is illuminated by extremely powerful red lamps, under which any object would look red to S no matter what color it was. Or, alternatively, suppose that S's color vision is defective, in such a way that all objects always look red to him no matter what color they are. It is clear that in these cases, S may not know that x is red; even though x is red and S perceives it to be red. Therefore, (B) is incorrect.

2. DOES PERCEPTION UNDER NORMAL CONDITIONS OF OBSERVATION AMOUNT TO KNOWLEDGE?

It may well seem that the cases considered so far do not present any serious difficulty regarding the relation between perception and knowledge. For in the cases where x is perceived to be F but is not really F , it is the conditions of observation which are to blame for this fact. The lukewarm water is perceived to be hot because the perceiver's hand is chilled; Descartes's square tower is seen to be round because it is too distant for accurate observation;

the sweet wine tastes sour because one has been eating something very sweet, and so on. In each case, it is the present conditions of observation that prevent the perceiver from perceiving the object to be what it really is. And in the cases where perceiving x to be F does not amount to knowledge that x is F even though x is F , it is again the conditions of observation which are at fault. Perceiving the red object to be red doesn't constitute knowing that it is red, just because under the prevailing conditions of observation any object would be perceived to be red, even if it were yellow or grey or blue or some other color.

This suggests that in order to specify the conditions under which perception yields knowledge, we need only introduce a clause to rule out abnormal conditions of observation. Consider, then, the following attempt to formulate the conditions under which 'S perceives x to be F ' implies 'S knows that x is F ':

- If S perceives x to be F , then S knows that x is F
if and only if
- (1) The conditions of observation are normal
and
 - (2) Under normal conditions of observation, S would not perceive x to be F unless x were F .

This may be regarded as an intended analysis of perceptual knowledge, inasmuch as it purports to provide both necessary and sufficient conditions for it to be true that a case of perceiving x to be F is a case of knowing that x is F .

Before considering whether the analysis is adequate, some clarificatory remarks need to be made.

(i) As previously noted, S cannot know that x is F if it is false that x is F . Nevertheless, it is not necessary to add ' x is F ' as an additional condition to the proposed analysis. For (1) and (2), in conjunction with 'S perceives x to be F ', entail that x is F .

(ii) The *analysandum* must not be interpreted as a material conditional. For then the analysis could be trivially falsified by making 'S perceives x to be F ' and condition (1) both false. Since the notion of a material conditional is a technical one which does not capture the full meaning of the vast majority of conditional statements in natural languages, this constitutes no serious objection to the analysis.

(iii) It is widely (though not universally) agreed by philosophers that knowledge entails belief (if S knows that p , then S believes that p). However,

it might be argued, 'S perceives x to be F ' does *not* entail 'S believes that x is F '; since if it did, 'S perceives x to be F but S does not believe that x is F ' would be inconsistent, which it plainly is not. Therefore, the condition that 'S believes that x is F ' must be added to the analysis.

I think it is true that 'S perceives x to be F but S does not believe (or even: S disbelieves) that x is F ' need not be inconsistent. Nevertheless, I also think it unnecessary to add 'S believes that x is F ' to the analysis. This is not because I would deny that knowledge entails belief; for present purposes I shall remain neutral on that question. Rather, it is because on *one* natural construal, the notion of perceiving x to be F does involve (so much as) taking or believing x to be F . This can be seen by noting that on one natural interpretation, 'S perceives x to be F and S believes (accepts, judges, thinks, takes it) that x is F ' is *redundant*. Thus, in one sense of 'S perceives x to be F ', this statement does not entail that S believes that x is F ; but in another sense of 'S perceives x to be F ', the statement does entail this. So if knowledge entails belief, then 'S perceives x to be F ' should be taken in the latter sense; while if there can be knowledge without belief, 'S perceives x to be F ' may be taken in the former sense. In either case, it is unnecessary to add 'S believes that x is F ' to the proposed analysis.

(iv) It might be suggested that condition (2) should be regarded as a definition or analysis of 'normal conditions', i.e. as a logical equivalence (whose right-hand side is a subjunctive conditional). But this would not be correct because, as I shall show presently, the fact that S would not perceive x to be F unless x were F is not by itself *sufficient* for the conditions of observation to be normal. At most, then, (2) might be held to provide a logically necessary condition for it to be true that the conditions are normal, i.e. a partial analysis of 'normal conditions'. Can we affirm, then, that in order for the conditions of observation to be normal, it is necessary that S would not perceive x to be F unless x were F ; e.g. that S would not perceive the water to be hot unless it were hot, or perceive the wine to be sour unless it were sour, or perceive the tower to be round unless it were round, etc.?

Even this weaker suggestion would have to be qualified in order to be correct. For suppose that S is inattentive to his experience, or confused about the (criteria for applying the) concept ' F '. In that case S might perceive x to be F though x were not F , even if the conditions of observation were completely normal. Surely a person can misperceive things as a result of inattentiveness or of some confusion about the relevant concepts. In order for (2) to specify a necessary condition for 'normal conditions', it must accordingly be amended to read:

- (2') Under normal conditions of observation, if S is attentive to his experience and is not confused about the concept ' F ', then S would not perceive x to be F unless x were F .

Notice that (2') allows for considerable variation, depending upon the circumstances, in what counts as normal conditions. This is as it should be. Normal conditions for visual perception are not the same as normal conditions for gustatory perception. Normal conditions for visual perception of a thing's size are not the same as those for perception of its color. Normal conditions for visual perception of a ship's length are not the same as those for a shoe's length. This looseness, which in effect highlights the analytic connection between normality of conditions and correct perception, is a feature of the ordinary conception of normal conditions of observation. Thus, suppose that a person misperceives a table's shape (e.g., takes it to be oblong though it is round), although he is attentive to his experience and knows how to apply the relevant concepts. Does it not then *follow* that the conditions of observation are not normal (for observation of the table's shape)? If they were normal, then — since the person is being attentive to his experience and knows how to apply the relevant concepts — he would not be misperceiving the table's shape.

It may be objected that the ordinary conception of normal conditions of observation is not as tightly connected with correctness of perception as I am suggesting. For isn't there a sense in which, for example, a person looking at Descartes's square tower from a great distance, and perceiving it to be round, is perceiving it under perfectly normal conditions of observation, provided that there is no unusual impediment to visual perception? Although it could be replied that the person's great distance from the tower in itself prevents the conditions for visual perception of its shape from being normal, let me concede the force of this objection. Anyone who feels that the objection has enough force to show that I am misusing the term 'normal conditions of observation' may substitute 'favorable conditions' for 'normal conditions' in (2) and (2'). With one minor exception which will be noted at the appropriate place, this substitution would not affect the course of my argument.

The above considerations show that strictly speaking, the proposed analysis should be modified by substituting (2') for (2). A third condition should also be added to the analysis, namely:

S is attentive to his experience and is not confused about the concept ' F '.

However, for the sake of simplicity I shall leave these refinements understood rather than including them explicitly in the analysis. Since the problem concerning perception and knowledge that I shall present does not turn on the inattentiveness of perceivers or on their failure to master concepts, this simplification should not lead us astray and should help to focus our attention on the central issues.

