IMMEDIACY AND IMmutABILITY:
A STUDY IN THE THEORY OF KNOWLEDGE

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CHAPTER 1

THE MEANING OF KNOWLEDGE

There is an oft-repeated argument to the effect that we can not obtain valid knowledge of the external world but are restricted to belief and probability. Proffered grounds for this thesis are primarily two: (1) the circumscription of each percipient to his own "private" sense-experience, and (2) the contradictions and errors of the senses. Thus, although we may spontaneously and immediately leap from our individual subjective feelings and sensations to the assumption of a common external object, we have no rational warrant for doing so. A natural inclination may lead us to believe in the independent existence of a world of persistent objects with whose acquaintance others may share. But there can be no certainty that our world is shared by other percipient beings, that what we perceive is as it seems, or that present sensations have any connection with past ones. Doubt can be cast upon any belief; none is certain. Still, the demands of practical life make it expedient to act on the assumption that what we experience and seem to know is as it appears to be. It is not necessary to have certainty about the nature of things, as long as what we take to be true is probably true.
In contemporary philosophical discussion this argument has reappeared in a variety of highly refined probabilistic conceptions of knowledge. Taking their cue from the common empiricist contention that all statements about physical objects are "merely probable," extremists have argued that even "protocols," "report propositions," or "observation statements" are not certain. The advance from report propositions of sense data to laws of nature and to statements regarding physical things is said to include ultimately unjustifiable inductive leaps and, therefore, that such conclusions are only probable. Going further, presumably on the ground that the fundamental canon of scientific procedure is to the effect that no accepted factual statement is immune from withdrawal, some thinkers have denied that basic factual propositions ("report propositions," "observation statements") are absolutely certain. Thus, not only do they hold that statements about physical objects are merely probable, but that even observation statements, couched in a purely phenomenalistic language, also lack certainty. On this view, a statement on any level of discourse is a probability statement based upon the

1. Such terms refer to the basic reports of a perceiving, e.g., "I see a patch of blue," or, perhaps more accurately, "Blue-there-now."
probability of its supporting grounds. But these, in turn, are probabilities based upon other probabilities. In other words, the probability of anything whatsoever is based upon something else which is itself only probable. The regressus that this engenders is terminated by the posit or stipulation of some initial probabilities. "Knowledge," it is then contended, is not to be identified with certainty, nor need it contain any certain base. "Knowledge" is merely a system of probabilities mutually supporting themselves.

In effect, such a probabilistic conception of knowledge denies that knowledge is built up from a factual basis. The result is a system of arbitrary posits, with respect only to the language or symbols of the system, as the fixed ground from which other probabilities are derived. But it is impossible to see how such a concatenation of probabilities has any connection with the external world and in what sense it may claim to represent human knowledge of reality. How can sheer conventions in the choice of posited probabilities lead to valid knowledge of the world? Who is to determine the initial probabilities? On what evidence? Moreover, there can be no justifiable assignment of any initial probabilities if the fundamental assumption is that the probability of anything whatever depends upon a ground
which is itself probable. To seek to halt the vicious regress by the arbitrary assignment of some probabilities can lead only to unqualified conventionalism. But what is equally as important to note here is that, even on such a position, the established posits or stipulations serve as a determinate, invariant base of operations and, in this sense, are necessary and certain.

If any claim that something is probable is to be significant, it must be based upon something which is itself not probable, but certain. And, where our concern is not simply with an arbitrary or conventional linguistic system but with factual propositions (i.e., statements about the physical world), the certainty must be of some fact.

Let us assume that the probability of some event or fact is $p$. This probability is relative to some ground, $p_1$. If this ground is itself only probable, it must likewise have a ground, $p_2$, and so on. Now the probability of the initial event or fact is weakened by the probability of its ground, which, in turn, is weakened by the probability of its own ground, and so on. In other words, the probability at any stage is a product of the probability-values of the supporting factors. Since the probability of each factor is smaller than 1 (where 1 = the maximal probability-value, or certainty),
the product of an infinite number of factors would be equal to zero. \((p_1 \cdot p_2 \cdot \ldots \cdot p_n = 0)\) Thus, even if it is maintained that all factual propositions are merely probabilities, there must be certainty at some stage of the regress if the contention is not to be reduced to absurdity. Probability is dependent upon prior certainty.

To distinguish knowledge from belief and probability it must be identified with certainty. Still, factual knowledge is always knowledge of some object by a cognitive being. Hence, there are three elements in the cognitive situation: the object known, the knower, and their relation. This means that if certainty is to be assured, the possible object of knowledge must be within the scope of the subject’s cognitive powers. Moreover, the cognitum must be directly known by the cognitive being in order for it to afford the indubitability implicit in the meaning of knowledge. For these reasons a representative theory of knowledge makes certainty impossible and must, therefore, end in some variety of probabilism. For, whatever the supposed intermediary between the ultimate object and the mind may be, it must act as a screen cutting off the extra­}
mental world. It is of no avail to argue that our "ideas," "impressions," or "sensations," must be like,
similar to, or resemble, the underlying objects and thus afford us a ground for our beliefs regarding the world. On what evidence can this likeness, similarity, or resemblance, be asserted? If immediate knowledge is confined to ideas, or some other kind of entities, the extramental world must be somehow inferred. How can such inference be validated? To know that one thing is like, similar to, or resembles another thing, requires that the latter too is somehow known. Otherwise, no inference, no animal faith, no general opinion of mankind, can substantiate the claim of similarity. Any theory which considers all knowledge mediate, i.e., which makes ideas or some other entities the first objects of knowledge,

2. This point is cogently and amusingly made in Saint Augustine's *Contra Academicos*. "Then I said: 'Let us consider the matter precisely for a moment, and as it were, place it before our eyes. Suppose that this someone of whom we are talking were here with us. Along comes your brother. The man asks: 'Whose son is this?' The answer is given: 'The son of a certain Romanianus.' The other remarks: 'How like his father he is! How right was the report I heard!' You or someone else interjects: 'My good man, so you know Romanianus?' 'No,' he says. 'All the same, he seems to me to be like him.' Would anyone be able to keep from laughing?'"—Against the Academics, transl. by John J. O'Meara (Westminster Md., The Newman Press, 1950), pp. 84-5.
defeats its own goal. Instead of explaining how knowledge is acquired, it makes knowledge an impossibility.

If knowledge is the result of a relation between the thing known and the knower, it follows that it cannot be defined apart from the process by which this relating is affected. In this process, the objects of cognition, of whatever kind, must be received exactly. For, if they are transmuted in the process of transmission to the cognitive subject, certainty is lost. Knowledge of the external world presupposes the validity of perception and conception. Accordingly, some provision for immediacy of relation between the knower and the known is crucial in any theory of knowledge.

The question now arises: If the cognitive subject is one relatum in the knowledge relation, what elements are capable of being the other relata? Are these of one, or more than one, kind? How and where are they to be located?

Most philosophers acknowledge an indubitable presentational element as essential for knowledge. This element is generally designated as a sense-datum, sensation, impression, or idea. It is the cardinal thesis of empiricism that the edifice of knowledge is to be built up from such discrete, irrelative, ultimate data of sense. On such a view, where perception or sense-intuition is
considered the fundamental cognitive faculty, certainty is, at best, confined to the momentarily given facts, viz. to the feelings or images present at the moment to the mind. Accordingly, with cognition pared down to sensing, factual knowledge is restricted to a corpus of beliefs usually termed "perceptual" or "objective" beliefs. Each belief consists of a set of hypotheses as to what sense data would be given if the percipient were to take a specified action, e.g., touch the "material object," change his position, etc. This approach leads to some version of a verification theory of meaning, in terms of which the significance of an objective belief is increasingly "confirmed" or "verified" through actual (present) and obtainable sense-data. On such a view, the intelligibility of all concepts must be reducible to sense-data, or else rejected as non-sensical and, hence, meaningless. Moreover, certainty about the physical world is not possible beyond the moment of perception. We can merely increasingly confirm or verify our beliefs, which, however, always remain beliefs.

In fact, such a theory must lead to the conclusion that knowledge is not possible. The fatal objections

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to it can be tersely put. Considered ontologically, there is the question as to what it is that organizes or unifies the set of actual or obtainable sense data. Why does one set of data constitute what we designate as a physical object rather than another set? In what medium do the obvious data of sense arise and how are they related? In brief, what grounds the compresences or successions of such data? Considered epistemologically, the limitation of knowledge to sense cognition falls under the question: How do we know that an objective fact consists of a certain definite set of data and not others? For, unless we do so know, we will have no basis for proceeding with our verification of our perceptual or objective belief. In other words, how do we know that the obtained data are at all related to the set constituting the objective fact? Moreover, if verification is to be at all possible, the data must be bound together by real connections, i.e., they must be grounded in some determinate base. That is to say, the set of data can not be simply a series or collection of loose and separate elements. For, if this were the case, no one datum could be evidence for any other datum to come. To limit knowledge to the intuition of the evident data of sense is to annul the whole transitive significance of data. The connectedness requisite for causal explanation
presupposes an invariant ground for the relations among data. Further, in order to accept or reject the verification value of any datum we must have an antecedent notion of what we are attempting to verify. We will have no idea whether or not we are succeeding in increasingly verifying our belief unless we already have a meaning in mind. Only on such an assumption is the activity of verification made reasonable. This point is, in fact acknowledged by a foremost advocate of the verification theory of meaning, C. I. Lewis. Referring to the question of how it is that we know that an objective belief has a certain set of directly (sensibly) verifiable consequences, Lewis states: "The only answer which can be given is that we know this in knowing what we mean by our affirmation of objective fact."  

The point of the preceding discussion is that the meaning of knowledge can not be restricted to the data of sense, even if provision for indubitability is made through a doctrine of sensation allowing a relation of immediacy between the sensible object and the power of sense. Would we have a coherent, meaningful experience without some non-empirical factor as a constituent?

If our cognitive powers were confined to sense intuition, all that would be known would be the patent nature of the datum present at the moment. In addition to the impossibility of causal explanation, noted above, such a restriction of the objects and powers of cognition would make universal judgment and discourse, as we now know them, impossible. Inasmuch as the data of sense are transitory, they can not constitute the subjects of predication. All that one can do is to point to them. For, since judgment is a temporal process, the datum intended as the subject of the judgment would not survive the process. Nor could we, on such a view, rescue the import of judgment on the ground that images of sense data may be stored by the memory. For, even so, judgment still would be restricted to the particular image that is recalled. Hence, sense intuition alone can not be the ground of judgment. That "this" is "such-and-such" presupposes more than a bare datum denoted by this. Unless we are merely manipulating formal symbols, there must be a source of the unity reflected in judgment. Moreover, intellectual knowledge always has been considered something communicable. But, if knowledge were limited to the received impressions of the senses, every judgment would be no more nor less valid than another, since every judgment would be restricted to one's immediate
data. Hence, significant discourse would be impossible. To "save" the truth of discourse there is needed a common locus of certainty and its conjugate, necessity.⁵

One can not, however, stop at the halfway point of arguing for the indispensability of a non-empirical source of necessity and certainty, yet fail to locate it, delineate its character, and show how it is possessed by the mind. To argue, for example, to the essentiality of "ontological objects" or "substantial facts" as the loci of necessity, and to affirm that we do have concepts of them, does not suffice. If such objects are to be the ground for certainty, an account must be given as to how they are related to the knowing mind. Unless it is explained how the concepts in mind are accurately received from these extramental grounds, the existence of such objects remains supposititious. The only conclusion to such a position likewise must be that objective beliefs can not be known with certainty.⁶

⁵. An illustration of the problem that is involved here is supplied by St. Augustine. "If we both see that that which thou sayest is true, and if we both see that what I say is true, where, I ask, do we see it? Certainly not I in thee, nor thou in me, but both in the unchangeable truth itself, which is above our minds."—St. Augustine, The Confessions (in Basic Writings of Saint Augustine) ed. by Whitney J. Oates (New York, Random House, 1948), vol. 1, p. 221 (Bk. XII, ch. xxv).

One task of philosophers is to seek an explanation of how the subjective certainty we all feel may be objectively founded. An adequate theory of knowledge must make intelligible how knowledge is possible, i.e., it must articulate the presuppositions and conditions required to account for the attainment of conceptual knowledge. It is necessary, therefore, not merely to indicate the elements in the process of understanding or thought (e.g., sense-intuition, imagination, memory, intellection, etc.), but to describe what makes the process possible, i.e., to show how these elements must be related and in what order. This means that we must adduce principles of explanation which will account for the community among elements and for the continuity of the process of intellectual cognition. It is not sufficient to start with a statement concerning the presentations of sense and to end with a statement concerning the content of concepts. If it is contended that these are within consciousness and hence amenable to description, whereas the process from one to the other (from sense to concept) is below consciousness and, consequently, not a subject for discussion, one has, at best, maintained that we have knowledge. How knowledge is possible is presumably incapable of being explained. Yet we can not simply assert that there are sense data and that there are universal concepts, and let it go
at that. Whatever may be tendered as an adequate theory of knowledge has no proper claim to the title if it stops at that point. Rather, we must theorize as to what makes knowledge (both sensitive and intellective) possible, viz. we must discriminate the elements of the process, the requisite conditions, and the connecting links between the various elements. We must show how the universal concept can arise from, or be imposed upon, our primitive sense intuitions as the reason for perceptual unity and the intelligibility of experience.

To recapitulate: it has been argued that knowledge is significant only when it is distinguished from belief and probability. Its distinctive mark is certainty. We have seen that if indubitability is restricted to the data of the senses we can not account for the structure of our experience, for causal explanations, and for the import of judgment. Moreover, it is a fact that we engage in discursive reasoning and hold it meaningful. Sense-perception, however, is of a "this-here-now," which we must simply accept. But reasoning requires abstract and intelligible units, viz. concepts. Concepts represent or embody the permanent and universal. Thus, since reasoning must involve universality, sense cognition does not suffice for intellectual knowledge. There must be a non-empirical, determinate ground of universality.
We have seen that knowledge must be identified with certainty and that this necessitates immediacy between knower and known. Moreover, certainty is possible only where there is an invariant and determinate ground. Certainty implies fixity, stability, necessity; in short, immutability. We observed that even a system of probabilities must be based upon a fixed and, within that system, unchangeable base. Thus, the conception of the certainty of knowledge entails two requisite factors: (1) a relation of immediacy between the knower and the known, and (2) a determinate, fixed ground common to all men. It is the thesis of this essay that these factors of immediacy and immutability are the minimal requisites for a theory assuring the certainty of knowledge of the external world. Both factors are essential. Without either one we must abandon any claim to knowledge of things themselves.

I will refer to the provision for the relation of the knower with the known as a "principle of immediacy," and to provision for a determinate and unchangeable ground providing necessity and universality as a "principle of immutability." That both of these principles are required for a tenable theory of knowledge will be shown by examining various types of theories with respect to these principles. Attention will be devoted only to representative systematic expositors of typical
views.

The advisibility of discussing the possibility of immediacy between the mind and the external world has been questioned. But the necessity for immediacy in order to assure the certainty of knowledge has not been controverted. Likewise, the need for a factor of immutability generally has been recognized, either explicitly or tacitly. What has been problematic with respect to this factor has been where to locate it. Chapter Two will consider various views respecting the principle of immediacy, and Chapter Three will take up the question of the possible loci and forms of immutability.

The intention of the essay is only to show that the indicated principles are the minimal requisites for a coherent and intelligible theory of knowledge. Examination of various theories of knowledge in terms of the principles indicated here will reveal their particular defects. Failure to make provision for the principles of immediacy and of immutability will be shown to lead either to complete skepticism or to some variety of probabilism. No effort will be made to present a detailed examination of the theories considered or to engage in extensive criticism. It will suffice to indicate, either tacitly or explicitly, their inescapable consequences. Such will be the "negative" side of this study.
On its "positive" side, this study will show that a proper framework can be supplied that will enable one to incorporate both the principle of immediacy and the principle of immutability in a theory of knowledge. However, the justification for whatever distinctions and categories may have to be employed to supply a suitable context for these principles in order to make them effective is beyond the scope of this study.

The views considered will include those of Plato, Aristotle, Locke, Berkeley, Hume, Kant, Reid, Bradley, and Dewey. This essay will defend the view that, of the major alternative theories, only Aristotle's doctrine of knowledge provides both principles in a satisfactorily related manner. But this defense is based solely upon the provision of the minimal requisites for knowledge. It does not mean a blanket endorsement of all Aristotelian categories and distinctions. It may well be possible to employ other categories and distinctions as a matrix for immediacy and immutability. Nevertheless, these would have to be functionally parallel to the Aristotelian concepts.
CHAPTER 2

THE PRINCIPLE OF IMMEDIACY

The purpose of this chapter is to examine various approaches to the question of the relation between object and subject. The problem to be considered is one of the key issues of philosophy: What is the structure of the knowledge relation when we speak of objectively valid knowledge? In other words, how is what is experienced related to what is claimed to be objectively known? For, unless there is some relation between what is in the perceptual experience of an individual and what is taken to be a common reality, it is evident that a claim for objective knowledge is reduced to absurdity. The implications of proposed solutions to this problem are very far-reaching, merging with the questions of ontology and of philosophical psychology. On the one hand, a theory regarding knowing generally leads to, or develops out of, a theory of the ultimate nature and structure of the universe. On the other side, inquiries into the problem of the knower's acquaintance with reality explicitly or tacitly reveal the underlying conceptions of the faculties and functions of the mind, especially of the fundamental mode, or modes, of cognition.

One solution offered to the problem of the knowledge relation is to the effect that contents of
perception are never numerically one with external objects, although perceptual objects may, in some sense, represent them. On this view, the very nature of knowledge implies a chasm between knower and known. The natures of the mind and external objects are so regarded that direct contact between them is deemed impossible.

