## META-ETHICS AND META-EPISTEMOLOGY

Recent epistemology has been heavily concerned with the conceptual and methodological foundations of the subject — in particular with the concepts of knowledge, certainty, basic knowledge, justification, and so on. In other words to a considerable extent it has been taken up with meta-epistemology, in contrast with substantive epistemology, in contrast with questions about what we know, how we know it, and how various parts of our knowledge are interrelated. Just as with ethics, meta-inquiries have been pursued throughout the history of the subject (see, e.g., the discussions of the concept of knowledge in Plato's *Theaetetus* and in Book IV of Locke's *Essay*), but also as in ethics, meta concerns have been more prominent in twentieth century Anglo-American philosophy than ever before.

However meta-epistemology has not yet attained the pitch of self-consciousness displayed by recent meta-ethics. Writers on epistemology, unlike their ethical brethren, rarely signal the shifting of gears between meta and substantive. Nor do most of them seem to be aware of the range of alternatives in meta-epistemology and their interrelations or of the ways in which decisions in meta-epistemology do and do not narrow one's options in substantive epistemology. The time is ripe for an advance to a new level of self-consciousness in this regard. We need to take a hard look at the problems of meta-epistemology, their possible solutions, and their relations to the problems of substantive epistemology.

This paper is designed to make a contribution to that enterprise. I take as my point of departure the fact that all these matters have been, if anything, over-discussed in recent meta-ethics. Here the territory has been extensively mapped, the problems catalogued, the alternative positions delineated and interrelated, the connections with substantive ethics explored. The idea suggests itself that we might take all this as an initial model and try to do something of the same sort for meta-epistemology. In this paper I shall exploit only the grosser features of the meta-epistemological terrain, leaving the finer grain for future exploration.

Ι

According to a fairly young, but very well entrenched, tradition, the major divide in meta-ethics is between Cognitivism and Non-Cognitivism, with the former divided in turn into Intuitionism and Naturalism, thus yielding the familiar trichotomy of textbook and classroom. The major division can be formulated in terms of whether ethical judgments (statements, sentences, propositions) are susceptible of objective truth values — Cognitivism affirming and Non-Cognitivism denying this. Within Cognitivism, the Naturalist holds that ethical terms (concepts, statements) can be defined, explicated, or analyzed in 'factual' terms, that they, at bottom are factual terms, and that ethical questions are, at bottom, questions of fact, perhaps of an especially complicated sort. The Intuitionist, on the other hand, maintains that ethical concepts are sui generis, that they are of a distinctively and irreducibly normative or evaluative sort, not to be reduced to matters of fact, however complex.<sup>1</sup>

In looking for meta-epistemological analogues of these distinctions we will concentrate on the two forms of Cognitivism. To be sure, despite the paradoxicality of the phrase 'non-cognitivist theory of knowledge', suggestions along this line have not been absent from the literature. The best known is John Austin's 'performative' theory, the basic idea of which is that when I say 'I know that p' I am not 'describing' some condition I am in, but rather giving others my authority for saying that  $p^2$ . However non-cognitivism is much less prevalent here than in meta-ethics. Most epistemologists, past and present, have taken it that attributions of knowledge have definite truth values (subject to qualifications concerning vagueness and indeterminacy of concepts along with most of the rest of factual discourse). I shall go along with this trend and restrict consideration to cognitivist theories.

The most obvious analogue to meta-ethical intuitionism is the form of Justified True Belief (JTB) conception of knowledge that is set out with exemplary explicitness by R. M. Chisholm.<sup>3</sup> On this view the fact that S knows that p is thought of as consisting of at least three component facts, viz.,:

- (1) It is the case that p (it is true that p)
- (2) S believes that p
- (3) S is justified in believing that p.<sup>4</sup>

To these is sometimes added a fourth condition to take care of Gettier-type counter-examples. The similarity with Intuitionism is based on the third condition. 'Justified' is naturally construed as an evaluative term. To say that

someone is justified in believing that p is to say that in believing that p he is proceeding as he ought, that he has every right to suppose that p, that it is reasonable of him to do so, that he is conducting himself in an acceptable manner. Furthermore this dimension of evaluation is a distinctively epistemic one. What counts towards S's knowing that p is not that he is morally, prudentially, or legally justified in believing that p, but rather that his belief that p satisfies some specifically epistemic standards, standards that have to do with a kind of excellence that is appropriate to the quest for knowledge. One way of putting it would be this. Being epistemically justified in believing that p is the kind of state that an ideal epistemic subject, one whose over-riding concern in cognition is to believe that p iff p is true, would take as a sufficient ground for a positive attitude toward S's belief.

Thus on the JTB conception the concept of knowledge is, in part, an evaluative concept. Now if we hold, as Chisholm does, that this evaluative concept is indefinable in factual terms, we will be taking the position that the concept of knowledge is *sui generis* for just the same reason that Intuitionists in meta-ethics take ethical terms to be *sui generis*, viz., by reason of essentially involving an irreducibly evaluative or normative component. Admittedly, most philosophers who construe knowledge in JTB terms have not explicitly confronted the basic questions about the concept of justification; Chisholm is exceptional in this respect. Nevertheless I think that we may take Chisholm to be following out the tendencies inherent in this way of thinking about knowledge, and take his meta-epistemology as paradigmatic for JTB theorists.

The most obvious meta-epistemological analogue to meta-ethical naturalism is found in the various causal and reliability theories propounded by, e.g., A. I. Goldman, D. M. Armstrong, and F. Dretske. This kind of view is best presented as a different answer to the same question answered by JTB in terms of justification, viz., what makes a true belief that p into knowledge that p? This second answer is either in terms of some kind of causal or nomological relation between the belief that p and the fact that p, or in terms of the belief's being produced by a reliable belief-producing mechanism, one that can be relied on to produce true beliefs either all or most of the time (in most kinds of situations or at least in most kinds of situations we are likely to encounter, or at least in situations like this one). Whichever way we do it, there is a clear sense in which, on this conception, what makes a true belief into knowledge is a state of affairs of a sort that is by no means confined to the subject matter of epistemology. Causal relations obtain between inorganic things that are quite incapable of knowledge. And although a reliable

belief-producing mechanism can be possessed only by beings capable of belief, still the general notion of a mechanism's output being a reliable indication of some external state of affairs is one that applies to such humble non-knowers as thermometers. Thus on this sort of account knowledge that p is a special case of facts of a sort that are by no means unique to the epistemic realm. This view is like meta-ethical naturalism, both in that it takes the concepts in question to be factual in character, and because it supposes these concepts to be made up of concepts that are not at all peculiar to the body of discourse in question.