Do conditions (1) and (2) really provide the necessary and sufficient conditions for perception to yield knowledge? If they do, then it is difficult to see why there should be any problem about the relation between perception and knowledge. For after all, conditions usually are normal. So, perceiving x to be F will usually be a way of knowing that x is F . Furthermore, cases where conditions are not normal are precisely those in which we cannot know that x is F merely by perceiving it to be F . So it is a point in favor of the proposed analysis that it does rule out such cases. Of course, even in cases where conditions are not normal we can still know that x is F , provided we compensate for the abnormality by appealing to independent information. For example, if I am perceiving a white object to be yellow because I am viewing it under strong yellow lights, I can still know that it is white by reasoning that in this light it wouldn't look yellow unless it were white; or, if that seems too risky an inference, by carrying it into a better light and looking at it again. In such a case, perception has to be supplemented by some sort of inference or experiment before it can yield knowledge. All this is faithfully reflected by conditions (1) and (2). For they are supposed to specify the conditions under which perception yields knowledge even though it is not supplemented by any inference or experiment. The proposed analysis, then, does have a good deal of plausibility, and this suggests that the relation between perception and knowledge isn't nearly as problematic as many philosophers have supposed.

I shall now give an example purporting to show that conditions (1) and (2) are not sufficient for perception to yield knowledge, i.e. an example purporting to describe circumstances in which S perceives x to be F , conditions (1) and (2) are satisfied, but S does not know that x is F . Although I do not think that this example really refutes the proposed analysis, I want to present it anyway because it suggests a line of argument (to be presented in Section 3) which does refute the analysis.

The example is as follows. Suppose that S is a person whose sensitivity to heat and cold fluctuates frequently and irregularly. Sometimes when things feel hot to S they really are hot, but just as often when things feel hot to S they are not really hot. S is like a thermometer that works only intermittently:

sometimes it tells the right temperature, at other times it is way off. Suppose that at a given time, call it time t , S 's sensitivity to temperature happens to match that of an average person at most times; at time t S is like the thermometer when it happens to be working properly. And suppose that at time t , S plunges his hands into a tub of hot water and perceives the water to be hot. It is clear (assuming S has no independent information about the water's temperature or his present sensitivity to it) that S does not know that the water is hot, despite the fact that it is hot. For it is merely a lucky coincidence that S is perceiving the water as it really is. In other words, it is purely accidental, coincidental, or lucky that at time t S 's sensitivity to heat is an accurate index of the water's temperature. Had S plunged his hands into the water a moment earlier or a moment later, he would have perceived it to be cold, or lukewarm, or whatever. Think once more of the eccentric thermometer with which S can be compared. If you had such a thermometer, you obviously could not rely on it for knowledge of the temperature *even when it happened to be working properly*; unless you had some independent way of knowing that it was working properly at that particular time. Likewise, S , whose sensitivity to heat and cold fluctuates widely and irregularly, cannot rely on his senses for knowledge of the water's temperature even at t when his sensitivity to temperature happens to be normal; unless of course he has some way of knowing that at t his sensitivity to temperature is normal.

This example illustrates an important general principle. This is that one cannot know something if one is right about it merely by coincidence, luck, or accident. Otherwise, why should not every lucky guess be an instance of knowledge? Yet, that would be absurd: a correct guess does not amount to *knowledge*, because its being correct rather than incorrect is a matter of chance or luck. One contemporary philosopher, Peter Unger, has even attempted to analyze knowledge in terms of this principle. Unger proposed that:

S knows that p (at a time t) if and only if (at t)
it is not at all accidental that S is right about
its being the case that p .²

Whether or not this provides an adequate analysis of knowledge, it certainly does provide a necessary condition.³ If it is even somewhat accidental that S is right about its being the case that p , then S does not know that p .

Does the example refute the proposed analysis? The argument for thinking that it does would go as follows. At time t , S perceives x to be F (perceives the water to be hot) but does not know that x is F ; so the *analysandum* is

false. But the *analysans* is true. For condition (1) is satisfied: at time t , the conditions of observation are normal. This is because at t , S's sensitivity to temperature exactly matches that of an average perceiver at most times, so that at t the water wouldn't feel hot to S unless it really were not. Moreover, condition (2), being an analytic truth, is also satisfied. Therefore, the example constitutes a counterexample to the proposed analysis.

Dicke goes on to discuss responses to this counter-example, & then more difficult counter-examples, which he thinks turn out to be fatal to this account of perceptual knowledge.

He concludes:

I contend, then, that the proposed analysis of perceptual knowledge is inadequate: perceiving x to be F , even under normal conditions of observation, does not constitute knowing that x is F . If we lived in a world where the conditions of observation were always normal — where neither external factors such as the light or medium nor internal factors such as malfunctions of the senses or nervous system ever produced illusions or perceptual errors — then perhaps the analysis would be acceptable as it stands. For in such a world it would never be the least bit lucky, coincidental, or accidental that when one perceived x to be F , x really was F . Perception would be an infallible guide to reality. But obviously we do not live in that kind of world. Perception, in our world, is sometimes deceptive; occasionally grossly so. It is deceptive when the conditions of observation — either external or internal — are abnormal. Therefore, a further condition must be added to the analysis. This is the condition that

(3) S knows that the conditions of observation are normal.

In other words, in order for S to perceptually know that x is F , S must know that this is not one of those unlucky cases where, because the conditions of observation are abnormal, he perceives x to be F but x is not really F .

As soon as we introduce condition (3), however, we are faced with a question. How does S know that the conditions of observation are normal? The

only way available seems to be: by perceiving them to be normal. For how else could S know that the present conditions of observation are normal? But now, it is obvious that we have run into a difficulty. For the chance that some abnormality in the condition of observation is producing a perceptual error or illusion attaches to S's perceiving the conditions of observation to be normal no less than to S's perceiving x to be F .

Thus, the introduction

of conditions (3) launches us into a vicious regress.

Let me emphasize that I have no wish to assert that one can never know that the conditions of observation are normal, and so that condition (3) can never be satisfied. It seems to me, for example, that at this moment I do know that the conditions under which I am perceiving the objects around me are normal. I am not denying that we can have perceptual knowledge, but presenting a problem that arises when we try to specify the conditions under which we can have it. The problem of perception and knowledge, as I conceive it, is not *whether* perception yields knowledge (it is obvious that it does) but *how* it can do so: it is an intellectual problem, a problem of understanding. Thus, one should resist the inclination to dismiss the above regress with the claim that perception obviously does yield knowledge. Of course it does. The problem is to understand how it can do so. To dismiss the problem by simply insisting that perception yields knowledge would be to see only one side of what, like many other philosophical problems, is basically an antinomy.

We pick up again in Section 4...

4. AN ATTEMPT TO AVOID THE REGRESS: THE SENSE-DATUM THEORY

We have just seen that the vicious regress generated by condition (3) of our analysis of perceptual knowledge cannot be turned into a benign one by appealing to probability. It would appear, therefore, that the vicious regress can be avoided only by preventing it from starting in the first place. And there seems to be only one way in which this could be done, short of simply rejecting condition (3) and, thus, falling back on the analysis of perceptual knowledge (given in Section II) that we found good reason to reject. This would be to show that perception can yield knowledge regardless of whether the conditions of observation are normal or abnormal. In other words, if it could be shown that *something* can always be *known* in a case of perception, regardless of the conditions of observation, then the regress would not arise. At first sight, however, this may seem like an impossible requirement to satisfy. For how could perception possibly yield knowledge even if it were occurring under abnormal conditions of observation, when things are often perceived otherwise than they really are?