This point of view is expressed in Locke's theory of knowledge, although, to be sure, he is amply aware of the skeptical consequences and attempts to salvage if from such a conclusion. Locke assumes at the outset that it is self-evident that the objects of the understanding, "whatever it is which the mind can be employed about in thinking," are always "ideas" in the mind of the thinker.¹ The mind has "no other immediate object but its own ideas."² For Locke the term "idea" covers any datum that is an actual content of the mind. It is further argued that all such contents of immediate awareness are either simple ideas produced by the action upon the senses of qualities inhering in external objects, and conveyed by the senses to the mind, or else

² Ibid., Bk. IV, ch. 1, par. 1.
ideas that arise from awareness of the operations of the mind upon the antecedently received ideas of sensation. The primitive elements of knowledge, simple ideas of sensation, are given involuntarily to the understanding. They are irrepressibly "imprinted" upon our minds, and we are impotent to "refuse, alter, or obliterate" them.

Locke ascribes powers in objects, external to percipients, capable of affecting the mind through sensation. Such powers in the "things themselves" are termed "qualities" and are to be distinguished from the "sensations or perceptions in our understandings," viz., "ideas." Ideas, then, are not in things, nor are they "things themselves." They are the products in us of the action upon the senses of the qualities of external bodies. Not all simple ideas of sensation resemble the qualities which produce them. Only the simple ideas of solidity, extension, figure, motion or rest, and number, which are produced in us by those "original or primary qualities" of external bodies, which are "utterly

3. Locke, op. cit. Bk. II, ch. i, esp. pars. 2-5. Simple ideas of sensation are such as "yellow, white, heat, cold, soft, hard, bitter, sweet;" of reflection, such as "perception, thinking, doubting, believing, reasoning, knowing, willing." For Locke, even reflection "might properly enough be called internal sense." (Bk. II, ch. i, par. 4). Ideas of reflection are simply naturally transformed sensations.

4. Ibid., Bk. II, ch. i, par. 25.

5. Ibid., Bk. II, ch. viii, par. 8.
inseparable from the body, in what state soever it be," are resemblances of their qualities. 6 Our ideas of primary qualities are of "the thing as it is in itself." 7 Qualities which are "nothing in the objects themselves but powers to produce various sensations in us by their primary qualities" are called "secondary qualities." 8 Colors, sounds, odors, etc., do not resemble qualities in external bodies but are the sensations produced in us by the bulk, figure, texture, and motion of the insensible particles of bodies. There is nothing like the ideas produced by secondary qualities in the "bodies themselves." 9 Thus, the bodies are perceived as with traits or characteristics which in fact do not belong to them, e.g., bodies themselves are not colored.

Having taken it as "evident" that the relation between the knower and the known is mediated by the ideas the mind has of things, Locke is keenly aware of

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6. *Locke*, op. cit., Bk. II, ch. viii, par. 9; par. 15. Primary qualities are also termed "real" qualities, for they really exist in bodies "whether anyone's senses perceive them or no." (Bk. II, ch. viii, par. 17).


8. *Ibid.*, Bk. II, ch. viii, par. 10. The "third sort" of qualities distinguished by Locke are not relevant to the present discussion.

the problem that is raised. On a conception of knowing as an external relation, and with the knower limited to ideas, what criteria are there for distinguishing between the conformity or non-conformity of ideas with their originals? With respect to the simple ideas of sensation, Locke's answer is that the impotence of the mind shows that they are necessarily the products of things operating on the mind in a natural way, as ordained by the wisdom and will of our Maker, "and so carry with them all the conformity which is intended; or which our state requires." Of complex ideas we have real knowledge of all save those of substances. With this one exception, complex ideas are not referred to any real existence and must conform to their archetypes.

Unable to think of simple ideas of sensation as self-supported we conceive a self-subsistent substrate as their basis. The idea of "substance in general," seems to be that of a nucleus of things which is thought as the carrier of the qualities that produce in us the simple ideas. Hence, substance is a supposition of

10. Locke, op. cit., Bk. IV, ch. iv, par. 3.
11. Ibid., Bk. IV, ch. iv, par. 4.
we "know not what." This "cautious empiricism" means that Locke does not doubt the existence of "things without us." But the assurance of the existence of external things which we gain through the evidence of the senses, while going beyond "bare probability," falls short of intuitive or demonstrative certainty and is but "faith or opinion."

Since our ideas of particular substances are referred to external existence, they must be such as are composed of the simple ideas of sensation that have been discovered to co-exist in nature. Presumably, then, we can know something of substances, as independent and particular things, through the power of their qualities to activate our sense organs and produce simple ideas of sensation. But such knowledge is extremely limited by the fact that the necessary connections subsisting between most of the simple ideas is unknown. By putting the "real constitution" of things beyond possible sense-experience, Locke justly concluded that "natural

15. Ibid., Bk. IV, ch. iv, par. 12.
16. Ibid., Bk. IV, ch. xi, par. 1-10.
philosophy is not capable of being made a science."

The peculiarities of Locke's position seem to stem from a conception of the objects of knowledge as similar to the "physical things" of unreflective experience. He thinks of them in terms of the concepts of the physicist. In defense of such a view it might be contended that the "ideas," or immediately given states of our consciousness, are but the signs of the "trans-conscious" entities which stand "behind" them. Thus, even though our subjective sense-contents might not be accurate resemblances of the qualities of such transcendent things, their constant correspondence to them would vouchsafe their validity. However, such a hypothesis would not untangle the riddle of knowledge, inasmuch as the signs and the "signified," the ideas and the "real things", would be, ex hypothesi, members of disparate realms. There would be no ground for inferring from the nature of such data to the properties, or, even less, the very existence, of "real objects."

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17. Locke, op. cit., Bk. IV, ch. xii, par. 10. Cf. Bk. IV, ch. vi, par. 15.
Transcendence simply would have to be written down as an ultimate fact of the world, as a characteristic of minds as such. 18

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18. The contemporary "critical realists" advance theories which are, in effect, very similar to, and open to the same criticisms as, the Lockian doctrine. According to the critical realists we never come to the object directly but have immediately present to us only subjective content. "We have no power of penetrating to the object itself and intuiting it immediately." ("On the Nature of the Datum" by C. A. Strong, in D. Drake, A. C. Lovejoy, et al., Essays in Critical Realism (London, Macmillan and Co., Ltd., 1920) p. 225). Again, "The knower is confined to the datum, and can never literally inspect the existent which he affirms and claims to know." ("Knowledge and its Categories" by Roy Wood Sellars, ibid., p. 203). Various versions of "sensum theories" of perception also do not seem able to overcome the difficulty indicated above (page 24). On one version of this theory there are three entities involved in every perception. First, there are states of mind, called sensations. Second, these sensations have objects, called sensa, which are concrete particular existents, like colored or warm "patches" (or "expanses"), or sounds, or odors,—the sensa actually having the attributes of color, hotness, loudness, shape, size, etc. Third, there are physical objects, the existence of which, and their presence to our senses we are led to believe in by the existence of sensa and their presence to our minds in sensation. The properties we ascribe to the physical objects are always correlated with and based upon the properties of the sensa. The number of entities involved is this theory is increased over the simpler theory of Locke. Unfortunately, however, multiplication of entities offers no better ground for inferring from "sensations" to "physical objects." For a critique of various theories of perception and a carefully worked out theory that attempts to tread a path between "naive realism" and "phenomenalism" see H. H. Price, Perception (London, Methuen and Co., Ltd., 1950, 2nd. Ed.)
The implications of Locke's theory of knowledge are developed by Hume, who begins with the "pretty obvious" thesis that "nothing is ever really present with the mind but its perceptions or impressions and ideas." Hume distinguishes impressions from ideas solely by the greater force and liveliness with which they strike the mind. Impressions are the actual sensations perceived or felt, either external or internal, whereas ideas are derived from impressions by the memory or imagination and differ from them only in their lesser vivacity or force. In this sense, then, there is immediacy between the originals of experience and the later products.

Simple ideas are merely the consequents that have been inexplicably, but habitually, found to follow the simple impressions of the senses. All ideas whatsoever are ultimately traceable to simple impressions, "complete in themselves," which constitute the units from

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19. David Hume, A Treatise of Human Nature (Oxford, Oxford University Press, 1888, Ed. by L. A. Selby-Bigge) p. 67. What Hume means by "mind" is not an incorporeal substance or other active principle. It is merely the successive impressions and ideas strung together by various relations, especially that of cause and effect. Ibid., pp. 251-63.


which the entire edifice of knowledge is built. 22 Even
the most abstract ideas are analyzable into outer or
inner impressions or into a combination of both. Impressions are the criteria of the meaningfulness of ideas. 23
In sum, this means that unless we can show that our conceptions are founded upon sensations they are without
definite meanings and incapable of verification. Thus, for example, the idea of "substance" is a misconception. 24

Hume's thoroughgoing application of the principle that we can know nothing but what is perceived in sensation means that we have no warrant for going "beyond" our direct awareness of sense data and that to do so is to be "metaphysical." It is not given to us to comprehend the secret sources from which impressions spring. They arise "originally, from unknown causes" and hence the fact of their presentedness is "perfectly inexplicable by human reason." 25 Consequently, we shall be

25. Ibid., pp. 7, 84.
forever unable to ascertain whether representative realism, innateness, or occasionalism, is the true account of their existence. Our limitation to impressions means that the real causes of occurrences must remain unknown to us.

The emphasis given by Hume to the conception of impressions as discrete, irrelative, elements is carried to its consistent consequences. This "atomization" of experience leaves Hume not only with the question of the ulterior existential conditions beyond the transitory impressions, but also with the issue of accounting for the evident connections among impressions. The problem, in sum, is to account for our possession, and the validity of, ideas of relations among sensations for which there are no corresponding impressions.

Application of Hume's criterion of meaning to the interpretative concepts or connective principles of experience means that their foundation upon impressions must be exhibited. That is, all connective principles must be tested by uncovering the impressions from which they are supposedly derived. Any relating notion

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26. In the Enquiry Hume states that all our impressions are innate, if by this is meant "what is original or copied from no precedent perception." (Sec. II, footnote).
supposedly from a source other than the contents of
experience can arise only from the actual sequences among
them. There is, then, but one source of experience,
namely, sensation.

The conception that experience is ultimately
composed of discrete, irreducible data that are apprehended in no connection with one another restricts our
knowledge to the relations among ideas not pertaining
to matters of fact and to the relations among data
immediately present to the senses, e.g., resemblance.

present purposes it is not necessary to explicate Hume's
familiar doctrine. It is sufficient to note that the
seven philosophical relations specified by Hume are
disposed of as follows: resemblance, contrariety,
degrees in quality, and proportions in quantity or
number depend solely upon our ideas and are perceived
either by intuition or demonstrative reasoning;
identity, and relations of time and place do not
extend beyond what is immediately present to the senses;
cause and effect is the only relation pertaining to
matters of fact and extending beyond the perceptions of
the moment. (pp. 70-74). The relation of causation, in
turn, is founded upon the constant conjunction of ideas
in experience, and our attribution of a necessary
connection to successive impressions is ultimately based
upon an irresistible propensity or habit. Vide Treatise,
pp. 78-82, 86-94, 155-72; Enquiry, Sec. IV, pt. 1;
Sec. VII.

28. Ibid., pp. 70 f.
There is no knowledge of matters of fact beyond the presentationally immediate. As Hume justly recognizes, his problem is to effect a reconciliation of his ultimate principles that "all our distinct perceptions are distinct existences" and that "the mind never perceives any real connection among distinct existences."\textsuperscript{29} He locates this uniting principle in the natural activity of the imagination.\textsuperscript{30}

The customary transition from causes to effects, on which all beliefs in matters of fact extending beyond the present moment are founded, is a "permanent, irresistible, and universal" principle of the imagination.\textsuperscript{31} The inventiveness of the imagination bestows upon its fictions the vivacity of impressions, leading us to believe in their actual existence. But there is no rational justification for affirmations extending beyond the assurances carried by the data themselves. Manifestly, there can be no knowledge, only belief, of any matters of fact beyond the presentationally immediate. Belief, according to Hume, is nothing but a feeling

\textsuperscript{29} Hume, \textit{Treatise}, p. 636 (Appendix).
\textsuperscript{30} \textit{Ibid.}, p. 10.
\textsuperscript{31} \textit{Ibid.}, p. 225.
based upon habit, that constrains, but does not convince, the mind.\textsuperscript{32} Knowledge, therefore, is to be built up solely from given impressions cemented by beliefs.\textsuperscript{33}

In sum, for Hume all knowledge is confined to sense impressions. The ground of connections between ideas is sought in perception itself. The notion of necessary connections exceeds experience, since connection in time is different from causal dependence.


\textsuperscript{33} In discussing Hume, Ernst Cassirer writes: "This givenness of 'bare' impressions in which abstraction is made in principle from all elements of form and connection, proves to sharper analysis to be a fiction. When this is understood, doubt is directed, not on the possibility of knowledge, but on the possibility of the logical measuring-rod with which knowledge is measured here. Instead of the criterion of the "impression" making the universal formal relations of knowledge and its axioms questionable, the validity of this criterion must be contested on the basis of these relations. The only refuge from radical doubt lies in its being not set aside but intensified, in our learning to question, as ultimate elements of knowledge known in themselves, not only "things" and "laws" but especially sensations. The skepticism of Hume left the "simple" sensation as a completely unproblematic certainty, as a simple and unquestionable expression of 'reality'." (\textit{Substance and Function, and Einstein's Theory of Relativity}, Chicago, The Open Court Publ. Co., 1923, pp. 390-1).
Hume observes, however, that knowledge of real causes is not required for practical purposes, and thus we may confine ourselves to empirical regularities.  

Hume's aim was to replace futile metaphysical speculation with a system of sciences built upon the science of human nature. He sees the advantage of this program in the susceptibility of the subject to the method of observation and experiment. Kant learned from Hume's analysis that we can give a satisfying philosophical explanation of experience only by elucidating the preconditions of knowledge. The subject calls for an entirely different method than one based on observation. According to the familiar Kantian dictum, all empirical knowledge must begin with experience, but what makes experience possible does not itself stem from experience.

On Kant's view, cognition is a synthesis of sense-intuitions by the understanding. The human understanding is active or creative with respect to the forms of objects, but it is passive with respect to the sense-materials or contents of cognition. The effect of

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external things upon our faculty for receiving representations (the sensibility) is a sensation or empirical intuition. Kant terms the "undetermined object of an empirical intuition" an "appearance," designating its content as its "matter" and that which determines that the content can be ordered in certain relations its "form." The "matter" of all appearances is given to us a posteriori, but the "forms" of sensible intuitions (space and time) must be a priori modes of sensibility.\textsuperscript{37}

The empirical intuitions or materials of sense-experience are organized and structured by the necessary a priori forms of our sensibility and our understanding to give a world of objects existing in time and space and governed in accordance with uniform laws.\textsuperscript{38} On this view, both perception (empirical intuition) and conception (the synthesizing activity of the understanding) are necessary for our experience of a world at all. Our capacity for receiving representations, our sensible intuition, is the mode in which we are affected by objects themselves. The power of knowing an empirical or phenomenal object by means of these representations

\textsuperscript{37} Kant, \textit{op. cit.}, pp. 65-7. For Kant's elucidation of his conception of space and time, vide \textit{ibid.}, pp. 67-82.

\textsuperscript{38} The nature and functions of the Kantian doctrine of the pure forms of the understanding (categories) will be discussed in the following chapter.
is called the understanding (spontaneity in the production of concepts). Theoretical activity (spontaneity) synthesizes, but does not produce changes or alterations in the actual contents received by the power of receptivity. Both powers are equally necessary in order to have empirical knowledge. The sensibility alone, though yielding appearances, can not present us with "objects of experience." On the other side, the understanding only provides the forms through which an object is constructed, but these are themselves empty of sensuous content.

In his differentiation of, and assignment of functions to, the sensibility and the understanding, Kant has dichotomized human reason in such a manner that neither faculty alone is capable of cognition. However, he recognizes that such partitioning makes it impossible to account for the objects of experience and that there is required a connecting bit, a go-between, to overcome the heterogeneity of the two factors in all cognition of objects. Hence the doctrine of the transcendental imagination, the doctrine of schemata, and the doctrine of the homogeneity of both the sensibility and the

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understanding with time. Having started with the separation and opposition of the activity of thought from the passivity of sense, Kant is led to supply various links to bind together the fragmented consciousness. Thus, the task of salvaging the unity and continuity of consciousness requisite for knowledge occupies a major part of Kant's attention.

At present we are solely concerned with the implications of Kant's doctrine of intuition. On his view of the passivity of the faculty of sensibility, sensible intuition is regarded as the product of objects themselves, not as immediate acquaintance with them. We must assume the existence of "things in themselves" as the conditions of the appearances (phenomena) that are given to us through the sensibility. Sensible intuitions are derivative in the sense that they are dependent upon the existence of an independent reality. Since, however, we are limited to a sensible mode of intuition, the realm of "things in themselves" is forever beyond any possible human experience. Since what is not appearance can not become an object of

experience, the understanding can never transcend the limits of sensibility. Still, this boundary of our intuition is not the boundary of the thinkable. Reason is driven to the assumption of things beyond sensible intuitions. Kant terms these, "intelligible entities" or "noumena." In its negative sense noumenon refers to a thing in so far as it is not the object of our sensible intuition; in its positive sense, it refers to a thing which is the object of a non-sensible intuition. To know the "thing-in-itself" we would have to have a mode of intuition capable of "grasping" it in separation from all the characteristics due to its relations to knowing minds and to other things. But since we do not possess such a mode of intuition the "thing-in-itself" can not be intuited by us and, consequently, not known. 41

Since the objects of experience are worked up by the pure forms of the understanding from the passively received sense materials, we can not even assume that such constructs bear any resemblance or isomorphic relationship to the unexperienced "things-in-themselves." In other words, since the human understanding organizes its given materials in a manner peculiar to its own

structure, there is no reason why the resultant products should happen to "copy" or "represent" the external things. Moreover, the assumption of things-in-themselves does not guarantee that the phenomenal objects of knowledge will constitute a universe, i.e., an ordered whole.

For the sense-intuitions upon which the cognitive forms of reason work must still be given in some particular sequence. Thus, the mere positing of things-in-themselves does not really explain why these sense materials are received rather than others. No "construction" of objects could occur without some order according to which the sense manifold appears.

Kant's principles preclude the possibility of having even the representative "knowledge" of reality that Locke would allow us. Apart from our peculiar mode of intuition, what things-in-themselves may be like must remain hidden from us. 