However there are other meta-epistemological views of a cognitivist sort that do not fit so neatly into this dichotomy. The possibility of recalcitrant cases follows from the fact that JTB theories and causal-reliability theories differ in two respects: (a) the former but not the latter take the concept of knowledge to be, in part, irreducibly evaluative; (b) the former but not the latter take epistemic concepts to include elements that are peculiar to epistemology, not composable out of pieces that are found elsewhere. This suggests the possibility of views that differ from JTB in one of these respects and from causal-reliability in the other. I know of no view that combines the claim that knowledge involves an irreducibly evaluative element with the denial that epistemic concepts are sui generis, but the opposite combination is quite prominent in the history of the subject, in the form of what we may call the Intuitive conception of knowledge. According to this view "Knowledge is something ultimate and not further analysable. It is simply the situation in which some entity or some fact is directly present to consciousness"8. This view of knowledge is found throughout the history of philosophy. There is a particularly clear exposition in Locke's Essay (IV, i, 1) where knowledge is defined as the perception of the agreement and disagreement of ideas.

On this view the concept of knowledge is sui generis. The concept of something being directly present to consciousness or given to consciousness, of our being directly aware of it, is supposed not to be analysable or explainable in terms of simpler concepts, though it is held that we can point to familiar examples of it, e.g., our awareness of sense-data and of facts about sense-data. However what makes the concept sui generis is not the presence of some irreducibly evaluative component. The presence of x to consciousness will presumably be a clear case of something factual as opposed to evaluative.

How is the Intuitive conception to be classified? If we take the defining characteristic of the epistemological analogue of Naturalism to be the claim that epistemic concepts are purely factual, it will be a form of Naturalism. Whereas if we take the defining characteristic to be the claim that epistemic

concepts are (at least in part) sui generis, then it will be a form of Intuitionism. We can, of course, set things up in either of these ways, or set up a third category; it is simply a question of what classification highlights the most important features. For reasons to be brought out in the course of this paper I feel that the most fundamental division in meta-epistemology concerns the reducibility or irreducibility of epistemic concepts. Therefore I shall adopt the second alternative of those mentioned. The analogue to Intuitionism will be the view that epistemic concepts are sui generis, in whole or part; the JTB and Intuitive conceptions will be alternative forms of this position. Since this position differs from meta-ethical intuitionism in not necessarily holding that irreducibly evaluative or normative concepts are involved, I shall choose a different term. And since the position, as we shall see, stresses the self-containedness, the independence of epistemology I shall call it the Autonomy position, or, at the cost of a very ugly neologism, Autonomism. The opposite position, that epistemic concepts can be analyzed into components that are not distinctively epistemic. I shall correspondingly call the Heteronomy position, or Heteronomism.9

Since the Intuitive conception is presently out of favor, I shall focus on the JTB version of Autonomism in the ensuing discussion. So long as we are restricting ourselves to the opposition between the JTB view and causal-reliability views, we may as well avail ourselves of the familiar meta-ethical terms, Intuitionism and Naturalism. I shall take R. M. Chisholm as my paradigmatic intuitionist and D. M. Armstrong as my paradigmatic naturalist. These thinkers not only present fully developed theories of the kind specified, but they are also much more self-conscious methodologically than most of their colleagues.

ŢΙ

It will help in understanding our basic meta-epistemological distinction if we see how it crosscuts some more familiar divides in epistemology. First consider the opposition between foundationalist and coherence theorists. The interrelations are complicated by the fact that theories of these latter types are conceived in quite different ways. Thus we may have a coherence meta-epistemology, i.e., a view according to which knowledge that p is to be defined in terms of the involvement of one's belief that p in a coherent

system of beliefs. In that case, depending on how 'coherence' is defined, this will be a particular form of an autonomist or a heteronomist metaepistemology. It would be more unusual for a foundationalist to state his position as an account of the meaning of 'S knows that p'. It is commonly presented as a substantive position in epistemology more specifically as a position about the conditions under which a belief is justified; and it is opposed to a coherence position on the same issue. It may be possible to formulate analogues of foundationalist and coherence epistemologies for a causal or reliability conception of knowledge, but the job remains to be done. I hope that even this quick glance at the issue will suffice to show that the Autonomy-Heteronomy divide by no means coincides with the foundationalistcoherence divide. Just to extract the most easily made point from the foregoing, a coherence theorist might either be a Heteronomist who takes knowledge to be definable in terms of certain kinds of logical relations between propositions, or he may be an Autonomist who holds the substantive normative view that what it takes for a belief to be justified is that it participate in a certain kind of system with other beliefs.

Another crosscutting issue is whether knowledge requires certainty. In order to formulate the issue with sufficient generality, let us use the term 'epistemization' for whatever transforms a true belief that p into knowledge that p. Thus for the JTB conception one's belief is epistemized iff it is (adequately) justified, whereas for Armstrong what epistemizes a belief is the fact that, in the circumstances, one's belief that p is empirically sufficient for its being the case that  $p^{10}$ . Now 'certainty' is a term that ranges widely over this conceptual territory in, and we will not have time to explore all the varieties. Suffice it for the present to consider impossibility of mistake (infallibility), and even here let us not pause to ask just what sort of impossibility is in question. The points I want to make are, first, that some epistemologists take knowledge that p to require an epistemization strong enough to rule out the possibility that one's belief that p is in error, while others are willing to settle for a weaker epistemization, one that merely renders p highly probable; and, second, that both infallibilists and fallibilists are found on both sides of our divide. Among Heteronomists, Armstrong<sup>12</sup> and Dretske<sup>13</sup> are 'infallibilists', requiring epistemization to render mistake (empirically or causally) impossible; while Goldman<sup>14</sup> is a fallibilist. On the Autonomist side. Chisholm in company with most contemporary JTB theorists, sets things up so that it is possible for a false proposition to be evident for  $S^{15}$ , while Panayot Butchvarov requires of 'justification sufficient for knowledge'16 that it rule out the possibility of error.

