implies *Q*, and we do not know *Q*, then we do not know *P*; and from this it seems reasonable to infer that if what we take to be knowledge has any implications which we have not yet explored and tested, it is not in fact knowledge. But the step to the Ignorance Principle is not valid.

The Dubiety Principle itself is sound, if it is taken to mean: if *P* implies *Q*, and there is good reason to doubt *Q*, then there is good reason to doubt *P*. Let us add an axiom to the effect that if there is good reason to doubt *P*, then no one knows *P*; or – as it may more recognizably be put – if there is good reason for *A* to doubt *P*, *A* does not know *P*. This axiom I in fact believe to be too strong; but many theorists of knowledge have accepted it, including Descartes, and it is significant that the point I am now making will go through even if we do accept it. The Ignorance Principle will follow from these premisses only if we further assume that there is good reason to doubt any proposition which we have not explored and tested; and there is absolutely no reason to assume *that* – unless perhaps one has already assumed the position of the Method of Doubt, which is what the argument was supposed to be justifying. In fact, it is clear that the Ignorance Principle is quite unacceptable; since any proposition has infinite implications, no finite mind could know (as the Principle requires) all the implications of anything it knows.

Knowledge does have a problematical character, and does have something in it which offers a standing invitation to scepticism. Attempts to uncover this just in terms of the relations between the concepts knowledge, doubt, certainty and so forth seem nevertheless to fail, and characteristically to rely, like the last argument, on thoroughly implausible or question-begging assumptions. The source of the invitation lies deeper. What exactly it is, is a difficult question; I will try to sketch an approach which seems to me to lead in the direction of the source. This starts from a very basic thought, that if knowledge is what it claims to be, then it is knowledge of a reality which exists independently of that knowledge, and indeed (except for the special case where the reality known happens itself to be some psychological item) independently of any thought or experience. Knowledge is of what is there *anyway*. One might

suppose this thought to be incontestable, but its consequences can seem to be both demanding and puzzling. Suppose *A* and *B* each claims to have some knowledge of the world. Each has some beliefs, and moreover has experiences of the world, and ways of conceptualizing it, which have given rise to those beliefs and are expressed in them: let us call all of this together his *representation* of the world (or part of the world). Now with respect to their supposed pieces of knowledge, *A*'s and *B*'s representations may well differ. If what they both have is knowledge, then it seems to follow that there must be some coherent way of understanding why these representations differ, and how they are related to one another. One very primitive example of this would be that *A* and *B* were in different places; another might be that they were both correctly predicting the movements of the planets, but by different, geometrically equivalent, systems. In either case, a story can be told which explains how A's and B's can each be perspectives on the same reality. To understand this story, one needs to form a conception of the world which *contains A* and *B* and their representations; *A* and *B* are not debarred from taking this standpoint themselves, but it involves their standing back from their original ways of representing these aspects of the world. But this process, it seems, can be continued. For if *A* or *B* or some other party comes in this way to understand these representations and their relation to the world, this will be because he has given them a place in some more inclusive representation; but this will still itself be a representation, involving its own beliefs, conceptualizations, perceptual experiences and assumptions about the laws of nature. If this is knowledge, then we must be able to form the conception, once more, of how this would be related to some other representation which might, equally, claim to be knowledge; indeed we must be able to form that conception with regard to *every* other representation which might make that claim. If we cannot form that conception, then it seems that we do not have any adequate conception of the reality which is there 'anyway', the object of any representation which is knowledge; but that conception appeared at the beginning as basic to the notion of knowledge itself. That conception we might call the absolute conception of reality. If knowledge is

possible at all, it now seems, the absolute conception must be possible too.

What does that require? Here what was a natural, if very abstract, progression seems to have led to a basic dilemma. On the one hand, the absolute conception might be regarded as entirely empty, specified only as 'whatever it is that these representations represent'. In this case, it no longer does the work that was expected of it, and provides insufficient substance to the conception of an independent reality; it slips out of the picture, leaving us only with a variety of possible representations to be measured against each other, with nothing to mediate between them. On the other hand, we may have some determinate picture of what the world is like independent of any knowledge or representation in thought; but then that is open to the reflection, once more, that that is only one particular representation of it, our own, and that we have no independent point of leverage for raising this into the absolute representation of reality.