42 Appearances are empirically real (real in experience) but transcendentally ideal (not real beyond experience), whereas things-in-themselves are empirically ideal (not real in experience) but transcendentally real (real beyond experience). By

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taking objects in this twofold sense, as appearances and as things-in-themselves, Kant wishes to save the ideas necessary for the practical employment of reason, i.e., the ideas of God, freedom, and immortality. Accordingly, Kant is willing to sacrifice the demands of theoretical reason to the primacy of the practical reason. Herein lies the significance of his statement that he "found it necessary to deny knowledge, in order to make room for faith." 43

Thus far we have dealt with only one type of proffered solutions to the problem of the nature of the knowledge relation. Both Locke and Kant presuppose that the external thing mechanically acts upon the receptive faculty of the mind and produces effects there in the way of sensation. In both cases it is assumed that sense is passive in the knowing process. Kant does introduce an active faculty in order to supply principles of connection. But by compartmentalizing such activity apart from sense there results another gap in the knowing process. As we have seen, Kant has to span it with various devices.

43. Kant, op. cit., p. 29. It is to be noted that the purposes or intentions of the various philosophers is not the principle of examination utilized in this study, although a study could be made on such a principle.
We next have to consider a group of views that are classifiable together as a single type of answer to the nature of the knowledge relation only in so far as they hold in common that the genuine object of knowledge is definable or specifiable only in terms of experience transcending that of the percipient at the moment of perception. On this type of solution, the genuine object of knowledge is merely intimated in each perceptual experience. It is not something "given" and determinate, to be examined either retrospectively or instantaneously. Instead, it is something to be attained, it is prospective, and can only be progressively unfolded or approached through a series of experiences. Perceptual experience, therefore, is not truly cognitive, although the "movement" to the object of knowledge must, indeed, begin from sense-perception. Numerous varieties of this general view are possible, depending upon the mode of development that is employed, the intellectual operations that are distinguished, the placing of emphasis upon theoretical or practical concerns, etc. Accordingly, we shall be concerned here with only a few typical formulations of such an interpretation of the knowledge
A good basis for understanding Plato's theory of knowledge and reality is afforded by his doctrine of sensation. In it we see that Plato does not begin with a sharp and precise dichotomy between "subject" and "object." His context is not one of separate and individual substances standing apart from, and acting upon, discrete minds. Consequently, there is no need for determining whether or not the sensation is a "copy" of anything else. The context from which Plato begins is that of a dynamic whole, a world of experiences, in which distinctions are made, but which remain tenuous and relative to one another. In this context, perception seems nothing else than the adjustment between one segment of the whole (our bodies) and those portions of the remainder with which it comes into contact ("material things"). Sense-perception is merely a part of the processes of nature.

Assuming that the development given to

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44. The views discussed in the section that follows bear many dissimilarities. They are linked here only because of the broadness of the classification. I limit discussion to Plato, Bradley, and Dewey. For some parallels and affinities between these doctrines and one branch of "logical positivism" see Warner A. Wick, Metaphysics and the New Logic (Chicago, The University of Chicago Press, 1942).
Protagoras' proposition in the Theaetetus fairly represents Plato's own doctrine of sensation, "subject" and "object," "agent" and "patient," are related as two forms of motion directed upon each other and which can be grasped only in such reciprocal determination. Sensation is a complex process, in which, by virtue of the matrix established by object, medium, and end-organ, the object and end-organ are temporarily of a different nature than prior to their roles in the particular interaction. The eye becomes a seeing eye, and the object

45. "When the eye and the appropriate object meet together and give birth to whiteness and the sensation connatural with it, which could not have been given by either of them going elsewhere, then, while the sight is flowing from the eye, whiteness proceeds from the object which combines in producing the colour; and so the eye is fulfilled with sight, and really sees, and becomes, not sight, but a seeing eye; and the object which combined to form the colour is fulfilled with whiteness, and becomes not whiteness but a white thing, whether wood or stone or whatever the object may be which happens to be colored white. And this is true of all sensible objects, hard, warm, and the like, which are similarly to be regarded, as I was saying before, not as having any absolute existence, but as being all of them of whatever kind generated by motion in their intercourse with one another; for of the agent and patient, as existing in separation, no trustworthy conception, as they say, can be formed, for the agent has no existence until united with the patient, and the patient has no existence until united with the agent; and that which by uniting with something becomes an agent, by meeting with some other thing is converted into a patient." --Theaetetus, 156-7.
a white object. The "whiteness" is not an "idea" or "impression" or "sensum," if these terms are meant to connote separate and distinct entities. Nor is the seen object white prior to the process in which it cooperated in giving "birth" to whiteness.

The end-organ and its appropriate object unite to result in a particular sensation. In this union the agent and the patient are one; for we can form no trustworthy conception of them in separation. If, however, we rest in the content of particular sensations and consider mere perception as knowledge, we are faced with serious consequences. In the first place, since each sensation is the private possession of the percipient, the Protagorean dictum that "each man is the measure of all things" is inescapable. Moreover, even the individual percipient could not have a coherent and meaningful experience if he possessed nothing but a chaos of particular sensations. Granted the power of retention, the perceptions might somehow be packed together in the percipient, but there would be no combination or discrimination, and no establishment of relationships between heterogeneous kinds of perceptions.

The eye may distinguish the objects of sight, the ear the objects of hearing. But, as each sense has its appropriate objects, we can not perceive the objects of one sense through a different one. The senses alone could merely reveal differences among their own peculiar kinds of objects, e.g., the warm and the cold, the bitter and the sweet. Yet, the totality of such sensuous differences would not go beyond the particularity of the contents to establish connections and relations among them. When we say of a sound and color that they both exist, that one of them is different from the other, that both united are two, or that they are like or unlike one another, we are going beyond the particular sense contents. All judgments of perception must involve elements, such as being and non-being, likeness and unlikeness, sameness and difference (identity and diversity), unity and plurality, which are not the objects of any of the senses.\(^{47}\) These are the notions that go beyond, and connect, the contents of perception; for while two compared sensations must be elements in the examined connection, said connection could not be determined from either sensation alone. Such relations,

therefore, are not objects of any of the special sense-organs and have no separate organ of their own. The Platonic conclusion is that these common elements in all assertions are non-sensuous objects of the soul by itself, i.e., independent of the objects or organs of sense. 48

In this differentiation, and assumed discontinuity, of the powers of the mind (soul) lies the key to some of the peculiarities of the Platonic conception of the nature of knowledge. When a theorist distinguishes different faculties of the soul (or intellect) with correspondingly different objects, and then hierarchizes these objects, he must, in due consistency, recognize different "kinds" or "levels" of knowledge with varying degrees of worth. "Knowledge," then, can not have a univocal meaning. Precisely this is Plato's procedure in his familiar account of the Line and of the Cave in the Republic. 49 Accordingly, a scale is established, in which the power whose objects are most distant from those objects in which intelligibility is made to reside is considered lowest. This does not mean, however, that the objects of the inferior faculties are absolutely

48. Plato, Theaetetus.

unreal or merely appearances, connoting by such terms that which has no well-founded ground in the totality that is nature or the universe. Thus, there is advanced a doctrine of different degrees of reality corresponding to the different degrees of intelligibility.

How is the locus of intelligibility to be determined? Plato's predilection is towards establishing the intelligibility of objects through the symbolic means or forms of discourse used to represent them. Such inquiry takes the form of a clarification of meanings, an attempt to arrive at adequate definitions of the predicates employed in our judgments of perception. The same predicates are applied to many things. Hence, a context must be specified in order to give some degree of precision to an assertion. In this sense, all terms are found to be relative, so that a thing may be great and small, one and many, at the same time. Everything beautiful will in some respect be found to be ugly; everything just will also be unjust. 50 Such analysis of predication suggests that all predicates employed in judgments of perception are relatives. Still, intelligibility seems to require that relative

50. Plato, Republic, 479, Cf. ibid., 507.
terms be relative to absolutes. In order to comprehend our meaning, when we say of two perceptions that they are equal or unequal, the same or different, we must understand what is meant by equality and sameness. The same line of argumentation applies to all other predicates. Whenever a predicate may be applied to many things, there must be some conception of the abstract idea or essential definition of such predicate. By this route Plato arrived at his familiar doctrine of "universals" or "ideas" as the loci of intelligibility. Hence, "ideas" will be more real than the data of the senses. But the latter are not therefore "unreal."

Regarding this doctrine only two points need concern us. First, it may be maintained that predicates are of different kinds, so that it would be fallacious to argue from the independent reality of some (e.g., relational predicates, such as similarity and dissimilarity) to the independent reality of all (including, e.g., qualitative predicates, such as white and hot). Apparently, however, Plato was not unmindful of this distinction. In several passages we are told that not only the connectives of perceptions but every

51. Plato, Phaedo, 75.
object of sense as well has its eternal idea. In the *Parmenides* the youthful Socrates' hesitancy to accept the eternal existence of ideas of "hair, mud, dirt" is considered evidence of an unphilosophical temper. But such reluctance might well bespeak Plato's recognition of different kinds of predicates.

The second issue is the question of whether or not Plato used the term "ideas" in a single or double sense, so that, on the former interpretation, "ideas" have being only in thought, whereas, on the latter view, "ideas" would also have a metaphysical or real existence beyond thought. In other words, are "ideas" merely abstractions or logical entities, or are they realities existing independently of human thought. If the former interpretation is taken and "ideas" are considered the ultimate objects of knowledge, then Plato does allow for the immediacy of relation between the knower and the known. But such an interpretation would no more escape subjectivistic consequences than the view that mere perception is knowledge. Plato would still be faced with the problem of establishing the inter-subjectivity of knowledge. Accordingly, the latter

52. Plato, *Phaedo*, 75; *Theaetetus*, 189; *Republic*, 476.

interpretation, often referred to as "conceptual realism," in which "ideas" have existence in separation from thought, appears the most plausible. On this view, the role of "ideas" would be to make possible an escape from subjectivity by providing fixed, common objects for diverse individual knowers. On such a reading we could also take more seriously the Platonic doctrine of reminiscence. But this interpretation would mean that clear and determinate acquaintance with the real objects, the eternal and unchanging rational grounds of our phenomenal experience, would be denied to us in our present state. However, this would be consistent with Plato's repeated assertion that the "ideas" can only be seen clearly when the soul is free of the disturbing element of the body and that, consequently, the philosopher is always pursuing death. 54 Rational reflection shows that there are different degrees of clarity of thought. In the philosopher this is accompanied by the unquenchable desire to attain perfect clarity, i.e., to resume the "beatific vision" which the soul enjoys before birth and after death. 55

54. Plato, Phaedo, 61, 66-8, 81.

to conclude, then, that for Plato definitive knowledge of reality in our earthly state is unattainable. While embodied we can not have intuitive experience of "ideas," inasmuch as all degrees of knowledge are mediated by the forms of discourse. Dialectic, the means by which the embodied soul may rise from the sensible to the threshold of the "ideas," is merely the "second best mode of inquiry."\(^\text{56}\) Still, reality is not completely veiled from us. For the senses do convey, though in a confused manner, some intimations of truth.\(^\text{57}\) Reality, then, is seen, but it is seen as "through a glass dimly."\(^\text{58}\)

That Plato felt uncomfortable about some features of the position to which he is led is nowhere better seen than in the dialogue *Parmenides*. But these difficulties were primarily the harvest of his doctrine of sensation. Either by failing to consider the possibility of, or by refusing to accept, an account of sense as itself active, i.e., as performing the comparisons and discriminations on the data of perception, Plato concluded that relating and unifying notions must

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be the distinct objects of a separate power. It is for this reason, as we shall later see, that Aristotle insisted upon an activistic theory of sensation.

Modern "objective idealists" and "pragmatists" begin, much as Plato began, not with a dualism of the knower and the known, but from a whole of experience. And, much as with Plato, the "self" and "not-self," the "mine" and the "this," are features that differentiate themselves from each other out of a more fundamental and original basis. Such oppositions or differences are mere surface shadows of reality, distinctions which do not actually characterize it. Consequently, the ultimate object of knowledge is an all-inclusive "reality" or "experience," although theoretical or practical considerations may make it necessary to take relatively minute segments of the whole as items of our attention. There is similarity to the Platonic conception on the part of both of these views in the sense that the object of knowledge is something attainable, that is, it beckons from beyond the experience of the moment of perception. Here, too, sense-perception is not considered properly cognitive, although we must place reliance upon the testimony of the senses. For both the numerous varieties of "objective idealism" and of "pragmatism," all of "reality" or of "experience" is "given," but as a
"whole" it is given mediately. In neither case can we set a proposition over against particular outer objects and compare it with these. Whereas "objective idealism" emphasizes consistency as the goal and the measure of the relative truth of propositions, for the "pragmatists" the fruitfulness of a proposition in contributing to the ends of practical action is the index of its validity. These, however, are merely emphases, since on both views the spheres of thought and of action, as well as other demarcated areas, are not radically distinct. Compendious statements of the points of view of Bradley and Dewey, typical representatives of these approaches to a solution of the structure of the knowledge relation, will be presented in order to support these contentions.

Two basic theses, which are subsequently conjoined, underlie Bradley's philosophy: first, that the nature of ultimate reality must be intelligible, i.e., such as can be brought into relation to thought; and, second, that knowledge is not, and can never be, fully one with reality, i.e., that knowledge can not exhaust the wealth of detail of reality. The first principle leads Bradley to an unequivocal opposition to the doctrine that reality is inaccessible to the knower.
inasmuch as they are irreparably separated by wholly different natures. The problem of knowledge is made insoluble if we begin by assuming a reality absolutely disparate from the mind as knowing and then seek to discover how they are mediated. An unknowable reality, having no connection with the contents of sentience, is "sheer self-contradiction" and "nonsensical."

In lieu of this dualistic conception Bradley substitutes an organic conception of the relations between the self and not-self, knower and known, in which each is real only in functional interaction with the other. Accordingly, Bradley begins from, and insists upon, the unity of "immediate experience," or "feeling," and Reality. Feeling is the primitive basis out of which there arises the distinction between the subjective,


60. Ibid., pp. 113-4.

61. Ibid., pp. 90-2, 197 f. Cf. F. H. Bradley, Collected Essays (Oxford, Oxford University Press, 1935, 2 vols.) Vol. 2, pp. 631-2. Elsewhere, Bradley summed up this principle as follows: "... the whole of our knowledge may be said to depend upon immediate experience. At bottom the Real is what we feel, and there is no reality outside of feeling. And in the end the Reality (whatever else we say of it) is experience."
as the earlier stage of direct, amorphous feeling, and the objective, as a later stage of constructs of thought. Feeling is not an individual's awareness of something, it is simply a whole of being. Perception, thought, judgment, and the various distinctions they impose, are later emergents out of the "whole of feeling." Reality is, in the first instance, a whole of immediate experience, undifferentiated and non-relational. 62

While the nature of Reality is not alien to knowledge, knowledge is never identical with Reality. Thought, being abstract, discursive, relational, can never be the same as Reality, i.e., the concreteness of immediate experience, although it implies this as its necessary complement. Thought does involve a certain separation of itself from Reality, a separation of content from existence (the "what" from the "that"), but the content of thought is not altogether different—an "other." 63 The crux of this doctrine lies in Bradley's theory of judgment.

According to Bradley, judgment is not a relation of ideas considered as subject and predicate; it is not

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63. Ibid., pp. 143-62.
confined to ideas and cannot consist in their synthesis. 64 But judgment does necessitate the use of "ideas" as "symbols," i.e., in the sense of "meanings," cut off and fixed by the mind from the whole of immediate experience. 65 "Ideas" are not given or presented particular existents, they are abstracted or "taken" from the total real complex that is Reality. Hence, Reality is the ultimate subject of all our judgments. 66 Still, the ideal complex which is our judgment can not exhaust the full particularity, the infinite richness of content, of the all-inclusive experience, Reality. 67 The special characteristic of reasoning involves the abstraction of a datum from the total complex of experience and subjecting it to some operation, to an "ideal experiment." 68 Although the datum maintains its identity during this process, it is affected by it. Hence, all judgment is inherently fallacious to some extent, since it involves alteration and deformation of fact. To make the analytic judgment of sense categorical and true we must take up the given in its wholeness,

65. Ibid., pp. 4-8.
67. Ibid., pp. 93-6.
68. Ibid., pp. 396f.
as it really appears, "without omission, unaltered, and unmutilated. And this is impossible." Ideas are mutilated contents and can claim only adjectival standing. Since judgment and inference are restricted to ideas, they are necessarily impotent to reproduce the actual flow of events.

Bradley contends that the relational nature of judgment leads to logical antinomies, and consequently, that thought, proceeding by means of terms and relations, yields "appearances" only. Reality, therefore, can not be said to be made up of substances possessing qualities. Nor can Reality be made up of qualities in relations. An analysis of the conception of qualities and relations as "real" or "independent facts," leads to an unending regress, and this is unintelligible. Hence, when our experience attains the relational level, the original unity of "feeling" is sundered into a multiplicity of "appearances."

71. Bradley, *Appearance and Reality*, pp. 16-29, 157 f. In a footnote, p. 27, Bradley writes: "The relation is not the adjective of one term, for, if so, it does not relate. Nor for the same reason is it the adjective of each term taken apart, for then again there is no relation between them. Nor is the relation their common property, for then what keeps them apart? They are now not two terms at all, because not separate. And within this new whole, in any case, the problem of inherence would break out in an aggravated form."
Every effort of thought to specify Reality results in contradiction, which is unintelligible. In the knowing process more or less abstract symbols are substituted for the concreteness of feeling. The contradictoriness of our judgments consequent upon this abstractness and generality shows that our knowledge is fragmentary and incoherent in varying degrees. All our ideas and judgments are neither wholly true nor wholly false. All that can be claimed is that they have greater or lesser validity. The measure of this relative worth must be Reality. As the absolute criterion of all judgments Reality must be completely free of contradiction and, therefore, absolutely intelligible. Thus, the essence of Reality, and the mark of intelligibility, is the principle of non-contradiction. Moreover, this criterion shows that Reality must be an all-inclusive unity. A plurality is tenable only on the acceptance of the intelligibility of relations. But since it has been found that all relations lead to contradiction, and since Reality must be free of contradiction, it must be concluded that Reality is one.