HI

Now I want to explore the consequences of each position on our basic divide for some central issues in epistemology and meta-epistemology. At the outset it will be well to remind ourselves that the main thrust of meta-ethics has always been toward the methodology of substantive ethics. The detailed investigations of the meanings of ethical terms, so prominent in this century, have not been undertaken out of an intrinsic interest in the semantics of this segment of language, but rather for the light this throws on the status of ethical judgments: how they are properly evaluated, defended, attacked; what sorts of considerations may be relevantly brought to bear on them; how we settle ethical questions and disagreements. Presumably the same is true of meta-epistemology. Let's see what happens if we try to apply to epistemology the main methodological implications that have been typically drawn from naturalism and intuitionism in meta-ethics.

A naturalist analysis of ethical terms will exhibit ethical statements as factual statements, the truth or falsity of which can, in principle, be determined by empirical investigation.<sup>17</sup> If 'right' is defined as 'conducive to the survival of the species', then it is a matter for (very complex) empirical investigation to determine whether a given action is the right thing to do. The naturalist definition lays out the lines along which we are to determine whether the term applies in a given instance. If, on the other hand, 'right'. 'iustified' or 'know' is a term for an unanalysable non-natural quality, status, or act, as the intuitionist maintains, we are provided no such lead. The analysis does not tell us what to look for to determine whether the term applies in a particular case. That is the price we pay for irreducibility. Of course, once we have established one or more ethical principles they will tell us something of the conditions under which an act is right or a state of affairs good. But how do we establish those initial principles? How do we get started on the enterprise of determining the conditions of application for ethical terms? The intuitionist's position leaves him no alternative to claiming that we have an immediate apprehension of the truth of certain ethical statements - either singular or general. Either we have a 'moral sense' that enables us to spot rightness or goodness in the particular case; or we have a capacity to recognize the selfevidence of certain general ethical principles; or both. Since these apprehensions are immediate we do not need to have previously ascertained that the terms apply under certain conditions. Having exercised our intuition in particular cases or with general principles, or both, we are thereby given a basis for building up the body of ethical knowledge.

We may sum this up by saying that for the naturalist all ethical questions, including the most fundamental ones, are to be settled like any other empirical, factual questions, by the usual methods of empirical investigation — observation, experiment, induction, and the testing of hypotheses. Whereas for the intuitionist ethical investigation is built on the intuitive unmediated apprehensions of ethical truths.

Similar conclusions follow from the analogous meta-epistemological positions. According to the Heteronomist whether S knows that p is a question of whether S's belief that p stands in the right kind of causal or nomological relation to the fact that p, or alternatively, whether S's belief that p was produced by a reliable belief-producing mechanism. Thus the question is properly investigated by whatever procedures are suitable for settling questions about nomological relations and/or the reliability of input-output mechanisms; and this at least includes the standard empirical procedures of observation, experiment, induction, and the testing of hypotheses. Because of the relatively undeveloped self-consciousness of meta-epistemology, noted at the outset, this point is not prominent in the literature, but we do find it popping out at certain points.  $^{18}$ 

If, on the other hand, the concept of knowledge contains an irreducibly evaluative component, we can hardly expect to get any handle on determining who knows what without having some immediate knowledge either of particular instances of this evaluative status, or of general principles specifying the conditions under which it obtains. Chisholm, our paradigmatic intuitionist, is, as I have suggested, much more clearly aware of the problems of meta-epistemology than his colleagues, and his presentation of this point in *Theory of Knowledge* is admirably explicit.

We presuppose, first, that there is something that we know and we adopt the working hypothesis that what we know is pretty much that which, on reflection, we think we know. This may seem the wrong place to start. But where else could we start? . . .

We presuppose, second, that the things we know are justified for us in the following sense: we can know what it is, on any occasion, that constitutes our grounds, or reason, or evidence for thinking that we know...

And we presuppose, third, that if we do thus have grounds or reasons for the things we think we know, then there are valid general principles of evidence — principles stating the general conditions under which we may be said to have grounds or reasons for what we believe . . .

In order to formulate, or make explicit, our rules of evidence, we will do well to proceed as we do in logic, when formulating the rules of inference, or in moral philosophy, when formulating rules of action. We suppose that we have at our disposal certain instances which the rules should countenance or permit and other instances which the rules should reject or forbid; and we suppose that by investigating these instances we can formulate criteria which any instance must satisfy if it is to be rejected or forbidden. To obtain the instances we need if we are to formulate rules of evidence, we may proceed in the following way.

We consider certain things that we know to be true, or think we know to be true, or certain things which, upon reflection, we would be willing to call evident. With respect to each of these, we then try to formulate a reasonable answer to the question, 'What justification do you have for thinking you know this thing to be true?' or 'What justification do you have for counting this thing to be evident?' ... (pp. 16-17)<sup>19</sup>

Here and elsewhere in the book Chisholm emphasizes the point that we have to begin with the assumption that we know certain things and that certain propositions are evident. ('Where else could we start?') It is not that we are to establish propositions to the effect that we know certain things, on the basis of other things we know, by empirical investigation or otherwise. Rather we must have knowledge of our knowledges and justifications at the outset of our epistemological inquiry.

It is clear from this passage that Chisholm's position is analogous to the *moral-sense* form of intuitionism rather than to the *self-evident first principles* forms. He proposes to start with immediate knowledge of particular instances of knowledge or evidence and then determine what general principles will cover those cases.

## ΙV

It is against this background that we can understand the insistence of Autonomists on the accessibility to a subject of his own epistemic conditions. It is a striking fact that JTB theorists, as well as partisans of the Intuitive conception, almost universally take some form of what we may call the High Accessibility position, the position that epistemic states are, in one way or another, readily accessible to their possessor. The most extreme form of this thesis is that knowledge that p entails, implies, or otherwise necessarily carries with it knowledge that one knows that p. However this extreme position has been widely recognized of late to run into serious difficulties, particularly over the fact that it seems quite possible to know that p without having the concept of knowledge, and so without satisfying the most elementary requirements for knowing that one knows that p. Chisholm takes a more modest position. More or less following Prichard, an eminent 20th century Intuitive theorist, he holds that:

If S considers the proposition that he knows that p, and if he does know that p, then he knows that he knows that p.<sup>20</sup>

In other words, if one knows that p he can come to realize that he knows that p just by considering the matter, just by turning his attention to the question. (He could not, of course 'consider the matter' unless he had the concept of knowledge.) One doesn't need any other knowledge or justified belief as grounds or reasons for the higher level belief than he knows that p. The lower level epistemic fact that makes the higher level belief true is all that is needed, provided the person will open himself to it and has the conceptual equipment needed for 'grasping' it. Thus a normal adult human being is capable of an unlimited amount of *immediate* knowledge of his own knowledge, limited only by the knowledge that is there to be known.