There is an answer to this question which until quite recently was widely accepted by philosophers: the sense-datum theory. Sense-data were supposed to be objects of a special kind, perceived in a special way. The kind of object and mode of perception intended can be elucidated only in connection with the methods that philosophers used in order to introduce sense-data. These methods were quite varied. Some philosophers, such as Moore and Price, introduced sense-data by giving us directions or instructions for picking them out within our own perceptual experience. Others, such as Russell and Lovejoy, introduced them by means of arguments whose premisses referred to scientific facts about the perceptual process. Still other philosophers, such as Ayer and, before him, the Classical Empiricists, used the so-called 'Argument from Illusion'. In the years just before the sense-datum theory fell into general disfavor, the favored method of introducing sense-data was by means of certain linguistic moves with the terms 'seems', 'appears', and 'looks', a procedure ingeniously defended by H. P. Grice as recently as 1961.⁷ Actually, most advocates of the sense-datum theory made use of several of these methods more or less simultaneously. Thus, the literature in favor of the sense-datum theory contains a bewildering variety of arguments and analyses, in which it is difficult to find a unifying theme except for the thesis that we 'immediately perceive' or 'directly perceive' sense-data.

Nevertheless, I believe that a single theme does run through the various

attempts to introduce sense-data. This unifying theme is the epistemological purpose of the sense-datum theory, which is: to explain how perception can be a source of knowledge. The connection between this question and the sense-datum theory is as follows. If we assume that the only objects that could be perceptually known are the physical things that exist in our environment and act upon our sense-receptors, then the possibility that some abnormality in the conditions of observation is causing an illusion or perceptual error forces us to require that the perceiver know that the conditions of observation are normal. But this requirement, as we have seen, leads us into a vicious regress. However, suppose that there are objects of perception such that no abnormality in the conditions of observation can fool us about their properties. Suppose these are objects about which we could be mistaken, if at all, only because of failing to pay close enough attention to them or due to some conceptual confusion on our part. In order to obtain knowledge of such objects by perceiving them, we would not need to know anything about the conditions of observation. So the vicious regress would not arise with respect to these objects. Obviously these objects could not be the physical things in our environment and acting upon our sense-receptors. So they would have to be objects possessing a special status and perceived in a special way: sense-data.

In the following chapter, I shall try to show that one of the classical arguments for introducing sense-data, the Argument from Perceptual Relativity, supports this interpretation of the sense-datum theory. My strategy will be to show that the argument's main premiss *both* (a) calls attention to the facts about the conditions of observation that prevent perceiving *x* to be *F* from constituting knowing that *x* is *F* if *x* is assumed to be a physical object or event in the perceiver's environment, *and* (b) covertly asserts that every case of perceiving is, nonetheless, a case of knowing the character of *some* object. If this is correct, then this argument should not be seen, in the usual way, as a straightforward attempt to *prove* that there are sense-data; for then it is simply question-begging. Rather, it should be viewed as posing the following alternative: *either* admit that there are no objects whose nature can be perceptually known regardless of the conditions of observation — in which case you will run into a vicious regress when you attempt to specify the conditions under which perception yields knowledge — *or* admit that there are special objects, sense-data, which are perceived in an epistemologically privileged way, i.e. in such a way that their nature can be known regardless of whether the conditions of observation are normal or abnormal.

In the ensuing chapters, I shall argue that a similar analysis applies to the other two classical arguments for sense-data, the Argument from Causation and the Argument from Hallucination. Moreover, as noted in the Introduction, analyzing these arguments will deepen our understanding of the *problem* of perception. For these arguments (unlike the argument advanced in this chapter and the Argument from Perceptual Relativity) show that perceiving x to be F is not even a sufficient condition for knowing that x exists, and this leads to be a second vicious regress, which it is also the purpose of the sense-datum theory to avoid.

After we have analyzed the three classical arguments for the introduction of sense-data, we will be ready to turn to the question, whether introducing sense-data enables us to explain how perception can yield knowledge of the physical things in our environment. For, as noted in the Introduction (and as will be argued more fully in Section 2 of the following chapter), it is upon the answer to this question that the acceptability of the sense-datum theory ultimately turns.

NOTES

¹ A number of philosophers have defined senses of 'S perceives x to be F ' which imply that x is F and, indeed, that S knows that x is F . (See for example R. M. Chisholm, *Perceiving: A Philosophical Study* (Cornell University Press, Ithaca, 1957), and Fred I. Dretske, *Seeing and Knowing* [University of Chicago Press, Chicago, 1969].) Although this use of 'S perceives x to be F ' may accord with one ordinary use of that locution, the locution carries no such implication in its most common uses. In any case, no substantive issues are decided by adopting the stronger use. Rather, the definition of 'S perceives x to be F ' must then incorporate both 'perceives' in my weaker sense and certain additional conditions which I prefer to represent as conditions that, in conjunction with 'S perceives x to be F ', imply 'S knows that x is F '.

² Peter Unger, 'An Analysis of Factual Knowledge', *The Journal of Philosophy* 65 (1968), pp. 157-170.

³ Unger would now hold that it provides only a necessary condition. See his *Ignorance: A Case for Scepticism* (Oxford University Press, London, 1975), Chapter 2, Note 4.

⁴ S might know that the conditions were normal by perceiving something else to be the case, from which he could reliably infer that they are normal. But this obviously would not alter the logic of the issue.

⁵ Less awkwardly: S knows that the conditions of observation, under which he perceives to be normal the conditions under which he perceives the (original) conditions of observation to be normal, are normal.

⁶ I am here treating ' x ' and ' F ' as variables, such that ' x ' and ' F ' in this sentence can represent the same thing and property as either ' x ' and ' F ' or ' y ' and ' G ' in the previous sentence.

⁷ H. P. Grice, 'The Causal Theory of Perception', *Proceedings of the Aristotelian Society* 35 (1961), pp. 121-168. As will be seen in Chapter Five, however, Grice did not intend to rehabilitate the sense-datum theory in the classical form favored by Moore, Price, and Russell.

THE ARGUMENT FROM PERCEPTUAL RELATIVITY

Perhaps the best-known method of introducing sense-data is by means of the Argument from Perceptual Relativity. This argument can be found in the writings of philosophers from antiquity to present times, and there are many different ways of formulating it.¹ I shall begin by expounding (only) what seems to me to be the strongest version of the argument; then I shall present the most important contemporary objection to the argument; and finally I shall try to specify the considerations on the basis of which the issue raised by this objection should ultimately be resolved.