This is a very schematic account of a kind of problem which has constantly recurred in the history of Western thought. This formulation is influenced, of course, by philosophy since Descartes, and would not have been recognized by him; but we can see him as, in effect, attempting to transcend this dilemma, and trying to extract an absolute conception of reality from the process of Pure Enquiry. That attempt, and its failure, itself led to much that has developed subsequently in this line of thought (including this way of formulating what he was trying to do). The 'absolute conception' that Descartes himself offered will, I hope, emerge in the course of this study.[12] The present question, however, is how the implicit presence of the absolute conception, or rather the promise of it, within the concept of knowledge, helps to motivate Pure Enquiry. Pure Enquiry, as we have so far considered it, is the undertaking of someone setting aside all externalities or contingent limitations on the pursuit of truth; this ambition, I have already argued, is itself enough to generate the Doubt. But if we are to make an attempt to ground the absolute conception of reality which knowledge seems to call for, then the project of undercutting every conceivable source of error takes on a new importance. It is a matter not just of

be preserved, and of how the indispensable causal aspect of the concept of perception should be accommodated, are questions which, as before,[14] I shall not try to answer. The important point here is that a distinction of primary and secondary qualities can be detached from the representational theory of perception, and when it is formulated independently of that, it emerges as of very great significance.

It combines the notions of the material world as it is understood by natural science, and of that world as it really is. The idea of the world as it really is involves at least a contrast with that of the world *as it seems to us*: where that contrast implies, not that our conception of the world is totally unrelated to reality, but that it has features which are peculiar to us. By the same token, the world as it really is is contrasted with the world as it peculiarly seems to any observer – that is to say, as it seems to any observer in virtue of that observer's peculiarities. In using these notions, we are implying that there can be a conception of reality corrected for the special situation or other peculiarity of various observers, and that line of thought leads eventually to a conception of the world as it is independently of the peculiarities of any observers. That, surely, must be identical with a conception which, if we are not idealists, we need: a conception of the world as it is independently of all observers.

There is every reason to think that such a conception should leave out secondary qualities. The traditional arguments bring out the ways in which the secondary qualities depend on psychological factors, are a function not just of consciousness, but of the peculiarities of individuals or species. The point comes out well in this, that when we understand, or merely have some vague idea of, the kinds of processes that underlie the phenomena of colour (to take what everyone has always regarded as the best entrenched secondary quality, the one that we are most disposed to regard as 'in' things), we can easily understand why a thing should seem one colour to one person, another to another; or, again, why it should seem coloured to members of one species, monochrome to members of another. In understanding, even sketchily, at a general and reflective level, why things appear variously coloured to various

observers, we shall find that we have left behind any idea that, in some way which transcends those facts, they 'really' have one colour rather than another. In thinking of these explanations, we are in fact using a conception in which colour does not figure at all as a quality of the things.

Our ordinary language does not display these considerations about secondary qualities: in fact, it encourages us to deny them. We can draw distinctions between things seeming green and their really being green; and asked to describe, in an everyday context, a scene without observers (for instance, events occurring before there were any observers), we would unreflectingly use colour-words and other sensory terms. If there was grass in the world before there was consciousness, there was green grass. But these usages do not go very deep; or rather, we should say, we cannot assume that they go very deep. (If scientific enquiry turned out not to yield what the present line of thought requires it to yield, then perhaps our everyday distinctions will turn out to go as deep as anything goes. But we cannot assume that that will be so. Moreover, paradoxically, it would be an affront to other parts of our everyday thought if it did turn out to be so.) Our distinctions between what seems green and what is green are essentially based on agreement within the range of human experience, and human thought is not, in that limited sense at least, tied only to human experience: scientific and philosophical reflection can stand back from at least these peculiarities of our constitution. That thought was marvellously expressed already in the fifth century BC by Democritus, one of the first to introduce the distinction between primary and secondary qualities: 'colours, sweetness, bitterness, these exist by convention; in truth there are atoms and the void.'[15]

So it is with our descriptions of the unobserved. We can say, and indeed say truly, that grass before there was consciousness was green: certainly '. . . was green' does not mean '. . . looked green to someone'. But equally '. . . was amusing' does not mean 'amused someone'; the term 'amusing', like 'green', is not (at least in that very simple way) relational. But it is, nevertheless, relative, relating to human tastes and interests. Descriptions which embody it, though they may not explicitly mention or include a distinctively

human perspective, recognizably and diagnosibly come from that perspective. One can in describing an unobserved scene properly describe it as amusing, but if one's attention were specially directed to describing it as it was without observers, one would have good reason to leave that concept aside. It is much the same with 'green' or any other secondary quality term: they may not mention their human relativity, but they only too obviously display it to reflection.[16]