We may take the Heteronomist to hold the same principle for other epistemic conditions, like being justified. This principle is clearly designed to guarantee the Heteronomist the basis of particular cases he needs to get his investigation started. If the epistemic states of a reflective individual are all available to him on demand, the epistemologist will have no dearth of data to use in testing epistemic principles. These considerations enable one to understand the fact that intuitionists regularly embrace High Accessibility principles, despite the fact that the arguments with which they support these principles are, in my judgment, totally lacking in cogency. If one is convinced that there is nowhere else to start, then he will find the means to convince himself of the required assumptions that one can ascertain his own particular knowings and justifications just by considering the matter.

In view of the centrality of High Accessibility for the intuitionist's scheme, it is of interest to determine what position the naturalist does, or should, take on the issue. We would have an ideally clear cut opposition if we could represent the Naturalist as constrained by his meta-epistemology to deny Chisholm's principle, to hold that mere reflection is (always or sometimes) insufficient for one to ascertain his epistemic condition. And, indeed, one may be tempted to suppose that this is the way the land lies. For, it would seem, knowledge, as construed by the Naturalist, is just not the sort of thing one could ascertain in this way. For Armstrong and for Dretske to know that p is, roughly, to have a belief that p in such circumstances that one would not have had that belief in those circumstances unless it were the case that p. How on earth could one be expected to know that such a counter-factual is true just by turning one's attention to the issue? Surely to know that requires that I have reasons or evidence that I would not automatically acquire just by

raising the question. On Goldman's version of Naturalism one knows that p only if one's belief that p was produced by a belief producing mechanism that can be relied on to (always or usually) produce true beliefs (at least in certain kinds of circumstances). Again, for me to know that what produced my belief has this feature it seems that I would have to know a lot about my psychology and perhaps other things as well. On either version I need general knowledge about the way things go in the world. And surely I cannot acquire all that just by turning my attention to the issue.

But this would be a superficial reading of the situation. It is not inconceivable, on Naturalist principles, that knowledge of knowledge should be available for the asking. The Naturalist concept of knowledge does not itself put any particular restrictions on the objects of *immediate* knowledge, on what one can know apart from evidence in the shape of other things one knows. On Naturalist principles, one can know that p not on the basis of evidence (non-inferentially) if one possesses a belief forming mechanism that reliably produces beliefs that p from inputs that do not include other knowledge one has. The question of whether one possesses such a mechanism for a certain type of belief, e.g., beliefs about one's own knowledge, is a question of psychological fact; we cannot expect it to be resolved just by the definition of knowledge. Thus the Naturalist meta-epistemology leaves open the possibility of Chisholmian knowledge of knowledge.

However the very considerations that show the Heteronomist not to be constrained by his position to deny Chisholm's principle, can also show us a more abstract respect in which the Heteronomist is necessarily in opposition to the Autonomist on the accessibility issue. For what the above considerations show is that, for the Heteronomist, it is a question of empirical fact as the conditions under which one has knowledge of knowledge, or, indeed, any other knowledge. But clearly that is not the case for Chisholm, and in this again he is typical of Autonomists. Chisholm does not purport to be performing an induction from a number of cases in which he has discovered reflection to possess this efficacy. Nor is his principle offered as an empirical hypothesis, to be evaluated in terms of how well it explains the empirical facts. Rather he attempts to derive the principle from his system of epistemic principles (which are themselves not construed as empirical hypotheses) and definitions of epistemic terms.<sup>22</sup> Thus he takes high accessibility to be required by basic epistemological principles. It is a question of (epistemological) principle, not a question of fact. Whereas for the Heteronomist it is not required by the fundamental principles of his epistemology; it is up for grabs in terms of detailed empirical investigations.

It is possible for A to know that p without knowing that he knows it..., and even for A to know that p and disbelieve that he knows it. (Armstrong, op. cit., p. 212)

One qualifies for knowledge when one has conclusive reasons for believing; one need not, in addition, know that one has conclusive grounds. (Dretske, op. cit., p. 17)

The possibility of which Armstrong speaks should not be interpreted as mere logical possibility; Chisholm might well agree with the statement on that reading. Rather he is saying that the basic principles of epistemology leave open this possibility; the epistemology doesn't rule it out.

Since the opposition between Autonomist and Heteronomist on the accessibility issue is going to play a large role in the sequel, it is important to get clear as to its exact nature. To repeat, the opposition is not over whether in fact one can have immediate knowledge of all one's knowledge, but over whether this is guaranteed by basic epistemological principles. Let's use the term 'Accessibility in Principle' for what is affirmed by the Autonomist and denied by the Heteronomist.

Though it is clear to me that the meta-epistemological positions we are considering do constrain their proponents to take differing positions on accessibility, it may be that the analysis of knowledge does not constitute the deepest roots of those positions. It is certainly a striking fact that the main tradition in epistemology since Descartes, which has been strongly Autonomist, has also been preoccupied with answering skepticism, with vindicating our claims to knowledge (or some of them) in the face of skeptical doubts. It has, I believe, been widely felt that we will have a chance of meeting the skeptical challenge only if our knowledge and other epistemic conditions are immediately available to us. For otherwise we would have to depend on other knowledge to show that we know anything, and so the enterprise would bog down in circularity. Now it seems clear to me that the immediate accessibility of ones own epistemic states does in fact give one no advantage whatsoever in meeting the demand of the skeptic, if that requires showing that one knows something. For to show this, in the relevant sense of constructing a discursive argument for it, requires that one use certain premises that one is presupposing one knows to be true. If one were not making that presupposition one could hardly be claiming to establish the conclusion by exhibiting its relation to the premises. And this means that any attempt to show that one knows something is going to be infected with circularity, however much immediate knowledge one in fact has. But this point has not been appreciated in the tradition; the classical epistemologists from Descartes on have supposed that our capacity for immediate apprehension

of our own knowings is what enables us to meet the skeptical challenge. And perhaps it does in a sense — not by way of enabling me to construct an argument that establishes the thesis that I know something, but by way of satisfying *myself* that I do. In any event, it is not implausible to suppose that this overriding aim of stilling skeptical doubts has given an impetus both to Autonomist meta-epistemology and to an Accessibility in Principle thesis, perhaps to each of these coordinately, perhaps to one through the other, perhaps in all these ways. Obviously this matter needs much more exploration; in this paper I am just throwing it out as a suggestion.