1. EXPOSITION OF THE ARGUMENT

The Argument from Perceptual Relativity, in its strongest form, is not a putative proof that there are sense-data. Rather, it is a proof that sense-data have a special status; that they are, in H. H. Price's phrase, "not identical with parts of the surfaces of physical things". Obviously, such a conclusion is of little interest unless sense-data have first been introduced in such a way that their *existence* is not a matter of controversy. But how can this be accomplished by an argument which draws a conclusion solely about the *nature* of sense-data? The answer is that the argument as a whole is intended to function as an *ostensive* definition of sense-data. This will be evident if we consider the exceptionally clear statement of the argument given by G. E. Moore in Chapter 2 of *Some Main Problems of Philosophy*, originally presented by Moore as a lecture to his students at Cambridge.² As Moore goes through the argument, he is attempting to give the members of his audience a set of directions for picking out the sense-data within their own perceptual experience. Thus his argument is intended simultaneously to call our attention to sense-data and to demonstrate a truth about their nature.

Since Moore's procedure is partly ostensive, I shall describe what he did as well as what he said. Moore began by holding up an envelope in front of the members of his audience, and asking them to look at it for a few moments while he did the same. He then asked: "What happened to each of us, when we saw that envelope?" He said that he would begin by describing part of what happened to him.

I saw a patch of a particular whitish colour, having a certain size, and a certain shape, a shape with rather sharp angles or corners and bounded by fairly straight lines. These things; this patch of a whitish colour, and its size and shape, I did actually see. And I propose to call these things, the colour and size and shape, *sense-data*, things *given* or presented by the senses – given, in this case, by my sense of sight.³

In a footnote added when Moore revised his lecture for publication, he corrects this statement. He says that it is the seen patch itself, with its color, size and shape, which is the sense-datum; rather than the color, size and shape taken separately. Let us take it, then, that the sense-datum Moore says he sees as he looks at the envelope is the particular colored patch he has described – one that has not only a specific color but also a certain size and shape.

Before continuing the demonstration Moore pauses to insist that it would be an error to call this colored patch, as some other philosophers would do, a sensation. Since the continuation of the demonstration leads to the conclusion that sense-data are not identical with physical things or their surfaces, this insistence may seem puzzling. Why does Moore refuse to call sense-data 'sensations' if his own argument shows that they are sensations or at least something very like sensations? The most important reason, I suggest, is that Moore wants the term 'sense-datum' to be a metaphysically neutral one – one that does not necessarily imply, for example, that sense-data are subjective entities.⁴ This is why he makes it clear that he does not want to build into the *meaning* of the term 'sense-datum' either (a) that sense-data do not continue to exist unperceived, or (b) that sense-data do not exist in the same place as the physical thing they belong to (e.g. the envelope).⁵ Moore's idea, I believe, is that so long as no metaphysical assumptions are built into the notion of a sense-datum, the existence of sense-data is beyond any question; for it is undeniable that Moore himself, as well as the members of his audience, do each see a certain colored patch upon looking at the envelope.

These things; this patch of a whitish colour, and its size and shape, I did actually see. . . And I have no doubts whatever that this is part, at least, of what happened to all of you. You also saw certain sense-data; and I expect also that the sense-data which you saw were more or less similar to those which I saw. You also saw a patch of colour which might be described as whitish, of a size not very different from the size of the patch which I saw, and of a shape similar at least in this that it had rather sharp corners and was bounded by fairly straight lines.⁶

The metaphysical status of the colored patch, on the other hand, is a matter to be settled not by definition but by argument – indeed, by the argument Moore goes on to develop.

Moore next introduces the first premiss of this argument. He says: "But

now, what I want to emphasize is this. . . no two of us, in all probability, saw exactly the *same sense-data*.⁷ Why is this? Well, consider just the color of the patch seen by Moore and each member of his audience. In all probability, no two of them saw exactly the same color; for there were slight differences in the way the light fell on the envelope relative to each of them and probably also slight differences in their color-vision. Again, consider the size of the patch seen by Moore and each member of his audience. In all probability, no two of them saw a patch of exactly the same size, because they were situated at different distances from the envelope. Finally, consider the shape. Certainly, Moore and the members of his audience did not all see a sense-datum having exactly the same shape. Persons situated obliquely from the facing surface of the envelope saw various rhomboidal shapes, while persons situated more directly in front of it saw more nearly rectangular shapes. As Moore put it, at the same time facing the envelope in appropriate directions:

Those on my left will have seen a figure more like this which you in front now see, and which you see is different from *this* which you then saw. And those in front of me will have seen a figure like that which you on the left now see, and which, you see, is different from *this*, which you saw before.⁸

To shift for a moment to a more famous illustration, had Moore held up a penny rather than an envelope, persons close to the walls of the room would have seen skinny ellipses, those somewhat closer to the center would have seen fatter ellipses, while those directly in front would have seen circles. Had the persons held pieces of transparent plexiglass before their eyes while looking at the penny and traced onto them the outlines of the shapes they saw, these shapes would have differed among themselves (though admittedly more so than the shapes seen, because shape-constancy corrects to some extent for perspectival distortion). Thus, Moore and the members of his audience saw sense-data that differed with respect to their colors, sizes, and shapes; this is why they did not all see the same sense-data.

But from this it clearly follows, Moore points out, that the sense-data seen by himself and the members of his audience cannot all have been identical with the envelope (or its surface). For an envelope cannot simultaneously have several different colors, sizes, or shapes. No physical thing or surface can simultaneously be of several different colors, sizes, or shapes. But the sense-data seen by Moore and the members of his audience did have many different colors, sizes, and shapes — probably as many, Moore implies, as there were persons looking at the envelope. Therefore these sense-data cannot all have been identical with the envelope or its surface.

Moore's argument, in its general form, can be put as follows:

- (1) The sense-data belonging to a physical thing or surface (e.g. to an envelope or its surface) have many incompatible qualities.
 - (2) A physical thing or surface cannot have incompatible qualities.
-
- ∴ (3) The sense-data belonging to a physical thing or surface are not all identical with that thing or surface.

Before discussing this argument something must be said to explain the term 'belonging to'. It designates the relationship between a sense-datum and the physical thing which stands to it in the same relation as the envelope stands to any of the colored patches (visual sense-data) mentioned by Moore. Some of the sense-data perceived by the members of Moore's audience, such as those they saw in looking above or below the envelope and those they heard in listening to Moore's voice, did not stand in this special relation to the envelope and so did not belong to it. The correct definition of 'belonging to' is of course not settled by these remarks. In his classic treatise on the sense-datum theory, *Perception*, H. H. Price treats the definition of 'belonging to' as one of the main questions to be answered by a theory of perception. What the above argument shows is that 'belongs to' can in any case not be defined as 'is identical with'. Should it, then, be defined roughly as 'is caused by', as the Causal Theory of Perception would hold? Or should it be defined roughly as 'is a member of a collection of sense-data of type —', as Phenomenalism would hold? The attempt to make these definitions precise and to work out their epistemological implications can be viewed as being identical with the task of formulating and evaluating these two theories when they are cast, as they traditionally have been, within the framework of a sense-datum epistemology.