72. Bradley, Appearance and Reality, p. 103.
73. Ibid., p. 120.
74. Ibid., pp. 124-6.
Bradley assures us, however, that Reality is not divorced from appearances. Reality is manifested in experience, for appearances exist, and whatever exists must belong to Reality. Reality transcends, yet includes, all thought and all appearances. It harmoniously takes up all the discordant notes of the finite into one whole.

Since only Reality is "individual or perfect," all the differentiations and diversities of the relational level of experience are appearances. An appearance is the relatively real whose degree of reality is dependent upon the relative amount of transformation necessary to make it a single, self-consistent whole. This is accomplished through the "ideal experiments" of thought in taking up more and more diversities and thereby bringing them all closer and closer to non-contradiction. Hence, truth is always relative and imperfect. Thought seeks to reconcile,
yet retain, the diversities and contradictions of experience. The quest for knowledge is just this search for unity in diversity; its goal is complete coalescence with Reality. Or, put differently, Reality is what thought seeks to become. But this complete coincidence of thought and Reality is impossible. As long as thought is relational a distinction between the two must remain.\(^79\) Reality must therefore remain for us essentially unknowable.

Again, as in the Platonic theory of knowledge, we find the source of the peculiarities of Bradley's philosophy in his doctrine of sensation, or, more precisely, in his conception of the relation between sense and thought. As already noted above (pages 51-2), Bradley rejects any theory in which the perceived object and the real object of knowledge are never numerically one. But on his point of view he must also consider as fundamentally erroneous any conception in which knowledge is limited to the contents of sense perception or in which the separation of sense from thought results in a

\(^79\) Bradley, Appearance and Reality, pp. 157-8. Bradley further argues that thought can never attain its ideal of being wholly blended with Reality because there are also other complementary aspects of Reality, e.g., feeling (in the individual, psychical sense) and will. Ibid., pp. 403-452.
schism in Reality. For Bradley, therefore, there is always a fusion of thought with sense, "ideality" (thought activity) is everywhere co-present with appearances of fact (sense content). There is no "bare" perception of data, unmediated by thought; the crudest perception involves thinking. Now the essence of thought, Bradley maintains, is judgment, so that "without exception to think must be, in some sense, to judge." Every judgment, as we have seen, is ultimately an assertion about Reality. But judgment works with ideas. The net result is that the ideas used in judgment qualify the reality judged about, so that the very act of perception, inasmuch as it involves thought, and thus judgment, modifies that which it sought to capture pure. Put differently, a perception that would be absolutely true would be some sort of "mystical intuition" without the intercession of thought. In such case, the content ("idea") would be absolutely identical with existence, a state in which all differentation and judgment disappears. This state remains

81. Loc. cit.
82. Ibid., p. 324.
for us impossible, since we operate with thought, i.e., judgmental activity, and all judgment whatsoever involves some difference between subject and predicate. The conclusion is the apparent paradox that even our immediate experience of the ultimate object of knowledge, Reality as such, is mediated by thought.

This same result can be looked at from a slightly different perspective, namely, from Bradley's doctrine of the absolute internality of all relations. His view is that relations are constituted or constructed by thought. We may think of as many relations between relations as we wish. If, however, relations were real independently of finite thought, there would have to be as many as can be constituted by thought, i.e., an actual infinity of them. This is self-contradictory. Hence, Bradley concludes, Reality itself is non-relational. The assumption underlying this doctrine is that every object of thought is a product or construct of thought itself. Bradley's theory of knowledge results, therefore, from his conception of thought as absolutely active or creative. In brief, sense and thought are so regarded.

85. Ibid., p. 96.
that thought transfigures the very data of sense as they are being perceived. Plato met the problem of accounting for the apparently radical distinction between sense contents and their unifying relations by the differentiation of faculties of the soul. By insisting upon the creativity of thought, Bradley unifies the object of knowledge. But on either view, reality can not be known.

In "pragmatism" the "activity" that is requisite to unite the knower with the known assumes the nature of "doing" or "making." This conception receives its most subtle interpretation at the hands of John Dewey. "Thought" here becomes the pure expression of "inquiry," with "reflective thought" connoting "inquiry into inquiry." This shift, turning on the ambiguity of "activity," requires a recasting or reorientation of all elements of the knowledge situation.

If "thought" is to be taken as synonymous with "inquiry" and "inquiry" as the prototypical "activity," then "thought" and its "object" can not be radically different and separate. For interaction demands community of natures. In consistency with this principle,

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Dewey criticizes all theories of knowledge implying the separation of thinking from the object of thought. These theories, Dewey repeatedly insists, are guilty of the fallacy of hypostatization, i.e., converting a function into an independent structure, an instrument of inquiry into an ontological entity. The problem of knowledge, therefore, can not be investigated in an abstract and abstruse manner; it is integral with, and undivorceable from, everyday experience.

According to Dewey, all life is continuous and involves the reciprocal adaptation, the integration in dynamic interaction, of organism and environment. The total environment of an organism is cultural as well as biological, so that purely organic (physically conditioned) behavior is distinguishable from "intellectually formulated" (culturally conditioned) behavior. But the difference between the biological and cultural environments is not marked by any distinct break; the latter grows out of, but remains continuous and

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89. Ibid., pp. 132, 149, 171.
90. Ibid., pp. 23-41.
91. Ibid., pp. 42-59.
co-present with, the former. All organic behavior, all "lower" and "higher" life processes originate from a continuum of "experience." At the pre-perceptual stage this environment is not characterized by isolated objects and differentiated relations. It is a felt, qualitative whole below the level of discourse.  

When the equilibrium between organism and environment is disturbed, so that conditions for favorable organic response do not obtain, an activity or process is instituted to restore the balance of responsive functional adaptation. Conditions of uncertain action or of imbalance in organic-environmental interactions are characterized as "subjective." This is not a state of the organism alone; it is the state of the whole of the existential context. Restoration of the organic-environmental balance requisite for appropriate organic response constitutes the conditions "objective." The full significance of this theory emerges in Dewey's main contentions that the origination of "inquiry" by "higher" organisms arises from a situation that is inherently

93. Ibid., pp. 26-7, 106.
94. Ibid., pp. 43-5, 66.
problematic or "indeterminate," that "knowing" is an activity resulting in the establishment of conditions suitable for appropriate responses by the organism, and that the "object" of knowledge is experienced only at the close of successful inquiry, i.e., when conditions are rendered "objective."

Activity in the direction of restoring the stable balance in the organic-environmental functions attains the level of "consciousness" when it is controlled or directed by acquired habits, skills, and information. The human activity of knowing is continuous with, not radically distinct from, response patterns of other organisms. Inquiry, then, is the process of resolving a doubtful, indeterminate "situation" into a determinate one, i.e., the reconstruction of certain elements of experience into a unified whole or object. A "situation" is a "contextual whole," not a single isolated thing or event, or sets of such. For there are no isolated or ready-made data that are "given" as the objects of knowledge. Data are selected from, or determined out of, the context of the total situation with reference to their

96. Ibid., pp. 66, 104-6, 454-5, 463.
97. Ibid., p. 66.
functions in a specific problem. A datum is cognitively significant only in so far as it is employed in inquiry. 98

Inquiry is undertaken to resolve an indeterminate or doubtful situation. The initial step is to see that a situation does require inquiry, that it is problematic. This suggests that a thoroughly "subjective" factor (in the ordinary sense of the term) is involved in the origination of inquiry. Dewey, however, staunchly maintains that it is the situation itself that is doubtful. 99 A doubtful situation on the level of conscious human behaviour corresponds, therefore, to a disturbance or state of imbalance in the functional adaptation of "lower" organisms to their environments.

Specific inquiries are instituted when there occur different kinds of natural events with distinctive problematic qualities. The nature of the problem involved suggests a plan or alternative plans of action. However, in order for suggestions to be operationally

98. Dewey, op. cit., pp. 124-463 F., 475; cf. pp. 110-14, 149-50. Referring to a "datum" Dewey writes: "In the strict sense, it is taken rather than given." (p. 124) It is worth noting that Bradley used the very same language with respect to "ideas." (see above, p. 54)

99. Ibid., pp. 105-6.
explored, their meanings must be developed in relation to other meanings through analysis. In this process the suggestion is transformed into an "idea" and converted into a proposition. Examination of the meaning-contents of ideas is facilitated and controlled by operating with symbols in propositional forms. The formulation of ideas in propositions permits the application of logical controls to determine what consequences are properly assignable to the ideas. Every proposition performs an instrumental function in inquiry. It is a "means" to further the controlled reconstitution of a specific environmental situation. But as an activity, inquiry is temporal and progressive. Accordingly, the various forms of propositions correspond to stages in the progress of inquiry. Discourse serves as a necessary

100. Dewey, op. cit., pp. 109, 111-12, 300-1. From his point of view, Dewey rightly criticizes the theory of "ideas" as copies of impressions as ignoring their prospective and anticipatory character. (p. 109, footnote).

101. Ibid., p. 274.


103. Ibid., p. 309.
mediator in the process of inquiry, i.e., the activity of "knowing." Hence, knowing is always mediate. 104

In effect, predication in propositions transforms suggested actions into a workable form. As operative means of inquiry, propositions are instrumental in acquiring "knowledge," but they are not statements of such attainment. 105 Hence, they have to be distinguished from judgments. Propositions are not judgments. As logical instrumentalities, propositions are provisional and intermediate, and can be differentiated into various kinds. A judgment, on the other hand, marks the termination or settled outcome of an inquiry. It testifies to the institution of a determinately unified situation for an originally indeterminate one. Hence, because each situation is qualitatively unique, judgment as such must be individual and, as contrasted with the symbolic import of propositions, has direct existential import. 106

When elements of experience are ordered in settled form by means of inquiry they constitute an

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105. Ibid., pp. 140, 220-44.

106. Ibid., pp. 120 f., 220 f., 283.
"object." In sum, an object of perception, according to Dewey, is the product of the reconstruction of certain elements of experience (environment) in a form that will elicit an appropriate response by the organism. Objects, therefore, can only be perceived after the knowing process has changed the primitive experience. "Objects" are not determinate independently of, and antecedent to, the activity of knowing. The object can be directly experienced (not immediately known) only after it has been "reached" through inquiry.

On this view, knowledge is simply the satisfactory close of inquiry, the product of the resolution of a problematic or indeterminate situation. However, inquiry never ceases. The continuum of experience is reflected in the continuity of inquiry. Things, being the "objects" of previous inquiries, thus exercise functional roles in the on-going process of inquiry. Conclusions of one inquiry become instruments in other inquiries. Hence, the term "knowledge" should always indicate a potentiality rather than an actuality.

110. Ibid., pp. 140, 246.
It is for this reason that Dewey prefers to substitute the term "warranted assertability."\textsuperscript{111} The upshot of Dewey's theory is that while there can be specific "knowings" there can be no definite terminal knowledge.

In effect, Dewey has extended the requisite factor of activity in conjoining the knower and the known to the extreme. While justifiably denying the severance of sense from thought, he has argued from the principle that thinking is activity to the conclusion that because sensing is continuous with thinking it is also entirely active. Hence, on the assumption that activity always produces changes in things, sensing transfigures the data. Why, however, should we extend a gross conception of activity to the processes of cognition? In brief, Dewey maintains that "knowing" is activity. And, presumably, we are always aware of activity.

Therefore, we can not be knowing without an awareness of this fact. The negative conclusion is drawn that "perceiving" is not "knowing."

On Dewey's view of knowledge, the mind does not apprehend an "object" in a completed form but, through its activity, it in some measure constructs the known.

\textsuperscript{111} Dewey, \textit{op. cit.}, p. 9.
There is no denial of reality as independent, although reality as known is always prospective and relative to the knowing organism. The "metaphysical veracity" of knowledge is thus relinquished. Now it is true that the means of knowing are futural to the initiation of inquiry. But the reference of our conclusions is to temporally antecedent conditions. Otherwise we will have not found out what we set out to find, but something else.

Thus far we have examined two types of solutions to the nature of the relation of object and subject. First we have examined views in which knowledge of reality is always mediated by "ideas," "phenomena," or "sensa." The second examined type of answer interprets the meaning of "real object of knowledge" such that it transcends the moment of perception. Here too, "knowledge," in its most honorific sense, can be mediate only. On this type of solution, however, it is mediated by the forms of discourse and not by some kind of existent or entity. A third class of solutions comprises those theories denying any kind of mediation between the knower and the known. Presumably, the synthesis of the knower with the known is thereby assured. But some forms of the denial of mediatism also fail to provide grounds of experience that are humanly intelligible or else
they fail to explicate the assumed relation of immediacy between knower and known.

This third class of proffered theories may be differentiated on the basis of whether or not they recognize any difference between the object of knowledge as it is experienced in perception and as it exists. Those that deny a difference between the experienced object and what they take to be the "real object" may do so either on the ground that all experienced objects are existentially dependent upon a percipient being, or that none of them are so dependent. On the other side, there is the position that the real object of knowledge is experienced through perception, but that it is not of the same character, and not existentially dependent upon, such experience. The burden of this latter position falls upon its doctrine of sensation. We will consider typical exponents of each of these views affirming immediacy in the knowledge relation.

According to the first view, represented by Berkeley, objects are existentially dependent upon their being perceived; that is, the experienced objects are the real objects. On this view, any distinction between absolute things, considered in their own intrinsic natures, and relative things, namely, the same things considered in respect to a sentient being, is
The conception of a trans-conscious reality mediated by ideas is criticized as an entirely redundant element. Berkeley attributes the notion of an external reality, a substrate of phenomena, to an untenable theory of the mind's power to form abstract general ideas.

Berkeley argues that the contention that reality implies separate existence, independent and distinct from a percipient, involves a contradiction. All that we do and can possibly experience are our own ideas and sensations, and to contend that these may exist while unperceived is unintelligible. Objects of experience are combinations of "sensations or ideas imprinted on the sense." They can be no more than our own ideas or

112. George Berkeley, A Treatise concerning the Principles of Human Knowledge, (Oxford, Clarendon Press, 1871) Sec. 18, 20. Berkeley maintained that by eliminating the notion of "matter" or "corporeal substance" as existing independently of being perceived, he would eradicate the natural root of skepticism. On his view, he believed, we do have certain knowledge of reality. Ibid., Sec. 86, 88.—The views attributed to Berkeley in this essay are based upon his Principles, not upon his later works, e.g., Siris.

113. Ibid., Introd., Secs. 6-10.

114. Ibid., Secs. 4, 9, 24.

115. Ibid., Sec. 3.
sensations, and these depend for existence upon being perceived. The real object and the sensations or ideas are one and the same thing. Hence, the basic Berkeleyan equation: To be is to be perceived.

At the base of this argument lies Berkeley's presupposition that the universe consists solely of two classes of distinguishable entities, i.e., ideas, and spirits or minds. Ideas are purely inactive or inert, capable of existence only in active beings. The active principle of all reality resides only in incorporeal active substance or spirit. Thus, ideas are the sole actual or possible objects of knowledge, whether these arise in the mind through its own activity, or through the activity of an infinitely more powerful agent, God.

The only distinction among the objects of knowledge is that between ideas created by individual minds and those created by the Divine Mind. The individual mind may create some ideas at its own pleasure. These are ideas of the imagination. Imaginary things are

117. Ibid., Sec. 3.
118. Ibid., Secs. 2, 26-7.
119. Ibid., Sec. 25.
120. Ibid., Secs. 28-30, 33.
distinguishable from the "objects of sense" in that the latter are independent of the will of the particular percipient finite mind. Objects of sense are marked from those of imagination or memory by their strength or liveliness, and by exhibiting a steadiness, order, and coherence that is wanting in those dependent upon the individual mind. The ideas of sense are aggregated and presented to each spirit by "the mind we depend on" through set rules, the laws of nature. Accordingly, the persistence of "things" is accounted for by the perpetual and orderly creation of ideas in the Divine Mind; orderliness and coherency being maintained among them for the guidance of, and their effectual use by, all finite spirits. 122

As we have already seen, Locke attempted to maintain the existence of independently existing substances as substrates for the inherence of primary qualities. Berkeley argues that the distinction between primary and secondary qualities is an untenable and arbitrary one and can not save the assumption of an unperceived substance. Upon analysis, primary qualities


122. Ibid., Secs. 32-6.
are also seen to be sensuous phenomena. Extension, figure, or any other "primary" quality, no less than the supposed substrate, are inconceivable in abstraction from the "secondary" qualities. Both "primary" and "secondary" qualities, therefore, can be only "in the mind and nowhere else."124

On Berkeley's principles, how can we have any assurance that there is anything at all other than our own ideas? Berkeley tries to avoid solipsism through the contention that although we can not have "ideas" of other finite spirits or of God, we do have "notions" of them. He does not, however, elaborate this distinction and fails to provide a clear answer to Hylas' objection on this point in the third of the Three Dialogues between Hylas and Philonous.126 The net result is that Berkeley merely posits the mind of God as the carry-all for things as ideas.


124. Berkeley, Principles, Sec. 9. The meaning of "existence in the mind" is clarified in Three Dialogues between Hylas and Philonous, page 118.

125. Ibid., Secs. 27, 142.

126. Berkeley, Dialogues, p. 95.
Berkeley's inference to the existence of a Divine Mind reveals his basic assumption. The individual mind is conscious of producing its own chain of thoughts and of controlling the imagery of its imagination. There is, however, no consciousness of productive or controlling power with respect to the presentations of the senses. Berkeley takes this as sufficient ground for attributing the origination of the sensations of finite minds to an Infinite Being of like nature. This argument assumes the identity of perception with other modes of operation of the mind. Without this assumption there would be no ground for inferring from the nature of the finite mind's productive power in the case of the objects of thought to the nature of a trans-finite mind as the causal agent of sensations.

On Berkeley's principles we can never have objective knowledge, in the sense of knowing the causal agent of sense experiences. For, in these terms, the sole reality is God. But, although we may have a "notion" of God, as finite spirits, we can not be said to know the Infinite Spirit. Faith in God's continuance of the order of phenomena takes the place of knowledge.