This suggestion is reinforced by what we find on the other side of the fence. Heteronomists have been markedly unconcerned with meeting skepticism. They typically start from the assumption that knowledge is a 'natural fact', one of the distinctive achievements of human beings and other animals; they suppose that knowledge simply confronts them as one of the things in the world to be studied, and understood. They feel no need to show that there is such a thing before investigating it. Hence they are without this motive for embracing an Accessibility in Principle thesis.

The difference over accessibility is going to have crucial implications for the Cartesian programme. Suppose we set out to build up knowledge from scratch, starting from whatever propositions can be known with certainty, apart from any support from other assumed knowledge. Let us further suppose, with Descartes, that no propositions about the physical world fall in that class. Now clearly, assuming there are such propositions we have to be able to identify them as such at the outset of our construction if we are going to get it off the ground. The bearing of the contrast just sketched is clear. Autonomism carries a guarantee that this will be possible while Heteronomism does not. For the Autonomist, if I do know that p with certainty at this moment, that itself can be known by me just for the asking. And so whatever isolated certainties I possess can be reliably identified by me as such, provided I persist in my reflection. But Heteronomism provides no such guarantee. Heteronomism doesn't rule out the possibility, but neither does it affirm it. It is no wonder that autonomist meta-epistemology and the Cartesian programme have always had close affinities for each other.

v

So far our discussion of intuitionist and naturalist 'methodology' has focused on the epistemological status of particular epistemic propositions, propositions attributing knowledge or justification to a particular subject at a particular

specified, this connection would be brought to light. The second reason is this. Principles arrived at in this explanatorily fundamental way are more likely to hold up over the entire spread of possible cases than principles arrived at by a mere induction from a sample of positive and negative cases. For the particular sample with which we work may be biased in ways that

These points are worth an illustration. One of Chisholm's epistemic principles is the following:

are responsible for the outcome.

do not reflect the nature and operation of the underlying mechanisms that

For any subject S, if S believes, without ground for doubt, that he is perceiving something to be F, then it is beyond reasonable doubt for S that he perceives something to be F. (Op. cit., p. 76)

Chisholm's defense of this principle will be that it lays down as little as possible in the way of requirements to fit actual cases of justified perceptual beliefs, as revealed by our immediate knowledge of our own epistemic states, But from the standpoint of the 'reliable mechanism' theory, if such beliefs are actually beyond reasonable doubt this is because the conditions of human perception are such that most such perceptual beliefs are formed by a reliable mechanism. Thus even if Chisholm's principle is in fact correct, we have not seen why it is correct until we have brought out the pertinent facts concerning the cognitive mechanisms that are responsible for perceptual belief formation. And, second, until we have an adequate account of those mechanisms and the conditions of their efficient operation, we will not be able to specify the limits within which the principles hold, or specify what environmental conditions are responsible for the fact that it does fit the general run of cases that actually do occur. Let's spell out this last point a bit further. If anything is clear from the millenia of discussions of perception, it is that for any perceptual mechanism that yields reliable outputs under normal conditions it is easy to imagine, and possible to institute, conditions under which that reliability will diminish. Our visual apparatus no doubts works very well in the ordinary run of things, but it is easily fooled by cleverly constructed imitations, not to mention more sophisticated neuro-physiological possibilities of deception. If it is true that every perceptual belief concerning which the perceived has no doubts deserves to be called 'beyond reasonable doubt', this is undoubtedly, in part, because our perceptual mechanisms are quite reliable in the environments in which they are usually called upon to operate. But unless our epistemic principles are based on an adequate theory of those mechanisms and their operations we will not be able to specify those environing

time vis-a-vis a particular proposition. Now let's turn to the implications of our two meta-epistemological positions for the more general enterprise of constructing a systematic epistemological theory—establishing general principles that lay down the conditions under which propositions of a general sort are known, evident, justified, or what have you.

We have already sketched Chisholm's typically intuitionist position on this matter. Armed with an unlimited quantity of data in the form of particular pieces of knowledge and evidence from his own cognitive experience, the epistemologist proceeds to formulate general principles that will certify the cases of knowledge and rule out the cases of non-knowledge.

Now in the light of the point made earlier, that it is consistent with Naturalism to hold that one does have immediate access to all or some of one's own knowledge, it is clear that it does not follow from the general principles of Naturalism that the epistemologist cannot proceed as Chisholm recommends. If in fact we do have sufficient immediate access to our own epistemic states, then, whatever the correct account of epistemic concepts, we can use Chisholm's methodology. But even if we are so endowed there is still a basic methodological difference between intuitionist and naturalist on the conduct of epistemology. For the latter, but not for the former, there will be a more fundamental, a theoretically more satisfying way of doing the job. Let's concentrate on the form of Naturalism according to which a true believe that p is a case of knowledge that p when it was produced by a reliable mechanism. Clearly on that construal of knowledge, even if I do have some immediate knowledge of my own epistemic states, the preferred way of developing a systematic epistemology would be to build on (or build up) an adequate psychological theory of belief-forming mechanisms, and then determine which of these are reliable under what conditions. This would be the preferred method for two closely interrelated reasons.

First, it investigates the matter in terms of what knowledge is, in terms of the real character of what is being investigated, whereas in Chisholm's inductive approach that is bypassed. And because it proceeds by way of what is (according to the meta-epistemology being assumed) the real nature of the subject-matter, it does not have to limit itself to listing the conditions under which a given epistemic status is in fact forthcoming; it can aspire to explaining why one or another set of conditions is required for the attainment of that status. According to this meta-epistemology the reason why one's belief that p, for a certain type of p, is epistemized by one set of conditions rather than another, is that it is under those conditions that the belief is produced by a reliable mechanism. And by carrying through the enterprise in the way

conditions on which Chisholm's principle depends for its acceptability. We will be blindly reflecting our destiny, rather than delineating it.

Thus we may say that for Naturalism the ideal for epistemological theory will be the development of a fundamental psychological theory of belief-producing mechanisms, and an account of the conditions under which they are reliable — all this to be achieved by the usual methods of empirical science. Whereas, as Chisholm makes explicit, the intuitionist has no other recourse than to look for principles that fit his initial intuitive epistemic data.