How exactly the truth-conditions of statements containing such terms are to be regarded is a hard and, I suspect, unsolved question. A familiar line is to treat '. . . is green' as in fact relational, though complexly and hypothetically so, equivalent roughly to '. . . is of such a nature as to look green to standard human observers in standard circumstances'. Under such an analysis, ascriptions of secondary qualities will in fact mention human relativities, and while, in a sense, objects really will have secondary qualities – since they really are of such a nature as to . . . etc. – nevertheless it will be clear both why and how secondary qualities should be laid aside in giving the conception of the world as it is without observers: 'of such a nature' can in principle be specified in terms of primary qualities, and the rest is irrelevant to characterizing the world without observers. However, this relational way of analysing secondary quality statements (which is Descartes's own way, as I understand him) may well not be correct. For one thing, it leaves us with the discouraging task of explaining '. . . looks green' in some way which does not presuppose any prior understanding of '. . . is green'. How the relational pattern of analysis might possibly be replaced is part of a larger question, how the partial views and local experiences are themselves to be related to the world as conceived in independence of them.

If we do think that we have reason to lay aside, with regard to the conception of an unobserved world, descriptions in terms of secondary qualities, what reason have we to think that we can do better with primary qualities, the properties of the world as characterized by natural science? Can we really distinguish between some concepts or propositions which figure in the conception of the world without observers, and others that do not? Are not all our

concepts ours, including those of physics? Of course: but there is no suggestion that we should try to describe a world without ourselves using any concepts, or without using concepts which we, human beings, can understand. The suggestion is that there are possible descriptions of the world using concepts which are not peculiarly ours, and not peculiarly relative to our experience. Such a description would be that which would be arrived at, as C. S. Peirce put it, if scientific enquiry continued long enough; it is the content of that 'final opinion' which Peirce believed that enquiry would inevitably converge upon, a 'final opinion . . . independent not indeed of thought in general, but of all that is arbitrary and individual in thought'.[17] The representation of the world that would be so arrived at must, if it is to fill the role required by the traditional distinction between primary and secondary qualities, be more than some minimal picture which merely offers the most that a set of very different observers could arrive at, like some cosmic United Nations resolution. Its power to be more than this would lie in its being explanatory, and in the way in which it would be explanatory. The picture, that offered by natural science, would explain the phenomena: it would explain them, moreover, *even as they present themselves in other, more local, representations*. It is this consideration that gives the content to the idea, essential to the traditional distinction, that the scientific picture presents the reality of which the secondary qualities, as perceived, are appearances.[18]

But this means that we need more than a conception of the world without observers; we need an equally impartial conception that includes not just the material world, as so far characterized, but its observers as well. The scientific representation of the material world can be the point of convergence of the Peircean enquirers precisely because it does not have among its concepts any which reflect merely a local interest, taste or sensory peculiarity. However, while these various particular modes of experience are not projected on to the description of the world in this representation, nevertheless the experiences themselves, the tastes and interests from which the investigators have abstracted, do actually exist, are something in the world. So the representation of the world without

consciousness must be capable of being extended so as to have a place for consciousness within the world; moreover it must be extended in such a way as to relate the various points of view comprehensibly to each other and to the material world. This extended conception will then be that absolute conception of reality, the idea of which was introduced in Chapter 2 as something, putatively at least, presupposed by the possibility of knowledge.[19] The absolute conception should explain, or at least make it possible to explain, how the more local representations of the world can come about – it is this that would enable us to relate them to each other, and to the world as it is independently of them. For instance, it should enable us to understand how certain things can seem green to us and not to others. Moreover, this conception of the world must make it possible to explain how it itself can exist. This conception is not something transcendental, but is an historical product of consciousness in the world, and it must at least yield a comprehension of men and of other rational creatures as capable of achieving that conception. It thus involves a theory of knowledge and of error: it serves to explain how members of these species might come to have or fail to have a true conception of themselves and of the world.

It is not less than this, I think – or not much less[20] – that is involved in the distinction between primary and secondary qualities, where that is interpreted in the traditional and the only interesting way, as claiming that it is primary and not secondary qualities that characterize the material world as it really is. I believe that these ideas are not incoherent, and have some faith that they are correct. But certainly they involve extensive intellectual commitments, not easy to fulfil. Those commitments can be seen, as one might expect, as arising from the collapse of the means that Descartes used to answer these questions. One requirement is to produce, or at least show the possibility of, the explanations which will link the material world as conceived under primary qualities with psychological phenomena such as the perception of secondary qualities, and, further, with cultural phenomena such as the local non-absolute conceptions of the world and indeed the absolute conception itself, including in that the possibility of physical science.