The foregoing position argues that whatever can be experienced exists as a result of its being experienced by some mind. A contrary position contends that all
that is experienced must have prior existential standing. On this latter view, all the qualities of real objects, including "secondary" or sense-qualities, exist independently of any relation to a percipient. Knowing requires neither interaction of agent and patient nor the mediation of some kind of entity. 127

In Reid's defense of this position, sensation, memory, and imagination, are distinct principles of the human mind, and do not differ merely in degree. A reduction of mind, says Reid, to either perceiving or to thinking, is incapable of leading to the objectivity


Reid's point of view has reappeared in the contemporary "neo-realist" school of thinkers. G. E. Moore and John Laird are perhaps nearest to Reid's position. Although some of these contemporaries have been more critical and analytical than Reid, the latter is discussed here for the following reasons: (1) In spite of their minute analyses, contemporary advocates of this position have made no significant doctrinal shift. It is repeatedly insisted that although a correct analysis of many propositions cannot be given, our immediate understanding of them and our belief in their truth is unaffected. This is simply a reiteration of Reid's philosophy. (2) Reid was the historical head of the "common sense" school of thought. He was one of the first to call into question the "theory of ideas" of Locke and Hume and oppose to it a theory of immediate perception; unfortunately, however, not a critical one. (3) Reid's influence extended to a long line of thinkers, including James Oswald, James Beattie, Dugald Stewart, and, most important, Sir William Hamilton.
of knowledge. Sensation and memory are "original principles of belief" implying the present or past existence of their objects, whereas imagination views the object without any belief in its existence or non-existence. The evidence of sense, of memory, and of the necessary relations of things, are the "first principles" of the very constitution of our nature.

We can assign no reason, and should seek none, for believing what is self-evident. Our referral of sensations to independent external existents is not the result of habit or of experience. It is an ineradicable consequence of our nature.

Reid's rejection of the intermediary role of sensations necessitates a reformulation of a doctrine of sensation. Sensations are not "copies" or "images" of independent external things or of any of their qualities. "Color" signifies not an idea in the mind, but a quality of body. Sensations have to be distinguished

129. Loc. cit.
131. Ibid., p. 122.
132. Ibid., p. 141.
from sense-qualities, e.g., color-qualities. The former are "internal" psychical contents, whereas the latter possess independent external existence. Accordingly, the Lockian distinction between "primary" and "secondary" qualities is untenable. Secondary qualities actually do inhere in objects themselves and are not mind-dependent.

The distinction was based upon the confusion between sensations and sense-qualities. In fact, Reid argues, all sensations are nothing but "natural signs" guaranteeing the existence of external objects by a "natural kind of magic." Sensation must be distinguished from perception. By the constitution of our natures, sensations "suggest" perceptions. For example, the sensation

133. More recently, G. E. Moore attacked "idealism" for confusing sensations with "sense-contents." A sense-content, e.g., "blue," is existentially and qualitatively distinct from the sensation, e.g., "sensation of blue." The sensation is nothing but a mere awareness of the sense-quality, so that, e.g., blue exists independently of being sensed at all.—"The Refutation of Idealism," Mind, vol. XII, No. 48, Oct., 1903; pp. 433-53.


of a certain smell suggests the perception of its permanent cause or quality, which we may come to locate in a rose. Thus, sensations signify the independent sense-qualities. They constitute the "language of nature to man" through whose interpretation we learn of the orders and differences among things. Reid is forced to his doctrine of "natural magic" through his rejection of mediating ideas while still stating the problem of the knowledge relation in terms implying the total separation of objects and subjects.

By eliminating the doctrine of ideas, Reid feels entitled to claim an immediate acquaintance with reality as such. Presumably, all cognition is bare awareness; all knowledge is mere recognition. Knowing is an entirely external relation. The fundamental assumption of this general point of view is that the relational nature of consciousness presupposes the discreteness and separateness of its terms.

"Common sense," on Reid's view, can not be judged by reason. As the aggregate of original principles in

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136. Reid, op. cit., p. 185; cf. p. 112.

the minds of all men it is the base of philosophical reason as well as of the beliefs of the plain man. Presumably, the principles of common sense are self-evident. For, other than this, Reid fails to specify how we may detect them.

The major, and fatal, weakness of this position is that, other than by appealing to the constitution of our nature, to "animal faith," or to some similar dogma, the theory provides no reasoned explication of the genesis of sensations. It fails to explain how the knower and the known can be united. It asserts immediacy in the knowledge relation, but it is merely dogmatic in its assertion. Its uncritical approach results in numerous unanswered difficulties. We will here note just one point.

If everything that can be an object of awareness must exist as such independently of the experiencer, the only consistent conclusion is that perceptual error is actually impossible and that illusions and hallucinations are existentially independent of the experiencing being. At least some of the contemporary advocates of this answer to the problem of knowledge are willing to
accept this consequence. But is this not a *reductio ad absurdum* of the meaning of objective knowledge?

The view that all that is known must exist as it is known prior to and independently of being known rests on the failure to distinguish between numerical and qualitative identity, and upon the assumption that sensing or perceptual consciousness is an act but not an activity. The claimed immediatism is supported by a doctrine of "natural magic," or something similar thereto, or else left completely unsupported.

By accepting a distinction between numerical and qualitative identity we can say that the experienced object and the real object are numerically one at the moment of perception, but that the perceived datum is a product of the interaction of the percipient and the external object. On this view, sensible objects must exist prior to, and as necessary preconditions of, sensation. But the sensation itself is the effect of the stimulation of a power of sense by an appropriate sensible object. Aristotle is an advocate of such a doctrine.

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In his analysis of the operations and objects of sense, Aristotle begins from the observation that each sense has a kind of object, peculiar to it alone and differentiating it from the other senses. 139 Thus, color is the special object of sight, sound of hearing, odor of smelling, flavour of taste; while touch includes a plurality of different qualities but is related to each set of qualities in the same manner as each other sense is related to its kind of object. 140 The sensible objects (colors, sounds, etc.) are related to the powers of sense (sight, hearing, etc.) in the operation of sensing. Sensing is a single conjoint activity of the sensible object and the percipient sense. 141 During this activity the two interacting factors, the object and the sense, are one. Yet, their existential difference, the "distinction between their being," remains. 142

The explanation of this union of sensible objects and percipient senses in the activity of sensing rests upon their natures and on the existence of media. Every

139. Aristotle, De Anima, 418a, 6-18.
140. Ibid., 422b, 17f.
141. Ibid., 425b, 26f.
142. Ibid., 418a, 4f.
sensible object has the power to set in movement a particular medium, i.e., what lies between the object and the organ of sense. Thus, the medium of colors is the "transparent;" of sounds, air; of odors, air and water; of flavours, liquids; of tangibles, flesh. Sensibles, therefore, do not directly set in movement the sense organs. They do so only through the appropriate media, which, extending continuously from sensible objects to organs, set the latter in movement.

By a "sense" Aristotle means what has the power of becoming what the special sensible object actually is. The sense and the organ of sense are in fact one and the same, but they are distinguishable by definition. In order to be excited to activity a sensible object must be present to a sense. A sense, therefore, is only potentially sensitive, that is, it

143. Aristotle, De Anima, 419a, 12—419b, 3; cf. 423b, 5f.
144. Ibid., 418a, 33f; 420a, 2f.; 421b, 8.; 422a, 15f.; 423b, 18f.
145. Ibid., 419a, 12f. In touch we are affected not by, but along with, the medium, i.e., flesh. (423b, 15)
146. Ibid., 417a, 12-20.
147. Ibid., 424a, 16f.
is potentially like what the perceived object is actually. The "potentiality" of sense to become actually like the sensible object is due to the fact that it is a "mean" between the opposite qualities which determine the field of objects for that sense. This accounts for its power to become like any one of its special objects within the range determined by the opposites of that kind of sensible object. Prior to its being acted upon by the sensible object, through the appropriate medium, the sense is dissimilar to the object, but at the end of the action it is assimilated to the object and is identical with it in quality. As actualities, the sensible object and the power of sense are one, while as potentialities, each may exist without the other. For example, a man may have the sense of hearing, yet not be hearing; while that which can sound may not be sounding. Thus, "their difference in being" remains.

Each individual sense, then, is related to its special objects by the operation of sensing. But this

149. Aristotle, De Anima, 418a, 3-6.
150. Ibid., 424a, 3-9.
151. Ibid., 426a, 15-26.
sort of relation is restricted to a single kind of objects, so that each special sense can discriminate differences only among its own kind of objects (e.g., white from black, among the colored; bitter from sweet, among the flavoured, etc.). This does not suffice to account for what is perceptible by two or more of the special senses, e.g., movement, rest, number, figure, and magnitude. These sensibles extend beyond the range of any single kind of sensible objects (e.g., colors, sounds, flavours, etc.) and are "common" to more than one sense.\footnote{152}{Aristotle, De Anima, 418a, 10-19. Locke also maintains that figure and motion are conveyed by sense, but he attributes these objects only to the sense of sight. (Essay, Bk. II, ch. ix, par. 9).} But no special sense is required for any one of these "common sensibles," since no one of them is a kind of sensible objects.\footnote{153}{Ibid., 425a, 14-29.} A special organ is needed only where there is a range of sensible objects between two opposites. The common sensibles, therefore, are perceived directly in more than one kind of special sensibles.

A sense can discriminate the differences within its own particular kind of sensible objects, e.g., sight discriminates colors, hearing discriminates sounds, etc.
When, however, we correlate the white with the sweet, or oppose them to one another, it is necessarily sense itself (not the special or particular sense) that performs this connection or comparison. For the contents of this act are sensible objects, and, as such, not the special objects of any other power or faculty. Moreover, the discrimination or connection of sensible qualities must be due to an agency that is one and single, and the performance of this operation requires the co-presence of the sensible objects and the power. Hence, it is sense that performs the discriminatory and combinatorial functions through which the relations among sensibles are discovered. Sense-perception is a "congenital discriminative capacity." 

It is at just this point that Aristotle's doctrine diverges so sharply from that of Plato. Plato assumed that such relations have to be the objects of a faculty in some special capacity. Aristotle, on the other hand, is maintaining that sense is both passive and active, i.e., that it performs a double function. As mere sight, or mere hearing, sense is passive in that it must be

155. Ibid., 426b, 16-427a, 4.
156. Aristotle, Posterior Analytics, 99b, 35; 100a, 35; Meta., 1047b, 31.
activated by an actual sensible object. That is, we can not choose to sense or not to sense. But sense also has an inclusive meaning, i.e., as encompassing all the kinds of sensible objects. It is as such a "common sense" that it is active, that is, it performs the function of relating the data of the special senses. Thus, "sense" has a double meaning, as a "one" and as a "many." The "many," the special (particular) senses, are differentiated by their special objects and are passive. The "one," the "common sense" is marked by its peculiar operations and is active. In sum, sense is both concrete and abstract.

On this doctrine of sensation the independent existence of knower and known is maintained, since a sensible object must be given to sense before sensing can occur. But in this process of sensation the union of the knower and the known is effected. Furthermore, since a sense can not be in error with respect to its special objects, the possibility of definitive knowledge is not precluded. Thus, this view of the relation between subject and object at the moment of perception allows for their existential diversity, yet provides the immediacy required for objective knowledge.

Further, by observing that thought and sense are the same "object-wise," it is possible to maintain the unity of consciousness. To be sure, sensing, imagining, and thinking, are not the same. But they are distinguished operationally or functionally and work with the same materials, although not in the same form. Imagination, for example, depends upon an actual exercise of sense, while judgment is not found without imagination.\textsuperscript{158}

Hence, a continuity is maintained between the particulars of sense-perception and the most abstract objects of thought.\textsuperscript{159}

In this chapter we have examined possible solutions to the problem of the nature of the knowledge relation. We have found that those theories which do not provide a point of nexus between the knower and the known must lead to skepticism, avowed or no. The theories that maintain that all knowledge must be mediated by the forms of discourse lead to a variety of relativity theories of knowledge (in the sense that there are contexts, levels, or stages). Of the theories asserting

\textsuperscript{158} Aristotle, \textit{De Anima}, 427b, 15-16.

\textsuperscript{159} Ibid., Bk. III, chs. iii-viii. Cf. \textit{Posterior Analytics}, Bk. II, ch. ix; \textit{Metaphysics}, Bk. I, ch. i. This portion of Aristotle's doctrine will be examined in Chapter 4.
"immediacy," we have found that those that argue either for the complete dependence or the complete independence of any possible object of knowledge upon some percipient vitiate their claims to objective knowledge. Only where the union of the knower and known is provided for in the moment of perception, and the continuity of the cognitive functions is affirmed, can we claim the objectivity of knowledge. But such a "principle of immediacy" does not suffice to account for our experiences. The following chapter will discuss the second necessary condition.
The principle of immediacy has reference to the "personal" or variant element in knowledge, viz., the contents of sense-perception. The principle of immutability has reference to the "impersonal" or invariant element in knowledge. It has a double function:

(1) to account for our experience of stable, structured groups of phenomena ("concrete, definite things"), and

(2) to provide for the objectivity of knowledge by overcoming the subjectivity of sensations.

In our examination of the principle of immediacy in the foregoing chapter we were able to differentiate a number of diverse formulations in terms of the assumed relations of the knower to the known. Because two relata were involved a number of alternatives were possible. Thus, for instance, even where immediacy of relation was denied, the natures of the mediating elements differed among different views. The nature of the principle of immutability, however, does not allow for such a variety of approaches. With respect to this factor we are not considering a relation; we are concerned with the possible loci of the fixed and determinate grounds requisite for certainty. A philosopher may locate immutability either in terms, in the things known,
or in the knower. Otherwise, he may tacitly or explicitly deny its necessity, while nonetheless transferring its functions to some elements, or to the whole, of his system.

If immutability is "located" in terms or symbols we have a system of arbitrarily fixed certainties. This is the sort of position discussed in Chapter One (pp. 2-4). But, as was there shown, such a locus for immutability results in unabridged conventionalism, viz. a conception of knowledge without any necessary tie to the external world. Accordingly, the only significant or fruitful loci of immutability are in the known or in the knower.

The principle of immutability may be "located" in the mind or knower, or else in external things or what is known. In either case, it is constitutive of the form of our experience. The locus of the principle of immutability is determined by the theorist's doctrine of sensation. When immediacy of relation between the object and the subject is affirmed, immutability can be located in external things. When immediacy is denied, but the need of a ground for universality and necessity is recognized, immutability is located in the knower. These divergent positions are best formulated in Aristotle's doctrine of substance and in Kant's critique
of reason. Accordingly, these two views will receive our consideration.

The doctrine of substance is fundamental in Aristotle's philosophy. An appreciation of his doctrine of the concept and of his terminological theories is conditioned by an understanding of the primacy, in every sense of the term, of substance. While it is true that substance is the grammatical subject of predication, its primacy and significance are not due to such linguistic usage. For even what is predicated of substance, i.e., the other categories, may be treated substantively. Indeed, as we will soon see, it is by virtue of what substance is that it is the proper and ultimate subject of our sentences. Its grammatical function is a consequence of its peculiar character. Further, the mode of being expressed by relations in judgments must be distinguished from the kind of existence of natural things. The former is a conceptual synthesis, the latter a concrete unity. Hence, we will direct attention to the Aristotelian conception of substance as that principle providing a generating relation for sensations and a

3. Ibid., 1027b, 17ff.
common, referable object of knowledge, rather than to
its role in predication.

"Substance," as Aristotle repeatedly remarks, is
a term used in several senses. In the primary sense,
every substance is a "subject," not as a grammatical
designation, but as an autonomous numerical unity, as
"being" that is a "one." As a concrete singular, a
substance is what is irrelative, that which has existence
in itself and not merely by reference to something else. Separate existence is the mark of primary substance alone. A primary substance is a "one" and a "this;" separability and "thisness" are its differentiating marks. Hence, there are no degrees of substantiality among substances in this primary sense of the term; "no one is more truly
substance than another." It is this autonomy that


entitles every primary substance to be a subject, i.e., something that is the ground of and in relation to which, other modes of being can exist. That is, quantity and quality, relations, place and time determinations, etc., do not exist in and for themselves, they are modifications of, and dependent upon, substances. Substance is related to the other categories as the independent is to the dependent. All other categories exist in virtue of, and are related to, substance. Thus, substance unites and is the ground of all modes of being. It is the concrescence of the various determinations of being incapable of self-existence in a concrete whole.

As a being in itself, primary substance alone is capable of uniting qualities (including habits and dispositions), and making the fact of change intelligible. Qualities exist "by nature" or "according to nature," but they do not "have a nature." They can exist only in a substratum that is a concrete individual, a determinate substance. Only substances "have a nature," i.e., a constitutive principle of "being moved and of


10. *Ibid.*, 1044b, 8ff; *Physics*, 192b, 8ff.
Qualities can merely succeed one another, but cannot change. If perceived change is to be more than an inexplicable bare succession, it must reflect the dynamic process by which primary substances maintain and develop themselves in accordance with their natures.

In sum, a primary substance is that alone which, while retaining its identity, is capable of admitting contrary qualities.

As a quality has a substrate in a determinate substance, so too does a primary substance have a substratum. This ultimate substratum is substance emasculated; it is that which is incapable of being characterized, either positively or negatively. It is this unknowable component of substances that Aristotle terms "matter." The total indeterminateness of matter means that it is completely determinable and absolutely indefinable. As determinable, matter requires a determining principle to produce the determinate primary substances. As indefinable, matter makes all things of which it is a

component incapable of precise definition. Since definition is required to permit the communicability of knowledge, the determining principle of things must be definable. Aristotle finds such a principle in "form."

The "form" is the principle of unity or the constitutive cause immanent in definite things. Form is what makes a thing to be some definite kind of thing, that in virtue of which each individual thing is what it is. But it is not to be thought of as an element (something present in the individual in the way that matter is), nor as a compound of material elements. For, in either case, we will need another principle of structure to explain the union of the components. And if this is likewise an element (or compound) another form will be required to unite the former components, and so on, ad infinitum. But since an infinite process is

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17. *Ibid.*, 1041b, 6-32. Forms of substances must be distinguished from "sensible forms." The former are not sensible, but intelligible.