This means that, for the Heteronomist, whatever temporary expedients he might adopt, epistemology is not the exclusive province of the philosopher. The philosopher has the analytical job of explicating the basic concepts, laying out conceptual alternatives, and exhibiting logical relationships; but then it is up to psychology to give us the theory of cognitive mechanisms on which epistemic principles will be built. The philosopher can't do it all in his armchair. Whereas the autonomist methodology, as expounded by Chisholm, is nicely calculated to insure that possibility. The relevant data are available to one who never leaves his armchair except to acquire some common sense knowledge. There is a close analogy in all this to be the intuitionism-naturalism opposition in meta-ethics.

It follows that epistemology, in its ideal realization, will occupy very different places in the organization of human inquiry, for our own two positions. To put it shortly, for the Autonomist epistemology comes earlier. Heteronomist epistemology, done properly, must come rather late. For it presupposes considerable development of scientific knowledge and methodology in general, and of psychological theory in particular. It cannot be done any earlier than any other specialized branch of psychological theory; and psychology, for whatever reasons, is not an early bloomer among the sciences. Whereas for the Autonomist, epistemology, at least those parts that have to do with commonsense knowledge, could in principle be done before any development of scientific theory. It is autonomous, not dependent on other developed branches of knowledge. To be sure, even for the Autonomist it could not be our very first cognitive achievement. The presence of a truth condition for knowledge ensures that one cannot know that he knows that p without at least simultaneously knowing that p. And pieces of knowledge like the former are required by the Autonomist as bases for the systematic development of the discipline. But to develop epistemology the Autonomist requires nothing more than the possession of various individual pieces of lower level knowledge. He doesn't need other bodies of theory.

VΙ

Let's now look at the implications of our two positions for the distinction of mediate and immediate knowledge and for what is required for knowledge of each type.

The distinction between mediate (indirect) and immediate (direct) knowledge is generally made within the JTB conception. Knowledge is mediate when the justification involved is mediate, and immediate when the justification involved is immediate. The most fundamental way of distinguishing between mediate and immediate justification, and the way most neutral between different substantive positions, is the following.

S is mediately justified in believing that p = df. What justifies S in believing that p is the fact that this belief stands in the appropriate relations to some other justified beliefs of S.

S is immediately justified in believing that p = df. What justifies S in believing that S is something other than this belief standing in appropriate relations to other justified beliefs of S.

In more familiar, though less careful terms, S is mediately justified in believing that p when he has adequate evidence, grounds, or reasons for believing that p (in the form of other things he knows or is justified in believing), whereas he is immediately justified in believing that p when he is justified by something other than that.

A Heteronomist cannot, of course, make the distinction in just those terms, but we can use the wider concept of 'epistemizing' introduced earlier to give a more general statement of the distinction between mediate and immediate knowledge, one that is applicable to any conception of knowledge that recognizes that knowledge that p entails belief that p. We begin by defining mediate and immediate epistemization in exactly the say way as that in which mediate and immediate justification were defined on the preceeding page.

S's belief that p is mediately epistemized  $=_{df}$ . What epistemizes S's belief that p is the fact that this belief stands in an appropriate relation to other epistemized beliefs of S. S's belief that p is immediately epistemized  $=_{df}$ . What epistemizes S's belief that p is something other than its standing in an appropriate relation to some other epistemized beliefs of S.

Then, as before, mediate knowledge is knowledge that involves mediate epistemization, and immediate knowledge is knowledge that involves immediate epistemization.

Even though this conception of immediacy is purely negative with respect to what does the epistemizing, it is, given certain plausible assumptions, quite important to determine what kinds of propositions can be immediately known in this sense. For if the regress argument is cogent, we can mediately know that p only if p can be connected by the right kind of inferential links to propositions all of which are known immediately. Hence, what we can know immediately puts limitations on what can be known in any way.

So let's consider the question of what can be recognized on our two positions to immediately epistemize a belief, and what sorts of beliefs might acquire this status on the two positions. The first question has a definite clear-cut answer for the Heteronomist but not the the Autonomist. On the 'reliable mechanism' version of Naturalism S's belief that p is epistemized iff it was produced by a reliable belief-producing mechanism. The epistemizing will be immediate iff the reliability of that mechanism does not essentially depend on any input from other epistemized beliefs of S. In other words, the epistemization is immediate iff it does not require that p has been inferred (or otherwise generated) from premises that are themselves epistemized for S. Now of course it is a further question (the second question above) as to just what kinds of beliefs can be epistemized in this way. Presumably beliefs about one's own current conscious experiences are so epistemized; and it is not at all implausible to think of perceptual beliefs about the physical environment (or some of them) as being produced by a reliable perceptual mechanism that does not depend on input from other beliefs that are antecedently epistemized.<sup>24</sup> Thus on Naturalism we have good prospects for a fairly extensive variety of immediately known propositions, ranging over singular propositions about objects as well as propositions about the believer's current experience, and possibly over quite different matters as well. This gives the Heteronomist hope of being able to avoid the notorious blind alleys encountered in the attempt to derive all one's knowledge from propositions about 'one's current experience.

The situation is cloudier for the Intuitionist. There is always liable to be persistent controversy over the conditions of application of irreducibly evaluative terms. Thus on the first question, we find one or another Autonomist holding that S's belief that p is immediately justified *if and only if*, (a) S is immediately aware of the fact that p (or, alternatively, of the object the proposition that p is 'about'). (b) it is true that p and p belongs to a certain

select class of propositions, <sup>26</sup> (c) p belongs to a certain select class of propositions (the belief is 'self-justified' or 'self-warranted'). <sup>27</sup> However on one point Autonomist theorists are in agreement — a belief cannot be immediately justified just by the fact that it was non-inferentially produced by a reliable mechanism. Chisholm puts this point succintly.

But aren't we overlooking the most obvious type of epistemic justification? Thus one might object; 'The best justification we could have for a given proposition would be the fact that it comes from a reliable source. What could be more reasonable than accepting the deliverances of such a source — whether the source be an authority, or a computer, or a sense organ, or some kind of psychological faculty, or science itself?' The answer is, of course, that it is reasonable to put one's faith in a source which is such that one knows it to be reliable or one has good ground or reason or evidence for thinking it to be reliable. (Op. cit., p. 63)

Note that Chisholm not only rejects this suggestion but regards it as obviously mistaken; he seems to think that one only needs to have its defects called to one's attention to recognize them as such. This indicates that his rejection must have fairly deep roots in his system; and we do not have to look far for those roots. Since the Autonomist is committed to holding that any epistemic status is readily recognizable on reflection, he cannot admit that a belief can be epistemized by a fact that might obtain without being readily available to the believer. And the modes put forward by Heteronomists clearly do not meet that condition. I can't ascertain that my belief was produced by a reliable mechanism just by considering the question.