It should be evident that the argument, as developed so far, does not show that *all* of the sense-data belonging to a physical thing or surface are distinct from it: on the contrary, (3) allows that some sense-data may actually be identical with the physical thing or surface to which they belong. It would be perfectly consistent with (3), for example, to hold that the sense-datum seen by an observer placed directly in front of and only a few feet away from Moore's envelope is identical with the facing surface of the envelope (in virtue of having the very color, size and shape of that surface). Moore himself admits this, though he adds that he is inclined to disbelieve it. As he puts it, "it seems very probable that *none* of the colours seen was really a part of the envelope; and that *none* of the sizes and shapes seen were the size or the

shape of the real envelope".⁹ Sense-datum theorists do characteristically hold that none of the sense-data belonging to a physical thing or surface are identical with it. But this clearly does not follow from (1) and (2) alone; further argumentation is needed. I shall complete my exposition of the Argument from Perceptual Relativity by summarizing the additional argumentation that is typically given (e.g. by both H. H. Price and A. J. Ayer), postponing all critical remarks until Section 2.

Typically, the move from 'not all the sense-data belonging to a physical thing or surface are identical with it' to 'none of the sense-data belonging to a physical thing or surface are identical with it' is mediated by the following premiss, which can be regarded as beginning the second stage of the argument summarized above.¹⁰

- (4) If the sense-data belonging to a physical thing or surface are not all identical with the thing or surface but some of the sense-data belonging to the thing or surface are identical with it, then there must be a special, discernible qualitative difference between the sense-data which are identical with the thing or surface and the sense-data which are not identical with it.

The rationale offered for this premiss is as follows. If some of the sense-data belonging to a physical thing or surface are literally identical with the thing or surface, then these sense-data have a very different status from those that belong to the thing or surface but are not identical with it. For while the latter are evidently subjective entities akin to Berkeleyan 'sensations or ideas', the former are perceiver-independent, physical existents. Hence, there ought to be some special, inspectable difference between these sense-data, answering to and signaling their different metaphysical statuses. For example, if the sense-datum seen from three feet directly in front of Moore's envelope is identical with the envelope's facing surface, then this 'privileged' sense-datum has a very different status from those seen from various distances and angles. So, there ought to be some distinctive qualitative difference setting it off from the others. But no such difference can be found. Accordingly, we must conclude that even the sense-datum seen from the privileged vantage point is distinct from the envelope's facing surface. Obviously this reasoning can be reiterated for any of the sense-data belonging to the envelope. The second stage of the argument, then, can be completed in two steps. First, we add the premiss:

- (5) There is no special, discernible qualitative difference among the sense-data belonging to a physical thing or surface.

We can now conclude from (3), (4), and (5) that

- (6) None of the sense-data belonging to a physical thing or surface are identical with that thing or surface.

A variant formulation of the argument's second stage (also mentioned by both Price and Ayer) appeals to the continuity between the members of a series of sense-data belonging to a physical thing.¹¹ Suppose for example that an observer, starting from directly in front of Moore's envelope, backs steadily away from the envelope. If he keeps on looking at the envelope, he will perceive a continuous series of sense-data diminishing in size. But, it is argued, if any one of these sense-data were identical with the envelope's facing surface, then there ought to be a greater difference between it and the next member of the series than between any two consecutive members of the series neither of which are identical with the envelope's surface. As Price puts it,

We should expect at least a jerk or a flicker as the one [i.e. the sense-datum which we are supposing to be identical with the envelope's surface] is replaced by the other [i.e. the next member of the series, which, since it has a different size, cannot also be identical with the envelope's surface].¹²

But again, no such difference can be found. So it must be concluded that there is no difference of metaphysical status between the members of the continuous series of sense-data. And since the first stage of the argument has proved that some — indeed at least *virtually* all — of these sense-data are special entities distinct from the envelope's surface, it follows that all of them are entities of this special kind.

2. EVALUATION OF THE ARGUMENT

We have seen that the Argument from Perceptual Relativity is a valid proof that not all sense-data are identical with the physical things or surfaces to which they belong.¹³ Does this mean that the phenomenon of perceptual relativity logically *requires* us to accept the view that we perceive sense-data (at least some of) which are distinct from physical things or surfaces? No, it does not. For the question, whether the sense-data we perceive are identical with physical things or surfaces, arises only if we accept the view that we perceive sense-data. But we do not have to accept this view. For recall how sense-data were introduced. Moore did not offer any argument to prove that we see sense-data when we look at the envelope. Rather, he gave us a set of directions for picking out the sense-data within our own perceptual experience. Moore said, in effect,

if you consult your experience as you look at the envelope I am holding, you will become aware of a colored patch whose color, size, and shape probably differ from those seen by every other person in the room and can be altered merely by changing your own distance or direction from the envelope. This patch or expanse is an example of what I mean by a 'sense-datum'.

It is only if this introduction of sense-data is legitimate that Moore can legitimately formulate the first premiss of his argument, i.e. that the sense-data belonging to an envelope have several different colors, sizes, and shapes.

However, we do not have to describe our experience in the way Moore suggests. We are free to respond to Moore as follows.

When I follow your instructions and look at the envelope, the *only* thing I see is a physical object — i.e. an envelope — which *seems* white or greyish depending on how the light is falling on it, which *looks* rectangular or rhomboidal depending on the angle from which it is viewed, which *appears* larger or smaller depending on the distance from which it is viewed. I do *not* see *any* object which actually depends for its color, shape, and size on the conditions of observation or the identity of the observer. Likewise, when I look at a penny from a certain angle, what I see is a round penny which *looks* elliptical from that angle. I do not see any object which actually *is* elliptical.

This negative response to the introduction of sense-data has been made by virtually every recent critic of the theory and is quite commonly regarded as decisive. For example, J. L. Austin quotes H. H. Price as saying, "a distant hillside which is full of protuberances, and slopes upwards at a quite gentle angle, will appear flat and vertical. . . . This means that the sense-datum, the colour-expanse which we sense, actually *is* flat and vertical." To this Austin responds: "But why should we accept this account of the matter? Why should we say that there is *anything* we see which *is* flat and vertical, though 'not part of the surface' of any material object?"¹⁴ And Gilbert Ryle writes in *The Concept of Mind*:

Let us consider the . . . instance of a person looking at a round plate tilted away from him, which he may therefore describe as looking elliptical The question is whether the truth of his report that the plate looks elliptical implies that he is really spying, or scanning, an object of sense which, not being the plate itself, can claim to be entitled 'a look' or 'a visual appearance of the plate'. We may grant that if we are bound to say that he has come across an object of sense which is really elliptical . . . then this elliptical object . . . is a sense-datum and therefore that there are sense-data . . . [But] in saying that the plate looks elliptical, he is not characterizing an extra object, namely 'a look' as being elliptical, he is likening how the tilted round plate does look to how untilted elliptical plates do or would look. He is not saying 'I am seeing a flat elliptical patch of white', but 'I might be seeing an elliptical and untilted piece of white china When we say that someone has a pedantic appearance, we do not mean to suggest that there are two

kinds of pedantic beings, namely some men and some appearances of men. We mean that he looks rather like some pedantic people look. Similarly there are not two kinds of elliptical objects, namely some platters and some looks; there are some platters which are elliptical and others which look as if they were elliptical.¹⁵

The point Austin and Ryle are both making is that in order to describe the phenomenon of perceptual relativity, it is not necessary to reify the ways things appear to us under various conditions by introducing sense-data. Rather, the phenomenon can be adequately described by means of such words as 'looks', 'seems', 'appears'.