19. *Ibid.*, 1041b, 12ff. Cf. *ibid.*, 1031a, 28ff. Aristotle also uses the same argument with respect to the soul as the original unifying agency of the body. *(De Anima, 411b, 5-14)*
unintelligible, Aristotle affirms that form is the original principle of structure, the primary cause, of the concrete thing.\(^{20}\)

All generation of natural products, and all production of artifacts, are the result of the imposition of form on matter. Both form and matter are common to all the products of nature and of art.\(^{21}\) They are universal principles of all that is. In natural productions, the agent of generation is the form embodied in an actual concrete individual, and the product is the same in form.\(^{22}\) Thus, the same form may be common to many numerically distinct things. Therefore, the principle of individuation among primary substances with the same form must be matter.\(^{24}\)

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\(^{20}\) *Meta.*, 1041b, 25ff.; cf. 1032a, 1.

\(^{21}\) *Ibid.*, 1032a, 12ff.; cf. 1037a, 28ff. The distinction between the production of natural substances and art things is made in terms of the range of forms at the disposal of the agent. That is, the artist can impose various forms on given matter, but, except in the case of accidents, a form in nature duplicates its own kind. When the agent is involuntary or natural, like begets like. (*Meta.*, 1033b, 29ff.)

\(^{22}\) *Ibid.*, 1033b, 29ff.

\(^{23}\) This is, of course, also true of artifacts.

\(^{24}\) *Meta.*, 1034a, 7.
Since neither matter nor what has matter is, as such, knowable, the knowable must be form. From the side of the knower, this appears as the "whatness" or "essence" of things. \(^{25}\) Essences represent, in conception, the forms peculiar to each kind of individual substances (species). The essence is the concept of the substantial form common to the separate members of a species. \(^{26}\)

Thus, it is by virtue of their common form that primary substances (concrete things) belong to a species. A species has no existence apart from its instances. In turn, an essence, as the being of things cognized in conception, is not separate from the totality of instances in which it appears. \(^{27}\)

For Aristotle, an essence can belong only to a species of primary substances, and there are different essences for different species. \(^{28}\) Taken from the side of things, this means that all things of the same kind will have the same constitutive cause (form), but diverse

\(^{25}\) **Meta.**, 1029b, 13ff. For Aristotle, essence, in the primary and simple sense, belongs only to primary substance. But in a secondary way it also pertains to the other categories of being. **Vide Meta.**, 1030a, 18ff.

\(^{26}\) **Ibid.**, 1030a, 11ff.

\(^{27}\) **Ibid.**, 1031a, 15--1032a, 11; cf. 1033b, 19ff.

\(^{28}\) **Ibid.**, 1070b, 17.
kinds will have diverse forms. The likeness of all kinds of substances is to each kind as the species is to the concrete things. Hence, the likeness of all substances is analogical only. Each kind of substances has principles (other than matter and form) specific to its kind. The significance of this doctrine lies in the conception of science to which it leads. On Aristotle's grounds, there will be diverse sciences seeking different unique principles through methods appropriate to each.

In primary substances much of what appears in them is accidental, a consequence of the matter in which the form manifests itself. The accidental is not a necessary part of the essence and it is indefinable. Accordingly, in the true sense of the term, a definition is a verbal formula of essence. This accounts both for the possibility of discovering univocal terms and for the fact that in genuine definitions the predicates

29. Meta., 1070a, 31ff.; 1071a, 1.
30. Ibid., 1071a, 30ff.
31. Ibid., 1027a, 14.
32. Ibid., 1029b, 19. On this view of definition it is not simply a matter of arbitrarily fixing the signification of names. The essence is not just a conventional specification of the attributes to be attached to the same name.
are simply convertible with the grammatical subjects.\textsuperscript{33} Further, because the only genuine predicates of primary substances (concrete things) are species ("secondary substances"), with determinate essences, the predicamental line in a demonstration must be finite.\textsuperscript{34} Hence the possibility of true statements which are not relative to contexts and which are not merely partially true. This does not mean that all definitions actually express the facts. However, the mind is not in error as a cognitive faculty, but in its capacity as a faculty of judgment.\textsuperscript{35}

For Aristotle, essences are the objects of thought\textsuperscript{36} and we possess knowledge of things only when they are obtained.\textsuperscript{37} But to know the essences is to know the determining constitutive principles or causes of things, i.e., the forms. Hence the conclusion that "mind is the form of forms."\textsuperscript{38}

\textsuperscript{33.} \textit{Topics}, 101b, 39ff.

\textsuperscript{34.} \textit{Cat.}, 2b, 2837; \textit{Post. An.}, Bk. I, chs. xix-xxi.

\textsuperscript{35.} \textit{De Anima}, 430b, 26-31. This point will be discussed further in Chapter 4.

\textsuperscript{36.} \textit{Meta.}, 1072b, 22.

\textsuperscript{37.} \textit{Ibid.}, 1031b, 20.

\textsuperscript{38.} \textit{De Anima}, 432a, 2.
On this account, the concept is essential for the statement and testing of knowledge claims. Knowing is not possible without the formation of concepts. They are not, however, empty abstractions, unrelated to their objective counterparts. We connect ourselves to primary substances through sensation. By this means we obtain only the sensible forms of things. But since these are accidents of composite substances and the effects of specific properties, they indirectly lead to the discovery of the common natures of discrete things, cognized as essences and formulated in definitions.\textsuperscript{39} Objective knowledge is made possible by the actual immanence of forms guaranteeing the unity, continuance, and efficiency of particular things. As we will see in Chapter 4, the mind merely isolates the determining constitutive principles. They are not dependent upon being known.\textsuperscript{40} Thus, as forms are constitutive of primary substances, the sources of definitions, and the grounds of intelligibility, the task of acquiring knowledge of things means separating out the various forms from one another.\textsuperscript{41}

As constitutive principles, forms are the grounds

\textsuperscript{39} Cf. \textit{Post. An.}, Bk. II; ch. xix.
\textsuperscript{40} \textit{Meta.}, 1041a, 2-4.
\textsuperscript{41} Cf. \textit{Physics}, Bk. II, ch. 11.
both of the acting and being acted upon of things, and of
the unity of their qualities. Thus, there are real
ities or necessary connections among things. Concrete
individuals come to be only through the prior existence
of other substances which are their agents of production. Forms account as well for the unity of the many "ones"
as for the substantiality of each.

Returning to the theme enunciated at the beginning
of this section (see above, p. 93), we now see how
Aristotle's conception implies that all things that
exist, all primary substances, are subjects. The distinc-
tion between "object" and "subject" is meaningful
only when the terms are considered correlative.

The difference in the views of Aristotle and of
Kant is epitomized in the contrast between Aristotle's
conclusion that the mind is the form of forms and Kant's
contention that reason is the lawgiver to nature.

42. Meta., 1038b, 24-28.

43. Ibid., 1034b, 16-19. It may be objected
that it is not conceivable just how form is transmitted
from the agent to its product in a natural production.
It is a reasonable conjecture that this may be what led
Leibniz to deny such causal efficacy and to argue for
the absolute separateness of substances (monads). As
a result, however, he had to make recourse to the doc-
trine of a pre-established harmony in order to unify
substances into an intelligible universe.

44. Aristotle, De Anima, 432a; 2. Immanuel
Kant; Critique of Pure Reason (London, Macmillan and Co.,
Ltd., 1950, transl. by Norman Kemp Smith) p. 20 (Preface
Although starting from a different doctrine of sensation than Aristotle, Kant also recognizes the necessity for a principle of immutability for objective knowledge. His "Copernican revolution" in philosophy may be interpreted as signalizing a shift in the principle of immutability from the known to the knower, from "nature" to "reason." 45

Kant's conception of the faculty of sensibility leads to the view of sense contents as a multiplicity or manifold of indefinable particulars. 46 Such an "atomic" conception of sense data means that combinations and relations among the manifold of sensible intuitions (appearances) are not objects of the sensibility, and that the "representation" of such combination can not be given through sense-perception. 47 Kant thus faces the same problem as did Plato and Hume, i.e., to locate the source of the uniting principles of sense intuitions. In language reminiscent of Plato, Kant remarks that without such organizing and unifying relations "it would be possible for appearances to crowd in upon the soul, and yet to be

45. Kant, op. cit., pp. 21ff.
47. Ibid., pp. 151-2.
such as would never allow of experience."  

There are just two possible ways, argues Kant, in which the required synthesizing connectives may be related to their objects. Either the object itself determines their possibility, or they make possible an object of knowledge. The former view is represented by Aristotle's conception of substance. Kant takes up and expounds the latter view.

In order for experience as we know it to be possible, the chaotic manifold of representations must be synthesized into intelligible unities. The sensibility receives representations through the forms of intuition, space and time. This manifold must then be taken up and structured through a single act of the understanding into an object of experience. Experience of objects thus contains two dissimilar elements: the matter of knowledge (received through the sensibility), and the form (contributed by the understanding). Sheer receptivity, sense-intuition as such,  

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51. Ibid., p. 121.
requires the *a priori* forms of space and time, but it stands in no need of the functions of thought.\(^5^2\) Hence, the forms of intuition and those of understanding are of "two quite different kinds."\(^5^3\) The former merely order sense data *vis-a-vis* one another spatially and sequentially. But they do not provide the synthetic principles through which the manifold of intuition can be structured into the objects of experience. This function is performed by what Kant calls the "categories" or "pure concepts of the understanding."

The synthesis of the manifold of intuition is an operation of the same faculty which produces the analytic unity of judgments.\(^5^4\) That is why the understanding may also be called the faculty of judgment.\(^5^5\) Every judgment, maintains Kant, even those that are ostensibly merely subjectively valid, i.e., in which the connection of perceptions in an individual consciousness is merely according to "*rules of association,*" claims

\(^5^2\) Kant, *op. cit.*, p. 124.


some measure of objectivity. 56 The association of particular appearances in an empirical (subjectively valid) judgment is not accidental. It is grounded upon the a priori modes of synthesis with respect to all possible appearances. 57 The copula of judgment expresses the relationship of the connections in individual sensible intuitions to the a priori synthetic principles of the understanding which make possible objectively valid judgments, i.e., those independent of intuitions in this or that individual. 58 Hence, even an empirical judgment contains an a priori factor, i.e., the tacitly affirmed necessary connection of its representations. 59 This is why the concepts contained in judgments are revelatory of the a priori synthetic principles

56. Kant, op. cit., pp. 144-5; 159. The "subjectively valid" judgments of perception and the "objectively valid" judgments of experience are not to be thought of as two heterogenous kinds of judgments. In his Prolegomena to Any Future Metaphysics (La Salle, The Open Court Publishing Co., 1947, ed. in English by Paul Carus), Kant indicates that these are but two perspectives or moments of all judgments. (pp. 55-6).

57. Ibid., p. 143.

58. Ibid., p. 159.

59. Cf. Ibid., pp. 208-38 ("Analogies of Experience").
necessary for the unification of the manifold of intuition. Hence, too, the logical forms of all possible judgments yield a complete specification of the categories.

For Kant, as for Aristotle, knowledge is not possible without concepts. But on Kant's view the concepts employed in judgments do not reflect the modes of relation of things themselves. Instead, they are the modes of synthetic activity of the understanding. In every valid judgment of experience the analytic unity of its representations is the function of an act of the understanding in conjoining its permanent synthesizing factors with the intuited sense materials. Thus, the categories are the necessary conditions of thought in a possible experience. Their objective validity rests on the fact that through them alone is experience, as far as regards the form of thought, possible. That is, it is only through the categories that we may think objects in general and thus pre-determine the structures that

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60. Kant, op. cit., pp. 104-13. It is not here necessary to detail Kant's table of judgments and the corresponding table of categories. Nor is it relevant to this discussion to examine whether or not the distinctions are valid and exhaustive.

61. Ibid., pp. 105, 129.
intuitions must fill.\textsuperscript{62}

The heterogeneity of the manifold of sensible intuitions and of the pure concepts of the understanding raises the problem of finding a point of junction. This is essential in order to save Kant's original doctrine of sensation, as supplying a disconnected manifold of data, from leading to conclusions similar to Hume's. Sensible intuitions and pure concepts must be connected because sensibility alone, though yielding appearances, would supply no objects of empirical knowledge, and the categories alone are "empty."\textsuperscript{63} The connecting link is supplied by the imagination. The two polar faculties, sensibility and understanding, are in a necessary connection through the mediation of the imagination in its transcendental function.\textsuperscript{64}

The reproducibility of representations (association of perceptions in images) is a necessary presupposition of experience, since it is such synthesis of the imagination which renders possible judgments of perception. The imagination, then, is the middle term through which

\begin{itemize}
\item \textsuperscript{62} Kant, \textit{op. cit.}, pp. 131 ff.
\item \textsuperscript{63} \textit{Ibid.}, p. 146.
\item \textsuperscript{64} \textit{Ibid.}, pp. 144-6; cf. pp. 132-3, 165.
\end{itemize}
the intellectual synthesis of the categories may be brought to bear upon the manifold of intuitions. It provides a pure concept with its image through the formal condition of inner sense -- time. In common with the categories, time has an a priori character, and in common with sensibility, an intuitive character. Thus, the ultimate link between sensible intuitions and pure concepts lies in the dual character of time as both sensuous and pure, i.e., as homogeneous with both the sensibility and the understanding.

Sense, imagination, and understanding, are the three subjective sources of all knowledge. But what is the ground of their objective validity? According to Kant, the indispensable ground of any mode of knowledge must be the unity of consciousness through whose synthetic activity alone the manifold of representations can form a whole. Kant terms this "pure original unchangeable consciousness," transcendental apperception. This must be distinguished from the changeable empirical self, known through the flux of inner sense,


66. It is not here necessary to discuss Kant's doctrine of the schemata. *Vide* Kant, *op. cit.*, pp. 180-8.

as that unchangeable consciousness that is a necessary condition of experience. The connective activity of the understanding is possible only through the unity of pure apperception. Through recourse to this principle Kant can allow for the unification of the manifold of representations in one particular consciousness. In this way, sense-intuitions become an object for an individual knower. The principle of the synthetic unity of apperception, therefore, is the highest principle of all human knowledge.

In terms of the distinctions explored in this essay, it is clear that Kant shifted the locus of the principle of immutability from the known to the knower. On Aristotle's view, the unified structure of things is a precondition for knowledge. For Kant, on the other hand, knowledge rests on the unity of the knower, who himself bestows unity, not on the unexperienceable "things-in-themselves," but upon the appearances that become for him an object of experience. It is not, however, to be concluded that Aristotle's doctrine does not allow for the unity of the knower. Quite the contrary. For, as we have previously observed, the

knower likewise is an "object" for knowledge. Hence, for Aristotle, all substances stand in that thorough-going reciprocity of acting and being acted upon that is termed Nature. Kant's severance of things themselves from the knower precludes such a conception of Nature. The systematic unity of nature therefore becomes for Kant a methodological presupposition, a principle of the regulative employment of reason.⁶⁹

On Aristotle's or Kant's views the principle of immutability, as the cause of regularity and order and as providing a ground for overcoming the subjectivity of sensations, is constitutive of what is experienced. Hence, though different methods are required by these views, we can have a sort of philosophical knowledge of such "explanatory facts" of what is experienced. More often, however, this explanatory factor has been considered inaccessible to human powers. Plato, for example, made recourse to the "ideas," in whose participation the coming to be and passing away of sensible things is explained. But, as Aristotle complained, the cleavage between the ideas and the sensible world left the fact of motion unintelligible. In our terminology, the principle of immutability is severed from connection

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with the principle of immediacy. In Berkeley's account of knowledge, the "steadiness, order, and coherence" of the ideas of sense is attributed to the will and wisdom of God. Laws of nature are simply the rules in accordance with which these ideas are imprinted on finite minds by the Author of Nature. But finite spirits can never come to know the infinite Supreme Spirit. For Bradley, all appearances are self-contradictory and their mere "perpetual disappearance in time" negates their claim to complete reality and intelligibility. So, in order to reconcile contradictions and get a changeless whole, we must look to the "Absolute," which is "self-existent, substantial, and individual." Still, this actual Reality is "above thought" and hence unknowable.

Within some positions the principle of immutability is transformed from an explanatory philosophical principle into a methodological or operational one. Thus, for example, the determinateness and "substantiality" generally attributed to "things" or to the mind, are considered by Hume to be the special characteristics of

71 Bradley, Appearance and Reality, p. 70.
72 Ibid., p. 493 (Appendix).
"impressions." The continuity of process is saved by the introduction of a principle of habit. On the other hand, for Dewey the ultimate fact of the world is process, continuous activity and change. A principle of immutability is not admitted in either the known or the knower. In this case, however, it is transposed from the materials or subjects of knowledge to its instruments. In other words, immutability is made to reside, neither in determinate external structures nor in forms of cognition, but in a single determinate method of inquiry. The concepts and theories of all fields of investigation thus become the elements that are unified and made continuous with one another through the universality and unity of the experimental method. Without stability in the general method of inquiry the results of various specific inquiries could not be compared or related to one another.

In summary, for both Aristotle and Kant the principle of immutability performs its proper functions, as assigned to it above (Chapter 1). The differences in

73. Hume, Treatise, p. 634. Compare the quotation from Ernst Cassirer given above, Ch. 3, footnote #33, p. 31.
74. Dewey, Logic, pp. 12-13, 20, 104 ff., 156. Vide also his "The Significance of the Problem of Knowledge," University of Chicago Contributions to Philosophy, No. 3 (Chicago, 1897) pp. 18 f.
their location of this factor stem from their divergent views as to the structure of the knowledge relation. Aristotle can find it in "forms" because his doctrine of sensation allows for immediacy between knower and known. Kant's doctrine of sensation does not allow him any choice. As he admits, he has to locate the synthesizing factor in the understanding because we can not intuit "things-in-themselves" but merely receive a manifold of representations. Thus Kant implies that knowledge of reality must mean intuitive acquaintance with individual things. For Aristotle, human knowledge is never of discrete things, but of the forms manifested in instances of a kind of things. How such knowledge is possible is the subject of the following chapter.