Thus in the sphere of immediate justification Autonomists restrict themselves to epistemizers that (they believe) are readily available to the believer. It is plausible to suppose that p's being 'presented' to my consciousness is something I can ascertain just by considering the matter. Likewise if what immediately justifies a belief is just that it is of a certain sort, e.g., a belief about the believer's current thoughts, then, provided I have the concept of that belief-type, it seems that I can hardly fail to be aware that it is of that type, if the question is raised. It may be doubted that these matters are as easily accessible as Autonomists suppose. <sup>28</sup> But at any rate, the plausibilities are such as to enable us to understand why Autonomists have restricted the sphere of the immediately known in the way they have, and therefore why they have persistently placed themselves in the suicidal position of trying to derive all one's knowledge from propositions about one's current experience.

Now let's take a brief look at what it takes for mediate epistemization. The standard JTB line (at least among theorists who discuss this issue in its

full generality) is that in order for S to be mediately justified in believing that p, not only must he in fact know or be justified in believing certain propositions that are so related to p as to constitute adequate reasons for accepting p; and not only must he come to believe, and/or continue to believe, that p because he has those reasons. In addition he must know or be justified in believing that those other propositions constitute adequate grounds for accepting p. The reason for this extra requirement is essentially the same as the reason for rejecting de facto reliability as an immediate justifier. If epistemic statuses are readily available to reflection, we cannot allow an epistemic status to depend on some fact outside the subject's epistemic field, unless that fact could not hold without being knowable on reflection. Since not all relations between propositions, especially inductive relations, meet this latter condition, we can allow a belief to be justified by its bearing the right relations to other justified beliefs, only on condition that the subject realize that these relations obtain.

Just as the demand for readily accessible higher level knowledge leads to a sharp restriction in the class of immediately justified beliefs, so this requirement will narrowly restrict the class of mediately justified beliefs. It seems that we are quite often in the position of having sufficient grounds for a belief but without realizing (or being able to realize on reflection) that our grounds are sufficient. Perhaps we cannot even consciously recall our grounds or give them an adequate formulation, so as to consider whether they are adequate. This is the case with most of what most people have learned about science, history, geography, and so on. And even where we can formulate our grounds, we may have no firm opinions as to whether they are sufficient, much less know (or have justification for supposing) that they are sufficient. The Autonomist will naturally be led to deny such cases the title of knowledge.

The Heteronomist, by contrast, is not motivated, by his general epistemological orientation, to impose any such requirements on mediate knowledge. <sup>31</sup> So long as the true belief that p arose from the knowledge that q, and so long as the mechanism by which it arose is sufficiently selective so that (with proper qualifications) it produces a belief output from a knowledge input only when the latter constitutes adequate grounds for the former, the reliability theorist can, in good conscience, allow that S knows that p, without adding the extra requirement that S must have the higher-level knowledge that the input constitutes adequate grounds for the output. Dretske argues this, for perceptual knowledge, in Seeing and Knowing, Ch. III, sec. 4, and for knowledge in general, in 'Conclusive Reasons', pp. 16–19.

## VII

I hope that this paper has demonstrated the value of a self-conscious consideration of meta-epistemology, in contrast to and in relation with, substantive epistemology. Further explorations along this line, using more refined distinctions than the relatively crude ones with which we have been operating, should yield a greater harvest of insights into the basic issues of epistemology.

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## NOTES

- <sup>1</sup> Needless to say, this quick characterization glosses over many complexities and subleties, which will have to be ignored in this paper.
- <sup>2</sup> 'Other Minds', *Proc. Arist. Soc. Supplement*, XX (1946). Reprinted in *Philosophical Papers* (New York: Oxford U. Press, 1946). See also A. J. Ayer's suggestion in *The Problem of Knowledge* (London: Macmillan & Co. Ltd., 1956), to the effect that whether we will judge that a person knows that p under certain conditions is a matter of 'attitudes' that cannot be proved to be correct or mistaken. (p. 32). This sounds very much like Aver's emotivist position in meta-ethics.
- <sup>3</sup> See especially the second edition of his *Theory of Knowledge* (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1977).
- <sup>4</sup> Not all epistemologists who present this kind of analysis use the term 'justified'. 'Warranted' is quite common, and Chisholm has a generous budget of terms for various degrees of positive epistemic status 'some presumption in its favor', 'acceptable', 'reasonable', 'evident', 'certain'.
- <sup>5</sup> 'A Causal Theory of Knowing', *Journ. Philos.* LXIV, 12 (June 22, 1967): 357-372; 'Discrimination and Perceptual Knowledge', *Journ. Philos.* LXXIII, 20 (Nov, 18, 1976): 771-791.
- 6 Belief, Truth, and Knowledge (New York: Cambridge University Press, 1973), Pt. III.
- <sup>7</sup> Seeing and Knowing (London: Routledge & Kegan Paul, 1969), Ch. 2; 'Conclusive Reasons', Austral. Journ. Philos., 49, 1 (May, 1971), 1-22.
- <sup>8</sup> H. H. Price, 'Some Considerations About Belief', Proc. Arist. Soc., 35 (1934-35), 229.
- 9 Admittedly this scheme oversimplifies some complicated historical relationships. As I read the situation, the JTB view developed out of the Intuitive view in the following way. The pure 'Intuitive' view, as found, e.g., in Locke, was felt to be too confining in several respects. First, and most obviously, it does not easily accommodate knowledge gained by inference (particularly complicated inference) from pieces of intuitive knowledge. Second, it restricts knowing to the condition one is in at the moment when a fact is presented to ones consciousness; it does not allow for knowledge as a more or less permanent possession. To remedy these deficiencies philosophers (1) allowed knowledge to include not only intuitive knowledge but also what is arrived at by acceptable inferences from that; and, (2) often implicity, treated knowledge obtained in either of these

ways to be 'possessed' for a period of time. A good place to see a 'snapshot' of this stage of development is Chapters XI and XII of Russell's *Problems of Philosophy*. But then it became evident that we no longer have a unified concept of propositional knowledge. What is common to intuitive knowledge and that gained by inferences therefrom? An answer that suggested itself is that in both cases one's belief or judgment is 'reasonable' or 'justified', has sufficient 'evidence' or 'grounds'. This move involved two important steps. First these concepts had previously been attached to beliefs that fall short of knowledge: a belief can be more or less reasonable, have stronger or weaker grounds or reasons; but knowledge is something quite different from all that; it stands outside that field of comparison altogether. In taking knowledge itself to be true justified belief, the earlier separation was broken down; now one envisaged a degree of justification strong enough to make the true belief count as knowledge. Second, these notions, previously restricted to beliefs that receive their justification from other justified beliefs, were extended to cover beliefs not so justified. We now recognize 'immediate' as well as 'mediate' justification. With these moves the full-blown JTB conception of knowledge is born.