This crucial point is incisively made by R. M. Chisholm in his influential book, *Perceiving*. Chisholm points out that the argument form

S perceives a . . . which appears . . . to him

∴ S perceives an appearance which is . . .

is simply invalid. There are many counterexamples to such an argument. For example 'S perceives a painting which appears several hundred years old to him' does not entail 'S perceives an appearance which is several hundred years old'; since the premiss could be true but the conclusion is obviously false. Chisholm adds that there is no true premiss which, in conjunction with 'S perceives an x which appears *F* to him', yields the conclusion 'S perceives an appearance (sense-datum) which is *F*'. He accordingly dubs this form of argument 'The Sense-Datum Fallacy'.¹⁶ In an article titled 'The Myth of Sense-Data', Winston Barnes makes essentially the same criticism as Chisholm: ". . . I cannot infer . . . merely from the three facts that I am seeing something, that it looks pink and that it is red, that there is a pink something where the thing appears pink to me".¹⁷

The bearing of these objections on Moore's attempt to introduce sense-data is clear. Austin, Ryle, Chisholm, Barnes and many others would say that Moore assumes that he can legitimately reformulate, for example,

S perceives an envelope which appears rhomboidal to him

as

S perceives a sense-datum which is rhomboidal.

However, this is an instance of the Sense-Datum Fallacy — an elementary error in reasoning. It is clear that if this is the correct response to Moore's attempt to introduce sense-data, then the Argument from Perceptual Relativity collapses. For, as we have seen, the argument does not prove that we perceive

✓ sense-data; it assumes this in its opening premiss. All the argument proves is that *if* we perceive sense-data, *then* these are not identical with physical things or their surfaces. But if, following contemporary critics of the sense-datum theory, one simply rejects the notion of a sense-datum as an illegitimate reification of the ways in which physical objects appear to us under different conditions of observation, then Moore's conclusion, though it follows from his premisses, is of no interest or importance.

Accordingly, let us look closely at the logic of the situation between Moore and the opponents of sense-data. We must begin by granting the point that 'S perceives something which appears *F* to him' does not entail 'S perceives a sense-datum which is *F*'. This inference is certainly fallacious. Moore, however, did not attempt to introduce sense-data by means of this or any other inference. Rather, as I have been at pains to emphasize, his procedure was an ostensive one. He said, in effect: "if you attend carefully to your experience while looking at the envelope from an angle you will really see a rhomboidal patch of color. Thus if you pay attention to your experience you will see for yourself that there are sense-data." To this the opponents of sense-data retort: "When I consult my experience all I see is a rectangular envelope that can be made to look or appear rhomboidal by viewing it from a certain angle. I do not see any object which really is rhomboidal." Our question is, how should we decide who is right here?

We cannot decide by evaluating some argument attempting to prove that there are sense-data, since no such argument has been offered. Nor have the critics made an attempt to disprove the existence of sense-data. Rather, they have offered an alternative way of describing the facts Moore appeals to, with the implication that theirs is the better or indeed the only correct way to describe those facts.

Can the matter then be settled by appealing to ordinary language? I do not think that it can, because ordinary language pulls both ways. On the one hand, it is quite natural to say that when one looks e.g. at a penny from an angle, all one sees is a round penny that looks elliptical from that angle; one doesn't see anything which is elliptical. On the other hand, it is certainly no misuse of language to insist that when I look at a penny from an angle, I see a brownish ellipse that gets fatter or skinnier depending on the angle. And it can be added that this ellipse surely exists since I see it. What is seen must exist. So the brownish ellipse exists, though it is not identical with the penny or its surface since that is round. All of this accords completely with the ordinary use of language.

Should the issue then be settled by appealing to Occam's razor? As many

philosophers have pointed out, once sense-data are introduced certain puzzling questions arise about their nature. How does one count sense-data? How many sense-data do I see, for example, when I look at my hand? Do sense-data, like physical objects, "have surfaces, as well as parts which are behind or beneath these surfaces, and rear surfaces which face away?"¹⁸ When a sense-datum is called 'elliptical' or 'brown' or 'small', do these terms have the same meanings as when they are applied to physical objects? In light of these puzzling questions, should we conclude that since introducing sense-data multiplies entities and difficulties beyond necessity, they ought not to be introduced?¹⁹

The appeal to Occam's razor is both relevant and important. However, it is not decisive. For in the first place, *some* of the puzzling questions about sense-data can reasonably be rejected by a resourceful sense-datum theorist. For example, A. J. Ayer argues effectively that any definite answer to the question as to how many sense-data one sees on a given occasion would, like a definite answer to certain questions about physical things, be arbitrary. The passage is worth quoting at some length.

How . . . are we to determine what is to count as one sense-datum? At the present moment it seems to me that I see the walls of a house, covered with virginia creeper, and a rose tree climbing to an open window, and two dogs asleep upon a terrace, and a lawn bespeckled with buttercups and clover, and many other things besides . . . How many visual . . . sense-data am I sensing? And at what point are they replaced by others? If one of the dogs seems to stir in its sleep does this create a new sense-datum for me or merely transform an old one? And if it is to be new, do all the others remain the same? Clearly the answers to these questions will be arbitrary; the appearance of the whole frontage of the house may be treated as one sense-datum, or it may be divided into almost any number . . . The correct reply may, therefore, be that these questions do not admit of a definite answer, any more than there is a definite answer to the question how many parts a thing can have, or how much it can change without altering its identity.²⁰

In the second place, there is a more fundamental reason why considerations of simplicity are not decisive here. Sense-data are introduced for a certain purpose; namely, to solve a fundamental problem concerning the relation between perception and knowledge. So if that problem can indeed be solved in this way, then the introduction of sense-data may well be justified despite the increased ontological complexity that results from it. Simplicity, here as elsewhere, is only one desideratum; another equally important desideratum is an answer to the very fundamental question how perception can be the source of knowledge we all take it to be. Considerations of simplicity may provide a good reason — perhaps even a decisive one — not to countenance sense-data if they cannot help answer this question. But if they can,

then it may well be reasonable to countenance sense-data despite Occam's maxim (which counsels us not to multiply entities *unnecessarily*).

Finally, the epistemological purpose of the sense-datum theory may itself provide a way to answer questions about the nature of sense-data that cannot reasonably be rejected. Concerning the question whether sense-data have rear surfaces or parts that face away, for example, Chisholm writes:

It is important to realize that we cannot avoid such puzzling questions merely by redefining the word 'appearance'. We could define 'appearance' in such a way that we could say of any appearance, as Professor Price has said, that its goods "are entirely in the shop-window". We could define 'the appearance of a piece of coal' as being something which has just those attributes which the coal appears to have. And then, of course, we could be sure that the appearance of the coal doesn't have a rear surface or any parts which face away. But now we may ask of *a* — the something which is blue when the coal looks blue — whether *a* is an appearance, as just defined, of the piece of coal. And this question can be answered only by deciding whether *a* has a rear surface or any parts which 'face away'.²¹

It is quite true that whether *a* is an appearance (sense-datum) would depend upon whether it has a rear surface or parts that face away. But this does not mean that this question must be answered in a straightforward empirical manner, say in the way one would discover whether the other side of a coin was tarnished. For the question might be answered in the light of theoretical considerations related to the purpose of the sense-datum theory. Thus, suppose it turned out that we could account for the fact that perception yields knowledge only by supposing that color-patches such as those Moore describes do "have their goods entirely in the shop-window" and so do not have rear surfaces or parts that face away. Then we might justifiably conclude that *a* — the blue patch of color seen upon looking at the coal — does not have a rear surface or parts that face away.