ARISTOTLE'S DOCTRINE OF KNOWLEDGE

It is a fundamentum of Aristotle's doctrine of knowledge that man is only a potential knower, both as regards sensitive cognition and intellectual cognition. Since we are sometimes knowing, sometimes not, coming-to-know is a process or sort of movement from our condition as potential knowers to that as actual knowers, viz. from ignorance to knowledge. In order to better understand what, according to Aristotle, occurs in the process of knowledge, it will be helpful to present a brief statement of his doctrine of motion.

Aristotle's definition of motion involves the distinction between potentiality (potency) and actuality (act). The latter, however, always are predicated analogically of various subject matters. In fact, the distinction between the potential and the actual can not be defined, but can only be illustrated through particular analogies. In general, we may only say

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2. Aristotle, Meta., 1036a, 2-12; 1048a, 35. Aristotle cites the following as examples of the relation of the actual to the potential: "as that which is building is to that which is capable of building, and the waking to the sleeping, and that which is seeing to that which has its eyes shut but has sight, and that which has been shaped out of the matter to the matter, and that which has been wrought up to the unwrought." (Meta., 1048a, 38-1048b, 4.)
that the potential is what is not yet actual, and may
perhaps never become so, but is capable of passing into
actuality when activated by an appropriate agent.
Accordingly, since potentiality and actuality have various
analogous but different meanings, depending upon the
things to which they are applied, motion or change will
likewise have a variety of meanings.

The potentialities of discrete things may concern
their substantive being, their quality, their quantity,
or the other categories of primary substance. Since
motion always involves a potentiality and since there
is nothing in addition to the categories, there is no
motion apart from the categories and motion is not
itself a category. In brief, there is no such thing as
motion in itself, apart from something that moves or
changes. But motion or change is always between
opposites.

Since opposites are either contraries or contra-
dictories, change is always between contraries (or a
contrary and an intermediate standing as the other
contrary), or between contradictories. Contrariety
consists in a pair of positive terms within the same

4. Ibid., 200b, 34; 201a, 2-4.
5. Ibid., 224b, 29-31; 229b, 15-21.
category, e.g., hot and cold, one and many. As the starting point and the goal of the transition from "this" to "that," contraries are related as form and the privation of form. And, since the contraries cannot act upon each other inasmuch as they do not themselves change, they require a substrate which undergoes the change, e.g., it is the kindling log that passes from "cold" to "hot," not the "coldness" or the "heat" that changes. Thus, the privation that is the goal of change is a potential form of the substrate. That is, contrariety will be between an actual form and a particular potentiality of the subject of change.

Where there is a change between a positive and a negative term, i.e., contradictories, there is coming-to-be or passing-away. This is a change from "not-being" to, or from, "being." But such a change is not a movement. In short, "change" is a wider term than movement. Hence, there are as many kinds of change as there are categories with opposites; e.g., in substance, coming into being and passing away; in quantity, increase and decrease. Thus, Aristotle distinguishes

6. Aristotle, Physics, 224a, 34-224b, 14.
7. Ibid., 225a, 12-34; 229a, 27-229b, 14.
8. Ibid., 201a, 4-9.
four kinds of change, viz. generation and corruption, alteration, increase and decrease, and locomotion; corresponding respectively to the categories of substance, quality, quantity, and place. But, since a substance does not have a contrary, movement does not pertain to the category of substance. A substance can only "come into being" and "pass into not-being." A change in respect of the essential nature of a substance is a "perishing." Hence, there can only be motion with respect to quality, quantity, and place.

In general, motion is a kind of relation between that which moves or changes, called the agent, and that which is moved or changed, called the patient. Motion or change is effected only when what has the power of producing a change acts upon a thing capable of being changed, i.e., motion always combines both actuality and potentiality. Thus, all motion is a process or


11. Aristotle concludes his discussion of motion as follows: "Since, then, motion can belong neither to Being nor to Relation nor to Agent and Patient, it remains that there can be motion only in respect of Quality, Quantity, and Place; for with each of these we have a pair of contraries."—*Physics*, 226a, 23-26.


progressive realization of a potentiality in so far as it exists potentially, e.g., of what is alterable insofar as it is alterable.\textsuperscript{14} The qualification "insofar as it exists potentially" directs attention to the fact that a single thing may have both an actuality and a potentiality, although not in the same respect. Thus, for example, a substance, \textit{as such}, is not subject to change without being destroyed. But nothing prevents the realization of its potentialities with respect to the other categories wherein motion is possible, viz. quality, quantity, and place.\textsuperscript{15} A substance and its potentialities, therefore, are not absolutely identical. They are one in subject, but two in definition, i.e., what can be said of "bronze" can not be said of a "potential statue."\textsuperscript{16}

A potentiality may or may not be realized. There is a specific motion only when a specific potentiality is being realized, e.g., when that which is buildable is being built. When this potentiality is fully realized, motion ceases. Thus, motion is a process between complete potentiality (in some respect) and complete actuality (in the same respect).\textsuperscript{17} Movement is something

\begin{itemize}
\item[\textsuperscript{14}] Aristotle, \textit{Physics}, 201a, 12-13; cf. 201a, 28-29; 201b, 4-6.
\item[\textsuperscript{15}] Ibid., 201a, 30-201b, 3.
\item[\textsuperscript{16}] Loc. cit.
\item[\textsuperscript{17}] Aristotle, \textit{Physics}, 201b, 8-15.
\end{itemize}
incomplete, viz. an incomplete actualization, for it continues only as long as some potentiality remains to be actualized.18

Every motion involves an agent and a patient, a mover and a moved. Thus the question arises: Where is the actual movement realized? Every motion or change is caused by what was in potentiality capable of causing such motion now realizing that potentiality by actually moving that which was in potentiality capable of being so moved. The change, however, does not occur in the termini (qualities, quantities, places) which are the starting point and the goal of motion.19 Since these are unmovable per se, they can be only incidentally involved in the primary motion of the subject.20 Hence, movement is realized in that which has the potentiality of being actualized by the agent. Thus each motion has two conceptually distinct aspects, viz. action and passion.21 Movement in general may be defined, therefore, as the actualization of the potentially active and of

18. Aristotle, Physics, 201b, 8-15.
19. Ibid., 224a, 34-224b, 6.
20. Ibid., 224b, 17-23.
21. Ibid., 202b, 7-23.
the potentially passive, as such.  

This sketch of the elements involved in all motion and change, on Aristotle's view, will serve to explicate how the soul, which is an actuality, may yet be in potentiality to knowledge. The answer is that knowledge is an affection of the soul, not a substantive or essential change. That is, as faculties of the soul, sense and intellect are actual, but not as actually functioning. With respect to their functions, they are faculties in potentiality. They are actualized by the presence of knowable objects (sensible or intelligible) in the act of sensing or knowing. But the acquisition of intellectual knowledge is not a qualitative modification of the intellect, since it does not come to know actually in virtue of a motion of its own. Motion is not an attribute of the essential nature of the soul. If it were, the soul would have to have a place. Understanding or knowing resembles a sort of coming to rest, rather than motion. However, the acquisition of intellectual

24. Ibid., 417a, 6; 429b, 30-31; 431b, 26-27.
25. Aristotle, Physics, 247b, 1--248a, 10.
knowledge does involve a qualitative modification of bodily organs, viz. sense organs.²⁸ We are here, however, anticipating what appears in the sequel. We must revert, therefore, to a more systematic account of the Aristotelian doctrine of knowledge.

In his doctrines of sensation and of substantial forms Aristotle has provided both of what have been here termed principles of immediacy and of immutability. But precisely how are they connected with one another? For, unless they are somehow united, there will be a break in the requisite continuity between the proper objects of intellectual cognition and the knowing mind. Without such a bond the senses would fail to lead up to intellectual knowledge. The crucial task in the Aristotelian doctrine is to explain how we get from the particularity of sense to the understanding of the universal.

Sense enables us to know the particular qualities of physical objects, but the intellect seeks the essential natures of such objects.²⁹ Sense and intellect thus are related to one another as are concrete particulars and universal natures. They are not separated, nor separable, from each other. Rather, they are different faculties of

²⁸. Aristotle, Physics, 244b, 2--245a, 11. Cr. De Anima, 406b, 10; 11.
a unity, the soul. But, whereas sense comes to its objects directly, the intellect must obtain its own proper objects (essences) by an indirect path. Sense may be compared to intellect as a straight line to a bent line. 30

Sensing is a process in which a power of sense, a potentiality with respect to sensibles, is actualized. The power is informed by the sensible forms and in this manner its potentiality is realized by its special sensibles. But the faculty as such is not itself changed in the process, i.e., sensing is merely an incidental sort of qualitative change of sense. 31 Furthermore, the power of sense is not always exercised. Since sensing requires the power plus a sensible in act and an appropriate medium, the absence of either of the latter two factors prohibits the operation. That is why sense is dependent upon an actual object and why we are not always sensing.

The indubitability of sensation is assured by explaining how the power of sense becomes one with the sensible during actual sensing. Similarly, the certainty of intellectual knowledge can be guaranteed only by showing how, and in what sense, the mind can obtain possession of the substantial forms of things. All

30. Aristotle, De Anima, 429b, 15-18
31. Ibid., 431a, 6; 406b, 10-11.
natural (physical) things, we must remember, are composites of form and matter, and the soul is itself the form of the body. But the forms of composites can not be really separated from matter. What must be explicated, therefore, is how the immaterial mind can be informed by the formal constitutive principles of material things. For, if thinking is an affection of the mind by the object of thought, just as sense receives impressions from the qualities of material objects, how will thought be possible? As sense is in potentiality with respect to sensibles, so mind must be in potentiality with respect to its own proper objects.

Sense receives sensible forms with all their individuating material determinations, viz. figure, magnitude, etc. This is appropriate to the power of sense inasmuch as the object of a power is proportionate to it. Hence, since sense is the power of a material body, a composite substance, it receives its objects with concrete, particularizing determinants. But thinking or intellection is an operation of a power of a non-corporeal principle, the soul. Accordingly,

33. Ibid., 429a, 14.
34. Ibid., 429a, 24-27.
the objects of thought must be the universal natures of things without any of the accidental individuating notes due to matter. These can only be the specific natures or fully determinate essences of composite substances. Thus we possess intellectual knowledge of things only when we know their essences. 35 Since sense-perception is in time prior to thought, how can substantial forms become known without the concrete characteristics attaching to them as a consequence of being individuated by matter? How, in short, do we get something intelligible? The answer is that this is possible only in virtue of some community between the physical world and the mind. 36 The nature of the link between external objects and the receptive intellect in the process of thought remains to be examined.

Aristotle's analysis of the operation of thinking is based upon an analogy of thinking to perceiving. 37 This procedure is justified inasmuch as the analogy is functional, not constitutive, and the analysis of sensation was itself a functional one, i.e., it proceeded

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35. Aristotle, Meta., 1031b, 8; cf. De Anima, 429a, 21.
37. Ibid., 429a, 13-14.
from objects to operations to powers. Moreover, the conditions for the process of thought are like those for the process of perception.

In the process of intellectual cognition there is a movement from ignorance to knowledge. Ignorance is simply the privation of knowledge. Actual knowledge is the realization of the power of intellect by the objects of thought. Consequently, knowledge as actually realized is identical with its objects, i.e., "speculative knowledge and its object are identical." This means three things. First, since we do not actually know all things, and since there is only a gradual accumulation of the number of things known, the very nature of mind must be its comprehensive potentiality to become like the objects of knowledge (essences). Mind is not actually any determinate thing until it thinks. It must assume a definitive form through knowing, and it becomes what it knows in the sense that an actually learned man is said to be learned, viz. when he has become what is knowable. Thus, the relation of

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39. Aristotle, De Anima, 430a, 5; 430a, 20; 431a, 1.
40. Ibid., 429a, 15-29.
41. Ibid., 429b, 5-9.
mind to the physical world is not unlike that of a
writing-tablet on which nothing is yet actually written
but which may be regarded as implicitly containing all
that will be written on it. 42 In the second place, since
all natural (physical) things are composites of form and
matter, and since the mind is potentially like any form,
we are capable of knowing all actual things. In other
words, the universe of composite substances is intelli-
gible. Finally, inasmuch as we are not always knowing,
and since the mind is only potentially identical in
character with what is knowable, the intellect must be
activated to know by some actual object. Knowing, then,
is a movement from potentiality to actuality, but, like
sensing, it is dependent upon actualities, viz. objects
in act. The sensitive and intellective powers of the
soul, therefore, are potentially, all existing things,
viz. the sensibles and the intelligibles. 43

Insofar as the mind is in potentiality to its
objects it is termed the passive or possible intellect.
It is that which is capable of becoming all things, i.e.,
of receiving the intelligible counterparts of the

42. Aristotle, De Anima, 430a, 1. Cf. ibid., 429a,
29.

43. Ibid., 431b, 26-28.
substantial forms of composite substances. In this respect it is analogous to the material factor of things (this is what all things are in their potentiality). But, since the intellect is not the power of a corporeal organ, what informs it can be neither material nor characterized by individuating material notes.

Immaterial objects are actually intelligible, i.e., they are directly assimilable by the intellect. But when entities are material they are only potentially intelligible, viz. the mind is in potentiality to such objects only in abstraction from ("in sofar as they are capable of being disengaged from") their matter. But all natural (physical) things do have a material component. How, then, can the mind assimilate what is intelligible in them? How do the intelligible objects of thought, the substantial forms individuated by, and existing only in, matter, act upon the possible intellect? In the process of sensing the physical object acts upon the passive special (particular) sense via an appropriate medium and through the agency of the sensible form. An

44. Aristotle, De Anima, 430 a, 14.
45. Ibid., 429a, 24-27.
46. Ibid., 430a, 2-4.
47. Ibid., 430a, 6-9.
analogous process and agent is needed for the mind and its objects. Aristotle thus seeks the functional analogues in the process of thinking to those in the process of perceiving.

If thinking is to have a real connection with external things, i.e., if knowledge is to be of physical nature, its process can not be severed from the process of sensing and of its data. Thus, an account of thinking must begin from the products of sensing. Such is Aristotle's procedure. On his view, in the act of sensing there is not only an immediate effect in the sensation which occurs, but the movement caused by the object in act continues in the animated body and a pictorial image or phantasm is produced there. The formation of such after-images is attributed to the faculty of imagination in one of its functions. 48

Imagination is the movement which results from an actual sensation after the object of sensation is withdrawn. 49

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48. Aristotle, *De Anima*, 428b, 10-18. Although in the first instance the imagination is moved through the agency of the sensible, the dividing or combining of recalled images may result in images of things not perceived. Thus, we can distinguish a receptive or perceptual imagination and a constructive or productive imagination. (*De Anima*, 415a, 5ff.).

An image may be fairly described as a relic or after-effect of a sensation left in the organs of sense.\textsuperscript{50}

In imagination there is no relating of the image to any time and it is looked at by itself, not as a copy. But when the image is accompanied by the consciousness that it is the reproduction of a past experience it is called memory.\textsuperscript{51} Memory is twofold: of sense-images, and of objects of thought. Still, memory is neither sensation nor conceptual thought. It is the condition or modified form of one or the other of these, after a lapse of time.\textsuperscript{52} Memory, not only of sensible objects, but even the memory of intelligible objects, does not take place without an image.\textsuperscript{53} Thus, the mind never thinks without the use of images; but images are merely conditions for the exercise of thought.\textsuperscript{54}


\textsuperscript{51.} Aristotle, \textit{De Memoria et Reminiscendia}, 449b, 15-22. Cf. \textit{ibid.}, 451a, 15. Memory is distinguished from recollection or reminiscence, viz. the faculty of calling back to consciousness the sense-images or the concepts stored by the memory. Moreover, although many animals have memory recollection is possessed only by man. The reason for this is that recollection is the deliberate reproduction of an experience and is based on \textit{reflection}. Hence, Aristotle refers to it as a sort of syllogistic process. (\textit{De Mem.}, 451b, 2-453a, 14.)

\textsuperscript{52.} \textit{Ibid.}, 449b, 18-27.

\textsuperscript{53.} \textit{Ibid.}, 450a, 13-15; 23-25.

\textsuperscript{54.} Aristotle, \textit{De Anima}, 431a, 16-18.
Is the imagination and/or the memory the proximate cause of intellectual knowledge? Neither one is; although both are instrumentalities in the process of thinking. The reason that they are not the immediate source of intellectual cognition is that they are faculties of the composite of body and soul. There is no image without the body. Consequently, as resultants of corporeal organs, images are still on the material level and hence not fit objects for assimilation by the immaterial possible intellect. Moreover, the particularizing marks of sensible forms are preserved by the image, so that it represents the concrete object (singular thing) with all its individuating material characteristics. Because of this, the image can not be the immediate source or proximate cause of intellectual knowledge, i.e., that which informs the possible intellect. For the intellect is not concerned with the particularity of the data of sense experience, but only with the universal natures (essences) of things.

Since the images preserve the marks of individuating matter they are merely potentially intelligible and can not act upon the immaterial passive (possible) intellect. And, since the passive intellect is only

55. Aristotle, De Anima, 403a, 5-10.
56. Ibid., 429b, 10-22.
potentially active, another faculty is needed to render the images actually intelligible and thereby link them with the possible intellect. This faculty must be in act in order that it may activate the possible intellect to actual knowledge, i.e., to receiving determinate intelligible forms. Further, since its operation is to be on an immaterial faculty (passive intellect), it also must be immaterial. This faculty, discovered through a requisite operation in the process of knowing, may be termed the active (actual, creative) mind or intellect.\(^{57}\)

The distinction that Aristotle draws here between actual and possible intellects refers to the intellective soul, the soul of man. But passive and active mind are not to be taken as two distinct minds. They are merely faculties for different kinds of operations.

In sensation there is an object in act and a faculty to perceive it. But an intermediary also is needed, viz. the sensible form. Further, a medium is required, e.g., light, which, although itself unaffected by the process, can act upon a sensible quality and transmit it to the power of sense in an assimilable form. A colored body, for instance, is made actually visible

\(^{57}\) Aristotle, *De Anima*, 430a, 10-16.
only when the medium of light can produce a sensible form to actualize the power of sight. Hence, sense perceives the material object by means of the sensible forms. Since thinking is analogous to sensing, similar elements and operations must be discriminated within that process.