- <sup>10</sup> Though the 'epistemization' jargon gives us a *linqua franca* for justificationists and causal-reliabilists it is still not completely general; it leaves out the intuitive conception, which doesn't construe knowledge as involving belief at all.
- <sup>11</sup> For a chronicle of some of its wanderings see R. Firth, 'The Anatomy of Certainty', *Phil. Rev.*, 76 (1967), 3-27.
- 12 Op. cit., Ch. 13, sec. 1.
- 13 'Conclusive Reasons', esp. section 1.
- <sup>14</sup> See his analysis of non-inferential perceptual knowledge on pp. 785–786 of 'Discrimination and Perceptual Knowledge'. The fallibilism stems from the fact that the knower is required to be capable of ruling out only 'relevant' alternatives. In some 'irrelevant' state of affairs he might form a false non-inferential perceptual belief that p. Thus the conditions of belief formation do not strictly rule out the falsity of the belief.

  <sup>15</sup> Op. cit., p. 103.
- <sup>16</sup> See his *The Concept of Knowledge* (Evanston, II1.: Northwestern University Press, 1970), Pt. L. sec. 4.
- <sup>17</sup> For simplicity of exposition I am leaving out of account what some writers call 'metaphysical' and 'theological' naturalism, in which ethical terms are defined in terms of non-empirical metaphysical or theological facts, such as the will of God.
- <sup>18</sup> See, e.g., Armstrong, op. cit., p. 191, and Goldman, 'Epistemology and Epistemics' (unpublished), pp. 23-25.
- <sup>19</sup> After my buildup this passage may seem a bit disappointing, in that Chisholm speaks of 'presupposing' or 'adopting as a working hypothesis' or 'supposing', rather than taking a more extreme intuitionist line that we have *immediate knowledge* that we know various things and are justified in various beliefs. But it is not clear that Chisholm is not wholly in earnest in this cautious talk of 'working hypotheses'. As we shall see in a moment, he lays down a principle to the effect that whenever anyone knows anything, he can, just by reflecting on that fact, come to know that he knows.
- <sup>20</sup> Op. cit., p. 116. See also Butchvarov, op. cit., p. 28-29, and K. Lehrer, Knowledge (Oxford: Clarendon Press, 1974), pp. 228-232. For Prichard's view see his Knowledge and Perception (Oxford: Clarendon Press, 1950), p. 86.
- I owe my appreciation of this point to Lawrence Davis and Robert Gordon. Of course,

it seems highly implausible that, given the Heteronomist conception of knowledge, all one's knowledge should be so readily accessible, even if common everyday knowledge is. One might well have a highly reliable mechanism for generating scientific explanations without realizing how reliable it is. But I shall suppress this consideration, in the interest of preserving the clean lines of the opposition.

- <sup>22</sup> See also Butchvarov, op. cit., pp. 28-29, and Lehrer, op. cit., pp. 228-232.
- <sup>23</sup> I cannot take time to align this brief note with what actually goes on in the *Meditations*. What I am talking of under this title is an enterprise often associated with the name of Descartes and which has become prominent largely because of Descartes' influence.
- <sup>24</sup> For suggestions along this line see Armstrong, op. cit., p. 163, and Goldman, 'Discrimination and Perceptual Knowledge.'
- <sup>25</sup> C. I. Lewis, An Analysis of Knowledge and Valuation (La Salle, II1.: Open Court Pub. Co., 1946), Ch. VII. Bertrand Russell, Problems of Philosophy (London: Williams & Norgate, 1912), p. 77: G. E. Moore, Some Main Problems of Philosophy (London: George Allen & Unwin, Ltd., 1953), Ch. II.
- <sup>26</sup> R. M. Chisholm, op. cit., Ch. 2.
- <sup>27</sup> Panayot Butchvarov, *The Concept of Knowledge* (Evanston I11: Northwestern University Press, 1970), Pt. I, sec. 6: W.P. Alston, op. cit.
- is committed to the easy accessibility not only of the presence of what justifies the belief but also of the fact that it is sufficient to justify it. And one may doubt that the latter is so easily accessible. Can I come to know that all beliefs of a certain type are justified by being of that type, just by raising the question? Can persistent controversies in epistemology be settled that easily? Is it that the opponents of the self-justification position, or of Chisholm's truth-justification position, have never reflected on the matter?

  See, e.g., two articles reprinted in M.D. Roth & L. Galis, eds., Knowing (New York: Random House, 1970): Keith Lehrer, 'Knowledge, Truth, and Evidence', p. 57; and Brian Skyrms. 'The Explication of 'X Knows That p'', p. 91, fn.5.
- <sup>30</sup> Chisholm is a notable exception to this trend in JTB theory. For example, his principle (G) on p. 82 of *Theory of Knowledge* reads:

If the conjunction of all those propositions e, such that e is acceptable for S at t tends to confirm h, then h has some presumption in its favor for S at t.

He does not also require that S know that the conjunction of those propositions tends to confirm h. It would seem that this principle does not sort well with Chisholm's position that when a proposition has a certain epistemic status for me I can know that it does just by considering the matter. Is there any guarantee that I can realize that the above relationship holds when it does hold. Considering that one term of the relationship is all the propositions that are acceptable to me at t I may well be at a loss to determine whether the relation does hold.

<sup>31</sup> Just as we find Chisholm deviating from the natural Autonomist line, so we find Armstrong arguing for the necessity of the subject's knowing that the evidence really is adequate evidence. (op. cit., pp. 151, 199). In Ch. 14, Armstrong finds himself enmeshed in considerable difficulties because of this requirement.