I contend, then, that the only way of coming to a reasoned decision concerning sense-data is to determine whether they can provide a solution to the problem of perception and knowledge. Let us recall the general contours of the problem, as we have developed it so far, in order to see exactly how Moore's introduction of sense-data suggests a solution. On the one hand, it is obvious that perception is our fundamental way of acquiring factual knowledge. But on the other hand, when we attempt to formulate the conditions under which 'S perceives *x* to be *F*' implies 'S knows that *x* is *F*', we run into difficulty. For in the first place, we cannot simply equate perceiving *x* to be *F* with knowing that *x* is *F*, since it is possible to perceive *x* to be *F* though *x* is not *F*. Furthermore, we cannot equate perceiving *x* to be *F* under normal

conditions of observation with knowing that *x* is *F*, even after having partially defined 'normal conditions' as those in which S wouldn't perceive *x* to be *F* unless *x* really were *F*. For S can know that *x* is *F* only if it is not at all accidental, coincidental, or lucky that S is right about *x*'s being *F*. But even when the conditions of observation are normal, it is somewhat accidental or lucky that they are, and so that S is perceiving *x* as it really is; just as even when the abnormally fluctuating heat-sensitivity of the man we imagined earlier (in Chapter One, Section 2) happens to match that of an average perceiver at most times, it is accidental or lucky that it does, and so that he perceives the water's temperature accurately. Therefore, S can know that *x* is *F* by perceiving *x* to be *F* only if S knows that the conditions of observation are normal. But this requirement leads to a vicious regress. For the only way S can know that the conditions of observation are normal is by perceiving them to be normal. However, the chance that some abnormality in the conditions of observation is producing a perceptual error or an illusion attaches to S's perceiving the conditions of observation to be normal no less than to S's perceiving *x* to be *F*. So even if the conditions of observation under which S perceives the original conditions of observation to be normal are normal, it is somewhat accidental or lucky that they are, and so that S perceives the original conditions of observation as they really are. Therefore, S can know that the original conditions of observation are normal by perceiving them to be normal only if S knows that the conditions of observation under which he perceives the original conditions of observation to be normal are themselves normal. But S can know this only by still other perceptions, that themselves constitute knowledge only if S knows that they are occurring under normal conditions of observation, which S can know to be the case only by still other perceptions . . . etc. *ad infinitum*.

This regress, as I argued in Section 3 of Chapter One, cannot be avoided by appealing to probability. Therefore it can be avoided only by preventing it from arising in the first place. But this cannot be done, compatibly with the principle that one cannot know something if it is partly a matter of luck that one is right about it, simply by resisting the requirement that the conditions of observation be known to be normal. Hence it can be done only by establishing that something can be known in a case of perception regardless of whether the conditions of observation are normal or abnormal.

But regardless of the conditions of observation, I can know that I am seeing a colored patch of the kind to which Moore calls attention. No matter what the light, the medium, the acuity of my vision, my angle of view etc. are, I can know by inspection that I am seeing "a patch of a particular whitish

color, having a certain size, and a certain shape . . . with rather sharp angles or corners and bounded by fairly straight lines". Even if — to anticipate considerations to be introduced in subsequent chapters — I were suffering from a hallucination and there were no envelope there at all, I could still know that I was seeing this sense-datum. As Price put the same point in a famous passage:

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 there at all. Perhaps what I took for a tomato was really a reflection; 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, and having a certain visual depth, and that this whole field of colour is directly present to my consciousness. What this patch is, whether a substance, or a state of a substance, or an event, whether it is physical or psychical or neither, are questions that we may doubt about. But that something is red and round then and there I cannot doubt.²²

Notice that it would not do to express what Price is here claiming to know as 'I see a tomato which *looks* red, round, and bulgy'. For this would imply that Price knows that what he is seeing is a *tomato*. But Price cannot know that something is a tomato by perceiving it to be a tomato regardless of what the conditions of observation are. For some abnormality in the conditions of observation could cause him to perceive something to be a tomato though it was not a tomato. In order to express what can be known by perception regardless of the conditions of observation, the notion of a sense-datum or something very like it must be employed: 'I see a red patch of a round and somewhat bulgy shape . . .'

Unlike Price, Moore does not explicitly refer to what can or cannot be doubted when he introduces sense-data. Nevertheless, suppose we interpret Moore's question concerning 'what exactly . . . happens when (as we should say) we *see* a material object', or what we 'actually see' upon looking at the envelope, to mean: what do we see in such a way that we can *know* its nature regardless of what the conditions of observation are? Then the answer cannot be: an *envelope* which looks whitish and angular; since under certain conditions of observation one can perceive something to be an envelope though it is not an envelope. At this point someone may say that it should be obvious that *nothing at all* is ever seen in such a way that its nature can be known regardless of whether the conditions of observation are normal or abnormal. But if we accede to this, then we shall be unable to account for the fact that perception is a source of knowledge, because of the regress that arises unless *something* can be known by perception regardless of the conditions of observation. So in accordance with our hypothesis that every method of

introducing sense-data seeks to avoid this regress by *assuming*, overtly or covertly, that every case of perceiving is a case of knowing, let us suppose that Moore is making this assumption. Then we can explain why he formulates the main premiss of his argument in terms of the concept of a sense-datum rather than in terms of the envelope's seeming, appearing, or looking whitish, angular, etc. The reason is that Moore intends to characterize something whose nature can be known by perception regardless of the conditions of observation; and that for this purpose he must like Price refer to colored patches or the like — to sense-data or something similar. Thus the Argument from Perceptual Relativity ultimately turns on the assumption that every case of perceiving is a case of knowing; or more precisely, of knowing the character of some *object*. As David Hamlyn puts it:

Moore does not explicitly say, as Price did, that the reason for invoking sense-data was that these are things over which there is no possibility of doubt. But his use of the phrase 'actually see' and the notion of 'direct apprehension' certainly suggests some such idea. Otherwise, why should not the members of the audience say that what they actually saw was an envelope? Why restrict the answer to something about patches of color? The only possible answer is that it might not have been an envelope after all, while there could be no doubt about patches of color.²³

The assumption that every case of perceiving is a case of knowing also lies behind the second stage of the Argument, in which the inference is made from 'not all the sense-data belonging to a physical thing or surface are identical with the thing or surface' to 'none of the sense-data belonging to a physical thing or surface are identical with the thing or surface'. The premiss on which this inference is made to rest — that if some though not all the sense-data belonging to a physical thing or surface are identical with the thing or surface, then there must be a special, discernible qualitative difference between the sense-data that are identical with the thing or surface and those that are not — has been vigorously attacked by J. L. Austin.