Pursuing the analogy between perceiving and thinking, Aristotle maintains that the relation of images to passive mind is like the relation of sensibles to the power of sense. But, as colors must be illuminated by light before the eye can see, so too there must be an operation which, by illuminating the potentially intelligible images of the imagination, produces an intelligible form for reception by the possible intellect. This is the act of the active intellect, and it is in this sense only that this faculty "creates all things." The functional proportion between the media in perceiving and in thinking may be expressed as follows: active mind is to light as intelligible forms are to sensible forms.

We now have all the elements required to clarify what is involved in the process of coming to know. These are: the images transmitted from sense through

59. Ibid., 430a, 15.
imagination and memory, passive mind, active mind, and intelligible forms. Sense cognition is the perception of particular sensible objects. The intellect, however, seeks to know the specific natures or essences of individual things, viz. composite substances. 60 As already observed, since images preserve the material conditions of the individual, they can not be the proximate causes of intellectual cognition. For if images did inform the possible intellect we would not know the common natures, the essences, of distinct things. Nonetheless, although images, as the after-effects of sensation, represent the individual thing, they must also convey the universal nature of that kind of things. 61 Since the possible intellect is an immaterial faculty it only can be informed by, and thus know actually, what is divested of individuating notes and thereby made immaterial, universal, and intelligible. This is accomplished by the operation of the active intellect upon the images.

60. Essence pertains to the compounds of nature, viz. natural or physical things. Thus Aristotle says that if there were no other forms, distinct and other than, those of composite substances, Physics would be the "first science," rather than "first philosophy" or metaphysics. (Meta., 1026a, 28).

61. Aristotle, De Anima, 432a, 4-5.
In this operation the images are denuded of particularity and the potentially intelligible form within them is rendered actually intelligible and thereby fit for reception by the possible intellect. Hence, the forms of the possible intellect, the proximate causes of intellectual cognition, are the intelligible forms abstracted or "disengaged" from images.\(^{62}\) Resorting to the analogy with light, we may say that the active intellect illumines the images in such a way that what is intelligible within the sensible is made actually assimilable by the possible intellect. Since this is not a physical process, neither the image nor the active intellect is altered. As neither the colored body nor light is affected in seeing, so too, neither the image nor active mind is changed in thinking.\(^{63}\) But both the images and active mind are necessary for the process. The images determine, in a sense, just what intelligible form is to be transmitted to the possible intellect.\(^{64}\)

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\(^{62}\) Aristotle, *De Anima*, 431b, 2-3.

\(^{63}\) *Ibid.*, 430a, 17-19; 431a, 5.

\(^{64}\) Hence, Aristotle says that loss of a sense involves loss of a corresponding portion of knowledge. (*Post. An.*, 81a, 38).
But the power of the active intellect is needed to operate upon the images and abstract therefrom a likeness of the specific nature of individual things. Accordingly, although sensible cognition is necessary, it is not the total cause of intellectual knowledge.

From the preceding account it is obvious that the notion of intelligible form is a crucial one in Aristotle's explanation of the knowing process. What are we to understand by "intelligible forms?" Is intellectual knowledge restricted to these forms themselves? If not, what is their function?

Since the possible intellect is in potentiality with respect to all intelligible objects and is reduced to actuality when it is informed by intelligible forms, coming to know is a sort of movement, viz. from ignorance to knowledge. 65 The possible intellect, then, is movable. But motion requires a mover or agent, which is "always the vehicle of a form." 66 In the movement to knowledge the immediate agent is the intelligible form as the vehicle of the substantial form. Thus, knowing is a process from form as it exists in things (the determining constitutive principle of composite substances)

66. Aristotle, Physics, 202a, 9.
to form as it exists in the mind (actual knowledge). Now, since whatever is actual is not liable to motion, in the respect that it is actual, substantial forms in things and actual knowledge in the mind are the two fixed termini in terms of which coming to know, as a kind of movement, can be understood. Intelligible forms are mediate and definable only in terms of these termini, just as motion is definable only in terms of before and after.

This account of knowing, and of the role of intelligible forms, involves several important consequences. First of all, it settles the question of what it is that is known. Intelligible forms are not themselves the primary objects of knowledge. If they were we would break contact with external things and lose objectivity. There could then be no science of things outside the mind and we would be forced to reach

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67. Actual knowledge is a fixed terminus of the process in the sense that what is actual is unmoving. Thus, once realized, knowledge is a permanent possession of the intellect. When the possible intellect has been informed by intelligible forms, it is still in potentiality, but not in the same way as before learning. For it can now operate through itself, although it will not always be so operating. The distinction is between knowledge possessed and knowledge exercised. Thus, one who knows geometry need not always be geometrizing. (Vida De Anima, 429b, 5-9).
a Humean position. Intelligible forms, therefore, are merely the vehicles for the transmission of specific natures to the possible intellect. As that by which a power of sense is made to perceive the sensible in act is the sensible form, so that by which the intellect knows is the intelligible form. And, just as what is perceived is the sensible itself, so too, what is known is the specific nature or essence of the external thing. Thus the intellect knows the essences of things primarily, and the singular represented by the image secondarily.

On Aristotle's view of the mind and of its objects the certainty of knowledge is assured. Mind is in one way a kind of receptivity. It is affected by its object just as sense receives impressions from the qualities of material objects. Since the proper objects of the intellect, essences, are indivisibles, and since the power of the intellect is proportionate to its objects, the intellect can not be in error concerning the essences of things. The intellect apprehends what is specifically indivisible in one indivisible act of an indivisible power of the soul. Hence, intellectual

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69. Ibid., 430b, 14-15.
cognition is intrinsically true. The intellect either apprehends its proper objects or it does not. As a sense is never in error regarding its special sensibles, so the mind is never in error regarding essences. Thus, in active thought the mind is the object of thought; the thinking mind is the idea thought.

When the mind thinks what a thing is in its essential nature it is true, because wholes are either known or not known. As wholes (indivisibles), the specific natures of things are understood before the properties and accidents that accompany them. It is only when the intellect, as a faculty of judgment, proceeds to divide the whole into its specific parts or to combine terms into the unity of a judgment, that it is liable to err. This is the sense in which Aristotle says that it is difficult to know when we

70. Aristotle, De Anima, 430b, 26-31.
71. Ibid., 431b, 16.
72. Ibid., 430b, 1-5.
have knowledge. 73

What is known or understood by the mind are its proper objects, viz. the specific natures or substantial forms of concrete things. Actual knowledge is identical in character with its objects. 74 Now the nature which is understood actually exists only in individuals. But the nature as it is understood, considered without the conditions of individuality, is in the intellect. In other words, specific natures have a double mode of being: as they exist in things outside the mind, and as they exist in the mind. This means that actual knowledge serves to mediate between the self and the external world. The mind is in contact with the world through knowledge. But the mind does not create or

73. Aristotle, Post. An., 76a, 26-30; cf. ibid., 75b, 37-76a, 3. — Since we come to know essences of sensible substances through their accidents, viz. sensible qualities, it may be questioned whether or not we do have complete or adequate knowledge of such essences. On the one hand is the fact that in making definitions of essences we often must employ accidental differences instead of essential properties. (Meta., Bk. VII, ch. xii). On the other hand, if essences are the proper objects of the intellect, how can it fail to apprehend them? Two answers may be given. First, that due to the imperfection of the intellect, essences are not known perfectly or distinctly, but confusedly. Second, that although we may not know an essence completely, viz. know all of its attributes, we may know some portion of it, viz. specific properties.

74. Aristotle, De Anima, 430a, 20; 431a, 1.
structure the world. Universal forms are not mental categories projected upon phenomena. They are actually immanent in things, and, potentially, in the mind. From various images of the same species of things, whether presented to one mind or to many minds, only one specific nature can be drawn. Through an action which is one and the same for all men, the active intellect abstracts the determining constitutive principles of external things from the images produced through sensation. In this manner, the mind grasps the immutable within the mutable. There is no contradiction in holding that thought requires for its exercise objects suggested by sense (images) and that it may, through the operation of the active intellect, pierce the passing flux of sense to fasten upon the fixed and intelligible encompassed within it. The unity of the soul and its union with the body enables the intellect to find its own proper objects in the objects of sense.

In terms of the distinctions explored in this essay, the foregoing is Aristotle's solution to the problem of uniting the principle of immediacy with the principle of immutability, and thereby explaining how knowledge of the external world is possible. The ultimate link is provided by the notion of intelligible forms. It is these forms that mediate between the
materially conditioned images and the immaterial intellect. Accordingly, "intelligible forms" in Aristotle's doctrine perform a function comparable to "time" in Kant's account. As time, according to Kant, has a dual character (both sensuous and pure), so too must the intelligible forms in the Aristotelian doctrine be considered Janus-faced. They are the common element or factor combining mind and its objects. By attributing this double nature to them Aristotle accomplished two ends. First, he retained the independence of the world from the mind. Second, he secured the certitude of intellectual knowledge.
CHAPTER 5

SUMMARY AND CONCLUSION

This study began from the contention that the significance of knowledge rests upon its differentiation from belief and probability and that its characteristic mark is certainty. Certainty, in turn, has been shown to involve a relation of immediacy between the knower and the known during the moment of perception and an immutable, non-empirical, ground for universality and necessity. Hence, an adequate theory of knowledge must make provision for both immediacy and immutability. These are the minimal requisites to support a claim for knowledge of the external world.

The aim of this study was to show that without either one of the indicated factors a theory must lead either to skepticism concerning the possibility of knowledge of things themselves or to some variety of a probabilistic conception of knowledge. Its positive contribution consisted in showing that a theory incorporating both the principle of immediacy and the principle of immutability in a satisfactorily related manner has been advanced, viz. the Aristotelian doctrine of knowledge.

Chapter Two investigated various possible solutions to the nature of the knowledge relation. This amounted
to an examination of typical proffered theories concerning the nature of, and the relation between, the subjects and objects of knowledge, primarily at the level of sense cognition. In one group of views (Locke, Hume, Kant) the mind and external things are so regarded that the contents of perception are never numerically one with these extramental objects. Thus, on such doctrines of sensation we can never come into contact with the external "substances," "secret causes," or "noumena" which are the generating sources of the compresences and successions of sense data. Locke, Hume, and Kant by no means offer purely phenomenalistic conceptions of reality. They do not deny that there are determinate productive agencies "beyond" the presented phenomena of sense. But they conceive the relation between these, or of the powers of the mind, such that the certainty of knowledge with respect to the nature of the external world must be denied. Hence we are restricted to "opinion," "belief," or to knowledge of a "phenomenal" world only.

The second group of views considered shifted from the contents of mind to the notion of a world of experiences as the starting-point for an analysis of the knowledge relation. In this group we examined the positions of Plato, Bradley, and Dewey. On these views
the genuine object of knowledge is definable only in terms of experience transcending that of the percipient at the moment of perception. Hence, sense perception is not fully cognitive and the object of knowledge is merely approached or "constructed" through successive perceptual experiences. For Plato, the fixed and determinate objects of knowledge (in its most honorific sense) lie beyond the powers of our embodied soul, although there are intimations of these objects throughout the sensible world. For Bradley, the Absolute is the sole determinate and non-contradictory object of knowledge, but, inasmuch as it is inaccessible to finite minds, knowledge is always partial or fragmentary. For Dewey, in turn, selected portions of "experience" (or "environment") are constructed into "objects" in response to "problematic situations." In any case, on all three kinds of views, knowledge is always mediated by the forms of discourse, whether "terms," "judgments," or "propositions." The net result is that certainty is impossible and a doctrine of relative degrees of knowledge is advanced.

Finally, we considered those theories which affirm immediacy between knower and known in the knowledge relation. These were differentiated in terms of whether or not they recognized a distinction between the objects
of knowledge as they are experienced and as they exist. On Berkeley's view, all objects are existentially dependent upon a percipient being. Berkeley tries to avoid the subjectivistic consequences to which this leads by asserting that we have "notions" (not "ideas") of other minds and of God. In fact, God is the sole causal agent of all the objects of sense. The orderly creation of ideas by the Divine Mind constitute the rules of nature. It is faith in the continuance of these set rules of God that must guide our actions. In Reid's doctrine of knowledge all that is experienced must exist as it is known independently of the percipient. Sensation, memory, and imagination are first principles of the constitution of our natures whose evidence we must accept. Reid's position was rejected as inadequate inasmuch as it fails to provide a critical account of the actual relation between the knower and the known at the moment of perception. In Aristotle's doctrine of sensation we found an account which retained the existential independence of the sensible object and the percipient but provided for their union during actual sensing. On this view, a sensation is the result of the actualization of the potentiality of sense to become actually like the sensible object. In actual sensing the two interacting factors, the sensible object and the sense, are one.
But as potentialities, each may exist without the other. Aristotle's view was cited as providing an intelligible and reasoned account of the union of knower with the known.

In Chapter Three examination of the principle of immutability proceeded in terms of the possible loci for this factor. After observing that the only two significant loci, immanent within experience, were the mind (the knower) or things (the known), the Aristotelian doctrine of substance and the Kantian doctrine of categories were elucidated. It was shown that both of these doctrines, although radically different in form, serve similar functions within their respective over-all theories. That is to say, both seek to provide the common, determinate grounds for universality and necessity that are essential for the inter-subjectivity and communicability of knowledge. Their radical differences are dictated, in part, by their correspondingly divergent doctrines of sensation. Given the Kantian view of the source and nature of the materials of sense intuition, his doctrines of the pure concepts of the understanding, of the imagination, and of schemata, provide the machinery needed to connect the elements in the process of cognition, allow for causal explanations, and account for perceptual unity. But because of his doctrine of the forms and
materials of sense, Kant's theory can assure the certainty of knowledge only of possible objects of experience within the "phenomenal" realm. The possibility of knowledge with respect to things themselves must be denied. On Aristotle's doctrine of sensation the factor of immutability could be located in external things themselves, viz. substances. The union of sensibles with the senses during actual sensing, coupled with the notion that sensibles are connected with the determining constitutive principles of things, allows Aristotle to affirm the possibility of attaining the determinate grounds of experience common to all men.

Since, of the views examined, only Aristotle's theory provides both factors of immediacy and of immutability, Chapter Four sought to indicate how he relates the two principles in order to account for intellectual (non-sensitive) cognition. That is, the relation between Aristotle's doctrine of sensation and his doctrine of substantial forms was explicated to show how we can get from the particularity of sense to the understanding of universal concepts, viz. from sensible objects to intelligible objects.

The Aristotelian doctrine of knowledge has been defended in this essay as providing a reasoned explanation of how intellectual knowledge is possible. Aristotle
shows how universal concepts can arise from our primitive sense experiences and how their objective counterparts are the grounds of perceptual unity and causal explanations.

The question may be raised: Why is it that so many diverse theories of knowledge have been proposed subsequently to Aristotle's if that one is most tenable? Various answers may be suggested. It should be noted, first of all, that an Aristotelian approach did not fall into disfavor until the dawn of modern science. Emphasis upon sense observation may have been at least partially responsible for a shift from a consideration of "reality" to that of "mind" as the fundamental conception. The expansion of studies in mental phenomena also may have been a contributing factor towards using a "subjective" approach to the problem of knowledge. In both Plato and Aristotle, "subject" and "object" are correlative terms that gain significance only insofar as their respective roles in the knowledge situation are distinguishable. In more modern thought the distinction often has been taken as actually demarcating aspects of reality. By starting their inquiries from the supposed contents of the mind and by conceiving sense as the primary mode of cognition, many modern philosophers have been led to the brink of the "epistemological chasm."
We must observe too that within more recent decades epistemology generally has been considered a discipline or area of inquiry distinct and separate from ontology. In view of this, some philosophers have sought to present conceptions of knowledge divorced from any conception of the nature of reality. Among more extreme empiricist contemporaries, theories of meaning have been proposed that prohibit metaphysical speculation as meaningful activity. But a conception of knowledge has no significance apart from a view as to the nature of things, and an explanation of how knowledge is possible must go beyond the empirical (see above, pp. 7-14).

This study has served to call attention to a variety of analytical distinctions and devices which may be employed to give an account of knowledge. In a time when much of what has been traditionally considered genuine philosophical analysis is deplored as being abstruse, confused, or downright naive, and when methods of philosophizing currently in vogue are oftentimes considered definitive, it is extremely valuable to be aware of other possible modes of analysis. Our present prejudices can be re-examined only by becoming familiar with alternative principles and methods.
That Aristotle's assumptions do not succeed in eliminating the "mystery" of the universe is obvious. But no philosophy can so succeed. The best we can do is to offer coherent theories that at least partially satisfy our curiosity. Here philosophy must stop.

In some contemporary quarters the results of Greek speculative thought are disparaged as being the products of a distinct cultural milieu.

But modern scholarship and modern science reproduce the same limitations as dominated the bygone Hellenistic epoch, and the bygone Scholastic epoch. They canalize thought and observation within predetermined limits, based upon inadequate metaphysical assumptions dogmatically assumed. The modern assumptions differ from older assumptions, not wholly for the better. They exclude from rationalistic thought more of the final values of existence. The intimate timidity of professionalized scholarship circumscribes reason by reducing its topics to triviality, for example, to bare sensa and to tautologies. It then frees itself from criticism by dogmatically handing over the remainder of experience to an animal faith or a religious mysticism, incapable of rationalization. The world will again sink into the boredom of a drab detail of rational thought, unless we retain in the sky some reflection of light from the sun of Hellenism.¹

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AUTOBIOGRAPHY
AUTobiography

I, John De Lucca, was born in New York, N. Y., October 8, 1920. I received my secondary school education in the public schools of New York. My undergraduate training was obtained at the College of the City of New York, from which I received the degree Bachelor of Business Administration in 1941. From the Graduate Faculty of the New School for Social Research, I received the degree Master of Arts in 1950. From 1950 to 1952 I taught philosophy at Pace College, New York City. The academic year 1952-53 was spent in graduate studies at Harvard University. In 1953 I received an appointment as Assistant in Philosophy at The Ohio State University. In 1954 I was elected a University Fellow for the year 1954-55.