[If . . . I had never seen a mirror, but were told (a) that in mirrors one sees reflections of things, and (b) that reflections of things are not 'generically the same' as things, is there any reason why I should forthwith *expect* there to be some whacking big 'qualitative' difference between seeing things and seeing their reflections? Plainly not; if I were prudent, I should simply wait and see what seeing reflections was like. If I am told that a lemon is generically different from a piece of soap, do I 'expect' that no piece of soap could look just like a lemon? Why should I? . . . [W]hy on earth should it not be the case that, in some few instances, perceiving one sort of thing is exactly like perceiving another?²⁴

Austin is right: there is no reason why different kinds of things cannot be qualitatively alike or even indistinguishable. But Austin misses the underlying

point. Suppose that in a case of perception P the sense-datum d is perceived, and that we do identify d with the physical thing or surface to which it belongs. Then we deprive d of the epistemological function which provides the sole reason for introducing sense-data; for no physical thing or surface is such that its nature can be known by perception regardless of the conditions of observation. Therefore P , contrary to the assumption that in every case of perceiving something can be known, is not a case of knowing. This result would be avoided only if d had some special perceptible feature signaling that unlike the other sense-data belonging to the thing or surface it was both (a) identical with the thing or surface yet (b) such that its nature could be known merely by perceiving it, regardless of the conditions under which it was perceived — a feature which would necessarily distinguish it from all the other sense-data belonging to the thing or surface. Pointing to the lack of a special qualitative difference among the sense-data belonging to a physical thing or surface is a way of pointing out that none of these sense-data do have such a distinguishing feature. I shall have more to say about the principle that generically different things must be qualitatively different in Chapter Four in connection with the Argument from Hallucination, which turns on this principle.

How, in light of the foregoing discussion, should we assess the Argument from Perceptual Relativity? The argument shows, I believe, that we can describe our perceptual experience in terms of perceiving (or sensing) sense-data, that this is a possible way of describing what we perceive.²⁵ But it does not show that we *must* introduce sense-data or even that we *should* do so. For the phenomenon of perceptual relativity can be described just as well in terms of physical things' appearing to us in various ways under different conditions. Thus, whether sense-data should be introduced turns on the broader implications of the sense-datum theory. Introducing sense-data does make it possible to maintain that something can be known in every case of perceiving regardless of the conditions of observation. This seems to be an advantage given the regress that arises otherwise. But this advantage could yet turn out to be illusory. For the objects about which such knowledge can be had — sense-data — are not the physical things and events in our environment. But what an adequate solution to the problem of perception and knowledge must do, after all, is to show how perception can provide the kind of knowledge we all think it does provide: knowledge of the physical world. Can the sense-datum theory help to show this? In other words, can knowledge of the physical world be based upon or derived from knowledge of sense-data? It is to this traditional question that we must turn in order to come to a reasoned decision concerning the sense-datum theory.

Before turning to this question, however, I want to examine two other classical arguments for the introduction of sense-data: the Argument from Causation and the Argument from Hallucination. I shall try to show that both of these arguments, like the Argument from Perceptual Relativity, beg the question if they are interpreted as attempts to *prove* that there are sense-data. We shall also see that these two arguments draw attention to another dimension of the *problem* of perception and knowledge.

NOTES

¹ Three classic presentations of the argument are Plato, *Theaetetus*, 152ff; Berkeley, *Three Dialogues Between Hylas and Philonous*, the First Dialogue; Bertrand Russell, *The Problems of Philosophy*, Chapter I. I analyze Berkeley's argument in 'Two Arguments from Perceptual Relativity in Berkeley's Dialogues Between Hylas and Philonous', (unpublished).

² The lecture was first delivered by Moore in 1910. But *Some Main Problems of Philosophy* did not appear until 1953, at which time Moore, apart from some minor changes in the characterization of sense-data (signaled in his footnotes), still held to the sense-datum theory.

³ G. E. Moore, *Some Main Problems of Philosophy* (Collier Books, New York, 1966), p. 44.

⁴ Compare H. H. Price, *Perception* (Methuen, London, 1932), pp. 18–19.

⁵ G. E. Moore, *Some Main Problems of Philosophy*, p. 45.

⁶ *Some Main Problems of Philosophy*, pp. 44, 46.

⁷ *Some Main Problems of Philosophy*, p. 46.

⁸ *Some Main Problems of Philosophy*, p. 46–47.

⁹ *Some Main Problems of Philosophy*, pp. 52–53.

¹⁰ See H. H. Price, *Perception*, pp. 31–32; A. J. Ayer, *The Foundations of Empirical Knowledge* (MacMillan, London, 1940), pp. 5–8, and Ayer, *The Problem of Knowledge* (Penguin Books, London, 1956), p. 88.

¹¹ Price, *Perception*, p. 32; Ayer, *The Foundations of Empirical Knowledge*, pp. 8–9.

¹² Price, *Perception*, p. 32.

¹³ Initially I confine my evaluation of the argument to its first stage. At the end of the section I shall discuss the second stage, in which the move is made from the O proposition that "not all the sense-data belonging to a physical thing or surface are identical with that thing or surface" [(3), above], to the E proposition that "none of the sense-data belonging to a physical thing or surface are identical with that thing or surface" [(6), above].

¹⁴ J. L. Austin, *Sense and Sensibilia* (Oxford University Press, New York, 1962), p. 28.

¹⁵ Gilbert Ryle, *The Concept of Mind* (Barnes & Noble, New York, 1949), pp. 216–218.

¹⁶ R. M. Chisholm, *Perceiving: A Philosophical Study* (Cornell University Press, Ithaca, 1957), pp. 151–152. See also Chisholm's *Person and Object: A Metaphysical Study* (George Allen & Unwin, London, 1976), pp. 47–48.

¹⁷ Winston H. F. Barnes, 'The Myth of Sense-Data', p. 153. Reprint in R. J. Swartz (ed.), *Perceiving, Sensing, and Knowing* (University of California Press, Los Angeles, 1976), pp. 138–167.

- ¹⁸ R. M. Chisholm, *Perceiving*, p. 119.
- ¹⁹ R. M. Chisholm, *Theory of Knowledge* (Prentice-Hall, Englewood Cliffs, 1966), p.95.
- ²⁰ A. J. Ayer, *The Problem of Knowledge*, pp. 109-110.
- ²¹ R. M. Chisholm, *Perceiving*, pp. 119-120.
- ²² Price, *Perception*, p. 3.
- ²³ D. W. Hamlyn, *The Theory of Knowledge* (Doubleday & Company, Inc., Garden City, New York, 1970), p. 156.
- ²⁴ J. L. Austin, *Sense and Sensibilia*, pp. 50, 52.
- ²⁵ For some doubts about this, see O. K. Bouwsma, 'Moore's Theory of Sense-Data', reprinted in G. J. Warnock (ed.), *The Philosophy of Perception* (Oxford University Press, 1967), pp. 8-24. Bouwsma argues that Moore fails to make clear how to pick out sense-data within one's experience. However, Bouwsma addresses himself to a brief passage in Moore's 'Defense of Common Sense'. I can only say that in the much fuller discussion of sense-data in *Some Main Problems of Philosophy*, Moore seems to me to make the matter sufficiently clear.

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